

TEMPORAL THRESHOLDS IN TAQŚĪM: A COMPARATIVE STUDY OF DURATION AND MODAL EXPOSITION IN MALAYSIAN GAMBUS AND ARAB INSTRUMENTAL IMPROVISATION

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Abstract

Taqśīm occupies a central place in Arab and *maqām*-based musical traditions as a modality-bearing form of improvisation, yet duration has received limited attention as an analytical factor in its formal unfolding. While *maqām* identity may be recognised quickly through characteristic phrases, intervallic contours, or tonal cues, rapid recognition does not necessarily indicate that an improvisation has achieved sustained modal exposition, phrase development, expressive pacing, or convincing linkage to a subsequent composition. This article examines duration as a corpus-specific analytical issue through a qualitative comparative analysis of eighteen selected *taqśīm* examples: four Malaysian gambus field recordings, ten published Malaysian gambus recordings, and four Arab chamber-music recordings. Using exact duration, modal presentation, phrase development, register movement, ornamental elaboration, expressive pacing, and linkage to the following composition as comparative indicators, the study investigates how temporal span relates to the musical processes available within each improvisation. The findings show that the selected Malaysian gambus examples are generally shorter and more compressed, whereas the selected Arab chamber-music examples cluster around two minutes and display more sustained phrase continuity, registral exploration, ornamental pacing, and modal development. These differences should not be interpreted as automatic evidence of insufficient musicianship or pedagogical deficiency. They may also reflect genre function, performance context, instrumental idiom, local aesthetic preference, recording format, or intentional compression by performers. Within this limited corpus, durations around two minutes appear more likely to provide sufficient temporal space for observable processes of modal dwelling, phrase extension, and cadential preparation. The proposed temporal threshold is therefore not a universal rule or empirically tested perceptual boundary, but a preliminary corpus-specific analytical hypothesis. The article contributes to scholarship on *taqśīm* by foregrounding duration as a condition that may enable, though not guarantee, fuller modal and formal development in comparative *maqām*-based improvisation.

Keywords: *Taqśīm*, *Maqām*-Based Improvisation, Temporal Thresholds, Modal Exposition; Comparative Performance Analysis, Expert Analytical Listening, Arab Music Pedagogy, Malaysian Gambus

INTRODUCTION

Taqsim occupies a central place in Arab and *maqām*-based musical traditions as a modality-bearing form of improvisation, yet questions of duration and temporal adequacy have received limited focused attention in existing scholarship. Existing studies have illuminated *taqsim* as a symbolically charged, aesthetically significant, and creatively generative practice, discussing its role in modal expression, performer agency, historical development, and the broader affective culture of Arab music (Racy, 2000, 2003; Feldman, 1993; Touma, 1971; Alkaei & Küssner, 2021). Related scholarship in Ottoman and Turkish contexts has further clarified *taksim* as an improvisatory art shaped by formal expectation, pedagogical lineage, and performance function (Şimşek, 2011, 2014). Yet despite this growing body of work, relatively little attention has been given to the question of how long a *taqsim* must unfold in order to function convincingly as *taqsim*, not merely as a brief modal gesture, ornamental preface, or transitional fragment.

This question is important because *taqsim* is not exhausted by the rapid announcement of *maqām* identity. Informed listeners may recognise a *maqām* within seconds through signature phrases, characteristic intervallic contours, or familiar scalar pathways. For listeners trained in Arab modal systems, the opening gestures of *Ajam*, *Nahawand*, *Rast*, *Kurd*, *Bayātī*, *Hijaz*, *Saba*, or *Sikah* may already signal the modal field with considerable immediacy. However, quick recognition is not equivalent to formal completion, expressive fulfilment, or perceptual satisfaction. A *maqām* may be identified almost instantly, while the *taqsim* itself may still remain underdeveloped as an improvisatory act. Recognition, in other words, is not the same as unfolding. The present article takes this distinction as its starting point and asks when *taqsim* becomes temporally sufficient to function as a musically meaningful form.

The issue of duration is especially significant because *taqsim* operates simultaneously on modal, expressive, and anticipatory levels. As an improvisatory prelude or connective form, it may introduce the modal environment of the piece that follows, shape listener expectation, generate affective atmosphere, and display the performer's technical and expressive command. In this sense, duration is not simply a neutral measure of clock time. Rather, it conditions the extent to which the improvisation can establish tonal centre, articulate modal emphasis, move across registers, elaborate ornamental detail, and prepare a sense of continuity between improvisation and composition. A very short *taqsim* may announce a *maqām*, but it may not yet dwell in it. It may gesture toward expressive possibility without developing it. It may hint at formal direction without offering enough time for that direction to become convincing.

This problem becomes particularly visible when comparing different pedagogical and performance contexts. In the local *gambus*-player corpus examined in this study, selected local *taqsim* examples by *gambus* or *oud* players are often markedly short, sometimes compressed into brief openings that prioritize immediate effect over extended modal development. By contrast, *taqsim* examples drawn from Arab players and two recorded comparative sources more consistently extend beyond such brevity, permitting broader phrase formation, greater modal unfolding, and more substantial linkage to the subsequent song. The contrast does not simply reflect stylistic difference in a superficial sense. Rather, it suggests that duration may also index deeper pedagogical conditions, including the extent to which *taqsim* is understood not only as an introductory gesture but as an improvisatory form requiring development, pacing, and structural intent.

A temporal perspective also opens a productive bridge between *maqām* studies, improvisation research, and listener reception. Studies in music perception and auditory cognition have shown that sound may be processed rapidly, yet meaningful perceptual organisation, expectation, and affective engagement unfold over time (Bregman, 1990; Huron, 2006; Koelsch, 2011; Griffiths & Warren, 2004). Likewise, broader theories of musical

meaning have long emphasised that expectancy, continuation, and formal shaping are central to listener experience (Meyer, 1956/1961; Margulis, 2013). From this perspective, the functional adequacy of *taqsīm* cannot be reduced to the speed with which a listener detects its modal cues. Especially for non-specialist listeners, enjoyment may depend less on naming the *maqām* than on perceiving sufficient expressive elaboration, continuity, and a sense of arrival. *Taqsīm* therefore invites not only modal recognition, but temporal inhabitation.

LITERATURE REVIEW

Taqsīm as improvisatory form in Arab and maqām traditions

Taqsīm has long been recognised as one of the principal improvisatory forms within Arab music and related *maqām*-based traditions. Existing scholarship has treated it not merely as spontaneous ornamentation, but as a significant modality-bearing practice through which performers articulate *maqām* identity, expressive atmosphere, and musical authority. Early ethnomusicological studies by Touma (1971) and Spector (1970) established the centrality of *maqām* as both a tonal and improvisatory principle, while later work by Racy (2000, 2003) showed that *taqsīm* also functions symbolically and affectively, participating in broader cultures of tarab, virtuosity, and aesthetic intensity. In this literature, *taqsīm* emerges as a flexible but recognisable form: one that may be free in rhythm, individualized in style, and variable in length, yet still bound to modal logic, phrase coherence, and culturally informed expectations.

This scholarship has been strengthened by later work examining improvisation as creative process. Alkaei and Küssner (2021) frame *taqsīm* as a structured creative act rather than a purely instinctive or ornamental performance, highlighting the ways in which performers navigate memory, embodied knowledge, and modal decision-making in real time. Such studies are important because they move the discussion beyond simplistic notions of “free improvisation” and emphasise that *taqsīm* is shaped by internalized grammar, stylistic lineage, and aesthetic judgment. Similarly, Signell (1980), Nettle (1974), and Sarath (1996) help situate *taqsīm* within broader improvisation studies by demonstrating that improvisatory forms are rarely unbounded; rather, they are conditioned by rules, expectations, and culturally specific understandings of what counts as coherence or completion.

Scholarship in Ottoman and Turkish contexts provides an especially useful comparative frame. Feldman (1993) and Şimşek (2011, 2014) show that *taksim* developed historically as a musically meaningful form with pedagogical and performance functions, rather than as a marginal or decorative aside. These studies are valuable not because Turkish *taksim* and Arab *taqsīm* are identical, but because they demonstrate that in related modal traditions, improvisation has been taken seriously as an art of unfolding rather than mere introduction. Across these literatures, one common insight is that *taqsīm/taksim* depends on the performer’s ability to guide listeners through a modal environment in ways that feel directed, persuasive, and aesthetically sufficient.

Yet while this body of scholarship illuminates *taqsīm* as a creative, modal, and affective form, questions of duration remain comparatively less developed as a primary analytical concern. Existing studies often describe *taqsīm*’s function, structure, symbolism, or performer agency, but they do not usually ask at what point an improvisation becomes temporally adequate to fulfil those functions. As a result, duration tends to remain implicit, treated as part of performance circumstance rather than as a theoretical issue in itself. This article builds on the existing literature by shifting attention from *taqsīm* as an abstract improvisatory category to *taqsīm* as a temporally unfolding form whose adequacy may depend on having enough time to achieve modal exposition, phrase development, and perceptual coherence.

Duration, temporality, and musical expectation

Although duration has not often been foregrounded in *taqsīm* scholarship, the broader study of music has long shown that temporality is central to musical meaning. Meyer (1956/1961) argued that musical experience is inseparable from expectation, delay, continuation, and fulfilment. Huron (2006) later expanded this perspective by showing that anticipation is not incidental to listening, but fundamental to how music is processed, felt, and interpreted. From this viewpoint, the meaning of a musical event does not reside solely in what is sounded at a given instant, but in how that event unfolds through time and shapes the listener's sense of what may follow.

Racy's writing on tarab (1991, 2003) and Shannon's work on temporality and emotion in Arab music (2003) further support this view by showing that affective response is not detached from musical unfolding. Atmosphere, ecstasy, expressive intensification, and listener absorption are not instantaneous states triggered solely by recognition; they emerge through pacing, continuity, and accumulation. This is especially important in *maqām*-based traditions, where expressive force often depends on how a performer inhabits the modal field rather than merely identifying it. A short *taqsīm* may establish mode, but it may not yet build atmosphere. It may imply feeling but not allow that feeling to deepen.

Seen in this light, duration is better understood as a condition of temporal affordance: the time made available for modal dwelling, expressive shaping, and formal orientation. This article therefore treats duration not as a neutral metric, but as a parameter that affects how *taqsīm* produces expectation, continuity, and musical legibility.

Listener reception and perceptual unfolding

The present study is also informed by scholarship on music perception and auditory cognition, particularly the distinction between rapid auditory detection and fuller perceptual organisation. Bregman (1990) showed that listening involves active organisation of sound into meaningful perceptual units rather than passive reception of acoustic events. Griffiths and Warren (2004) similarly emphasise that auditory objects are not simply "heard" in an immediate and complete sense; they are constituted through processes of grouping, continuity, and attention. In music, this means that recognition and understanding are related but not identical phenomena.

Research by Koelsch (2011), Stevens (2012), and Margulis (2013) supports the view that musical engagement is shaped by expectancy, repetition, patterning, and temporal continuity. Hargreaves and North (1999) further remind us that listening is socially and functionally embedded; music is valued not only for structural recognition but also for how it provides atmosphere, enjoyment, orientation, and affective experience. From this standpoint, *taqsīm* should not be evaluated only in terms of whether the *maqām* can be detected, but also in terms of whether the temporal span allows listeners to enter into the improvisation as a meaningful event.

This article therefore distinguishes between at least two listening situations. The first is expert recognition, in which modal cues may be identified quickly by trained listeners. The second is perceptual fulfilment, in which listeners, especially non-specialists, require a longer span for the improvisation to register as coherent, expressive, and complete. The argument of the article rests precisely on this distinction: immediate recognisability is not equivalent to temporal sufficiency.

Table 1: Analytical distinction between expert recognition and perceptual fulfilment in taqsīm listening

Dimension	Expert Recognition	Perceptual Fulfilment
Typical listener	Musician, <i>maqām</i> -trained listener, specialist	Non-specialist listener, general audience, less formally trained listener
What may occur quickly	Recognition of <i>maqām</i> through signature phrase, interval, or opening contour	Basic awareness that an improvisation has begun
Main basis of response	Modal literacy, prior listening experience, familiarity with <i>maqām</i> syntax	Perceived continuity, expressive richness, pacing, atmosphere, and musical interest
Time required	May occur within seconds	May benefit from longer unfolding, as suggested by music-perception scholarship; this was not empirically tested in the present study.
Primary question asked by listener	“Which <i>maqām</i> is this?”	“Is this musically engaging, coherent, and satisfying?”
Relation to duration Dependence on formal unfolding	Short duration may still allow recognition Limited	Short duration may prevent deeper engagement or completion High
Relevance to this study	Shows that rapid identification is possible	Shows that recognition alone does not equal <i>taqsīm</i> adequacy

The distinction clarifies a central argument of this article: the ability to identify a *maqām* quickly does not necessarily mean that a *taqsīm* has unfolded sufficiently to achieve expressive, formal, or perceptual completeness.

Pedagogy, modal knowledge, and the Malaysian gambus-player context

The pedagogical dimension of *taqsīm* becomes especially significant when duration is examined through the lens of actual performance practice. Improvisation does not develop in a vacuum. It depends on training, embodied familiarity with *maqām* movement, confidence in phrase construction, command of technique, and an understanding of *taqsīm* as more than a brief introduction. In this respect, the local *gambus*-player material considered in the present article is not merely a local case but a revealing site of pedagogical inquiry.

Short *taqsīm* in the selected Malaysian examples should be interpreted as an observed temporal pattern rather than as automatic evidence of insufficient musicianship or deficient transmission. Its causes may include pedagogical emphasis, song-centred function, performance setting, recording format, instrument idiom, local aesthetic preference, audience expectation, or intentional performer compression. The present corpus raises pedagogical questions but cannot determine pedagogical causes. Further research should therefore examine performer training histories, teacher–student transmission, rehearsal practice, and local performance ecology.

This is not to claim that all local *gambus*-player *taqsīm* is deficient, nor that Arab practice is automatically normative in every respect. Such a binary would be crude and analytically unhelpful. Rather, the comparison highlights how different pedagogical formations may produce different temporal outcomes. Where *taqsīm* is taught and understood as an unfolding improvisatory form, longer durations may emerge more naturally because the performer has the conceptual and technical means to dwell, elaborate, and connect. Where *taqsīm* is treated primarily as a short pre-song gesture, the result may be compressed openings that signal mode without sufficiently developing it.

The local *gambus*-player corpus therefore provides more than local description. It allows the present study to examine how duration may serve as an indicator of pedagogical depth and modal command. In this sense, the article contributes not only to improvisation studies, but also to discussions of how *maqām*-based knowledge is transmitted, simplified, or truncated in new educational and cultural settings.

METHODOLOGY

Research design

This study adopts a qualitative comparative design grounded in comparative performance analysis and expert analytical listening. Its purpose is not to establish a universal statistical rule for *taqsīm* duration across all *maqām* traditions, but to investigate how duration functions within a focused corpus of selected *taqsīm* examples drawn from different pedagogical and performance contexts. More specifically, the study examines whether shorter *taqsīm* provide sufficient temporal space for modal exposition, phrase development, expressive pacing, and listener orientation, and whether longer examples more consistently support these functions.

The research combines three interrelated approaches. First, it undertakes close musical analysis of selected *taqsīm* recordings in order to identify patterns of duration, modal presentation, phrase development, ornamental elaboration, and linkage to the subsequent song or performance context. Second, it employs comparative interpretation across two broad groups of material: *taqsīm* by local *gambus* players and *taqsīm* by Arab players, supplemented by two recorded comparative sources.

Third, it incorporates expert analytical listening informed by the author's long-term experience in *maqām*-based *oud* and *gambus* pedagogy, performance, and listening. This combination allows the study to move beyond purely descriptive timing data and toward a more musically grounded account of what duration enables or limits in *taqsīm* practice.

Corpus and sampling logic

The corpus consists of eighteen selected *taqsīm* examples: four Malaysian *gambus* field recordings, ten published Malaysian *gambus* recordings, and four Arab chamber-music recordings. These materials were chosen purposively rather than randomly. The aim was to assemble a small but analytically meaningful corpus in which differences of duration and developmental scope could be observed clearly. The local *gambus*-player material is particularly important because it provides a pedagogically revealing case in which *taqsīm* often appears in compressed form. These examples make it possible to examine how brevity may relate not only to stylistic choice, but also to modal confidence, technical fluency, and underlying conceptions of what *taqsīm* is supposed to do. The Arab-player material and the two recorded comparative sources serve as contrastive cases in which *taqsīm* more consistently unfolds over longer spans, thereby allowing analysis of how additional duration affects modal development and expressive pacing.

The sampling strategy is therefore comparative and interpretive rather than representative in a statistical sense. The selected examples are used to illuminate a conceptual problem: the existence of temporal thresholds in *taqsīm*. The study does not claim that all local *gambus*-player players perform short *taqsīm*, nor that all Arab players perform long ones. Rather, it examines a corpus in which these tendencies are sufficiently pronounced to support comparative musical analysis.

Table 2: Corpus overview and comparative function of analysed *taqsīm* examples

Corpus Group	Source Type	No. of Examples / Informants	General Context	Analytical Role in the Study
Malaysian gambus (field)	Informant field recordings (M1–M4)	4 examples	Author's MA fieldwork, Johor (2014–2017)	Primary corpus for compressed/short <i>taqsīm</i> and pedagogical implications
Malaysian gambus (published)	Commercial/archival recordings (J1–J10)	10 examples	Published Johor gambus recordings (exact durations in Table 4)	Documented corpus of short <i>taqsīm</i>
Arab chamber (published)	Commercial recording (A1–A4)	4 <i>taqsīm</i>	Naseer Shamma & Al-Oyoun, Arab Chamber Music (2015)	Comparative corpus for longer <i>taqsīm</i> with broader modal development

The corpus was selected purposively to allow comparison between shorter and longer *taqsīm* examples across local performance, Arab instrumental practice, and recorded comparative sources. The aim is analytical contrast rather than statistical representativeness.

Analytical procedure

The dimensions summarised in Table 3 were not treated as isolated checkboxes, but as interacting indicators of whether the improvisation had sufficient time to unfold meaningfully. A short *taqsīm* might still establish *maqām* identity, but it may not develop phrases, expand register, or build expressive momentum to the same extent as a longer one. The analysis therefore focused on the relationship between duration and musical process rather than on duration alone.

Table 3: Analytical criteria used in the comparative assessment of *taqsīm* examples

Analytical Dimension	Description	Key Question
Total duration	Length of the <i>taqsīm</i> in minutes and seconds	How much temporal space is available for improvisational unfolding?
Modal exposition	Establishment of <i>maqām</i> through tonal centre, phrase emphasis, characteristic movement, and cadential logic	Does the <i>taqsīm</i> move beyond brief modal signalling into clearer modal presentation?
Phrase development	Extension, sequencing, variation, and continuity of phrases	Does the improvisation develop ideas or remain fragmentary?

Register movement	Exploration across low, middle, and upper ranges	Does the <i>taqsīm</i> remain narrow in range or open wider modal space?
Ornamental / technical elaboration	Use of embellishment, articulation, technique, and expressive nuance	Does the performer elaborate the modal material with enough fluency and detail?
Expressive pacing	Sense of tension, release, continuity, and temporal shaping	Does the <i>taqsīm</i> feel rushed, static, or musically paced?
Linkage to following composition	Relationship between <i>taqsīm</i> and the song or piece that follows	Does the improvisation meaningfully prepare or connect to the next musical section?
Listener orientation	Theoretical implications for listener orientation, informed by music-perception scholarship; not directly measured in this study.	What theoretical implications might duration have for perceptual coherence and listener orientation?

These criteria are used comparatively rather than mechanically. The purpose is not to score *taqsīm* numerically, but to examine how duration interacts with modal, expressive, and perceptual processes.

Expert analytical listening as interpretive support

The study incorporates expert analytical listening informed by the author's long-term experience in *maqām*-based oud and gambus performance and pedagogy. This does not replace musical analysis, nor is it used to impose purely subjective opinion on the corpus. Rather, it provides informed contextualisation regarding phrase logic, modal pacing, instrumental technique, and the pedagogical conditions under which *taqsīm* is learned and evaluated.

Researcher expertise can provide an informed interpretive perspective when used reflexively and alongside clearly described materials and analytical criteria. In the present study, expert analytical listening is relevant because the issue under investigation is not only whether a *taqsīm* is long or short, but how duration relates to phrase logic, modal pacing, instrumental technique, and formal development. The author's long-term engagement with oud and gambus pedagogy, *maqām* instruction, and *taqsīm* performance therefore supports interpretation of the musical processes observed across the corpus, while the claims remain limited to this corpus and analytical framework.

At the same time, the study maintains analytical caution. The proposed threshold of approximately two minutes is not presented as an absolute or universally binding rule. Rather, it emerges from repeated comparison across the corpus as a practical lower point at which modal unfolding, phrase development, and listener orientation become more consistently achievable.

Scope and limitations

This study is limited by its small and purposively selected corpus. It does not attempt to establish generalisable conclusions across all *taqsīm* traditions, repertoires, or performance settings. Nor does it claim that duration alone determines musical quality. Artistic excellence may occur in both shorter and longer forms depending on context, performer intention, and listener expectation. Listener reception is not measured empirically in this study; rather, it is

discussed as a theoretically informed interpretive implication derived from music-perception scholarship and comparative musical analysis.

A further limitation concerns organology. The Arab comparative corpus includes ney, violin, qanun, and oud, whereas the Malaysian corpus is centred on gambus. Differences in sustain, acoustic decay, idiomatic ornamentation, and phrase pacing may partly shape temporal behaviour. The comparison therefore identifies a durational pattern across this corpus, rather than attributing all differences solely to pedagogy or cultural tradition.

The value of the present study lies instead in its conceptual contribution. By identifying duration as a neglected analytical issue and proposing the idea of a temporal threshold, it opens a new way of thinking about *taqsīm* in relation to form, pedagogy, and listener reception. The findings should therefore be read as a focused case-based argument that invites further research, including larger corpora, listener-based studies, and cross-traditional comparison.

FINDINGS AND ANALYSIS

Duration patterns across the corpus

The most immediately visible pattern across the corpus is the difference in duration between the local *gambus*-player *taqsīm* examples and those drawn from Arab players and recorded comparative sources. In the local *gambus*-player group, *taqsīm* often appears in highly compressed form, frequently occupying a brief introductory span that prioritizes immediate modal signalling over extended development. By contrast, the Arab-player examples and the recorded comparative sources more often sustain the improvisation for longer durations, thereby creating greater temporal space for phrase expansion, registral exploration, ornamental detail, and more deliberate linkage to the composition that follows.

This contrast should not be reduced to a simple quantitative opposition between “short” and “long.” Rather, the durational pattern reveals a qualitative difference in how *taqsīm* functions within performance. In the shorter examples, the improvisation often fulfils a narrow introductory role: it identifies or hints at the *maqām*, establishes a momentary expressive frame, and proceeds quickly toward the next musical event. In the longer examples, however, *taqsīm* more often operates as a self-sufficient unfolding process. It does not merely point to the modal field but inhabits it. This distinction is central to the present study because it suggests that duration is not an external attribute added to *taqsīm*, but one of the conditions through which *taqsīm* acquires formal and perceptual depth.

A further observation concerns consistency of internal pacing. In the shorter examples, musical gestures often appear compressed into a limited span, resulting in a sense of abbreviated movement rather than gradual development. Modal identity may be signalled clearly, but the pace of transition from opening cue to closure or song entry is often too rapid to support a fuller arc of improvisation. In contrast, the longer examples more commonly display a pacing that allows for dwelling, return, expansion, and controlled variation. What emerges, therefore, is not simply that one set of examples lasts longer than another, but that duration appears to affect the very shape of musical thought.

The Malaysian *gambus* field recordings cluster within approximately 20–35 seconds, whereas the Arab-player *taqsīm* fall within the two-minute range. This contrast is further documented in the published Johor recordings listed in Table 4, where the *taqsīm* openings all remain below two minutes — the Fadzil Ahmad vs Said Ahmad Bagil tracks, for instance, run under one minute — in clear contrast to the sustained two-minute *taqsīm* of the Arab chamber examples.

Table 4: Comparative duration profile of analysed taqsim examples

Example Code	Corpus Group	Source / Instrument	<i>Maqām</i>	Duration	General Observations
M1	Malaysian gambus (field)	Field recording / gambus	<i>Kurd</i>	≈ 0:20–0:35	Brief opening; rapid modal cue; limited development
M2	Malaysian gambus (field)	Field recording / gambus	<i>Nahawand</i>	≈ 0:20–0:35	Short <i>taqsim</i> ; early closure; narrow register
M3	Malaysian gambus (field)	Field recording / gambus	<i>Hijaz</i>	≈ 0:20–0:35	Modal signalling present; little phrase expansion
M4	Malaysian gambus (field)	Field recording / gambus	<i>Kurd</i>	≈ 0:20–0:35	Transitional function stronger than developmental function
J1	Malaysian gambus (published)	Isteri Cemburu / gambus	<i>Kurd</i>	1:30	Opening <i>taqsim</i> ; published recording (Kenangan Johor)
J2	Malaysian gambus (published)	Joget Memikat Janda / gambus	<i>Kurd</i>	0:58	Opening <i>taqsim</i> ; published recording (Fadzil Ahmad vs Said Ahmad Bagil)
J3	Malaysian gambus (published)	Malam Pengantin / gambus	<i>Kurd</i>	0:53	Opening <i>taqsim</i> ; published recording (Fadzil Ahmad vs Said Ahmad Bagil)
J4	Malaysian gambus (published)	Naam Sidi / gambus	<i>Nahawand</i>	0:58	Opening <i>taqsim</i> ; published recording (Kenangan Johor)
J5	Malaysian gambus (published)	Ramadhan Bulan Mulia / gambus	<i>Kurd</i>	0:55	Opening <i>taqsim</i> ; published recording (Fadzil Ahmad vs Said Ahmad Bagil)
J6	Malaysian gambus (published)	Seruan Petani / gambus	<i>Kurd</i>	0:54	Opening <i>taqsim</i> ; published recording (Fadzil Ahmad vs Said Ahmad Bagil)
J7	Malaysian gambus (published)	Ya Allah Ya Saidi / gambus	<i>Nahawand</i>	0:48	Opening <i>taqsim</i> ; published recording (Fadzil Ahmad vs Said Ahmad Bagil)
J8	Malaysian gambus (published)	<i>Yaladan</i> / gambus	<i>Kurd</i>	0:36	Opening <i>taqsim</i> ; published recording (Kenangan Johor)
J9	Malaysian gambus (published)	<i>Ya Salam</i> / gambus	<i>Kurd</i>	0:28	Opening <i>taqsim</i> ; published recording (Noraniza Idris, Iktiraf)
J10	Malaysian gambus (published)	<i>Zapin Merindu</i> / gambus	<i>Kurd</i>	1:26	Opening <i>taqsim</i> ; published recording (Kenangan Johor)
A1	Arab chamber (Oyoun)	<i>Ishraq</i> / <i>ney</i>	<i>Rast</i>	1:55	Clear modal exposition; broader phrase unfolding
A2	Arab chamber (Oyoun)	<i>Hilal Saba</i> / violin	<i>Saba</i>	1:55	Longer pacing; more ornamentation and register movement
A3	Arab chamber (Oyoun)	<i>Zaman el-Nahawand</i> / <i>qanun</i>	<i>Nahawand</i>	1:55	Sustained development and stronger linkage to following piece
A4	Arab chamber (Oyoun)	<i>Bein el-Nakheel</i> / <i>oud</i>	<i>Bayātī</i>	2:03	Sustained modal unfolding, clearer phrase continuity, and broader expressive pacing

This table provides a comparative overview of duration across local *gambus*-player examples, Arab-player examples, and selected recorded sources. The analytical significance lies not only in measured length, but in the degree to which duration enables modal unfolding, phrase development, and listener orientation.

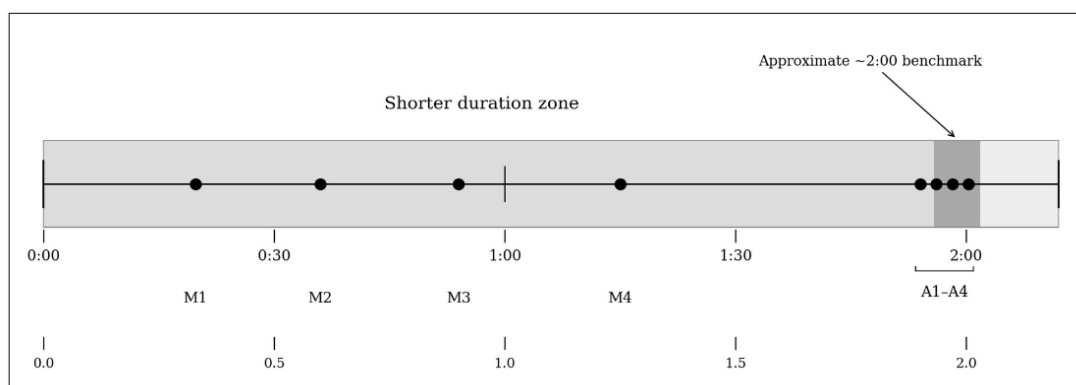


Figure 1: Illustrative duration range across analysed taqsīm examples

This simplified chart illustrates the clustering of shorter Malaysian gambus examples below the approximate two-minute benchmark and Arab chamber examples clustered around the two-minute mark. The benchmark is interpreted analytically rather than prescriptively.

Short taqsīm as compressed modal signalling

The shorter *taqsīm* examples in the Malaysian gambus-player corpus reveal a recurring tendency toward compressed modal signalling. In many cases, the improvisation begins with a recognisable phrase contour or intervallic cue that points clearly toward a *maqām* identity. For listeners already familiar with Arab modal systems, such openings may be sufficient to identify the modal field quickly. Yet what follows often remains limited in scope. Instead of expanding the *maqām* through sequential phrase growth, registral extension, or ornamental elaboration, the *taqsīm* tends to move rapidly toward closure or transition.

In M1 and M4, both in *maqām Kurd*, the modal identity is established quickly, yet the improvisation remains confined to a brief opening gesture before moving toward closure, leaving little room for sequential phrase extension or registral departure. Similarly, M2 in *Nahawand* and M3 in *Hijaz* signal their modal field clearly enough for recognition, but their durations of approximately 20–35 seconds restrict the possibility of broader unfolding, making the *taqsīm* function more as compressed modal announcement than as sustained improvisatory development.

The shorter examples also often display restricted phrase development. Musical ideas appear in isolated or minimally elaborated form, with little opportunity for repetition, variation, or cumulative shaping. This creates a sense of compression that may still be effective in highly localized or functional settings, but that falls short of what *taqsīm* can achieve as a more fully developed practice. The problem here is not simply that the improvisation is brief, but that the brevity limits the possibility of internal growth. Phrase logic remains present, yet it does not have enough time to become persuasive. In these cases, the listener hears the beginning of a *taqsīm* process, but not enough of its continuation to experience a fuller arc of modal dwelling, intensification, and return.

Short duration also often coincides with narrow registral movement and reduced ornamental expansion. The improvisation may remain close to the opening area, offering little exploration of upper or lower ranges, and little opportunity for subtle intensification through embellishment. This contributes to the impression that the *taqsīm* serves more as a transitional signal than as an unfolding modal event. Even where technique is present, it may appear in condensed form, without enough space for accumulation or expressive pacing.

Short *taqsīm* in the selected Malaysian examples should be interpreted as an observed temporal pattern rather than as automatic evidence of insufficient musicianship or deficient transmission. Its causes may include pedagogical emphasis, song-centred function, performance setting, recording format, instrument idiom, local aesthetic preference, audience expectation, or intentional performer compression. The present corpus raises pedagogical questions but cannot determine pedagogical causes. Further research should therefore examine performer training histories, teacher–student transmission, rehearsal practice, and local performance ecology.

Longer *taqsīm* and the unfolding of modal space

The longer *taqsīm* examples from Arab players and the recorded comparative sources present a contrasting mode of improvisational logic. In these examples, duration is not merely an extension of the same material over a longer span. Rather, additional time enables a different kind of musical process. The *maqām* is not only signalled but progressively unfolded. Important tones are established and revisited, phrases are extended and varied, and the improvisation develops a clearer sense of internal continuity and direction.

This is particularly evident in A1 (*ney, Rast*), A2 (*violin, Saba*), A3 (*qanun, Nahawand*), and A4 (*oud, Bayati*), all of which fall within the two-minute range and allow the performer to move beyond initial modal identification into more sustained phrase shaping. A similar pattern is heard in the *Oyoun: Arab Chamber Music* examples, where *Rast*, *Saba*, *Nahawand* and *Bayātī* are each given approximately two minutes, allowing cadential direction, ornamental pacing, and broader modal dwelling to emerge more convincingly than in the shorter local and comparative examples.

One important feature of the longer examples is their broader phrase architecture. Instead of moving rapidly from opening cue to conclusion, the performer allows phrases to breathe, recur, and evolve. This creates a stronger sense of musical argument. The listener does not simply receive modal information; the listener is guided through a process of exploration in which the *maqām* becomes progressively more vivid and persuasive. In practical terms, this longer span permits not only recognition of the *maqām*, but also a clearer experience of how the *maqām* behaves across phrases, registers, and expressive weight. The temporality of these examples therefore supports not just recognition, but inhabitation.

A second feature is greater registral and expressive range. Longer duration allows the performer to travel more convincingly across the instrument's range, using contrast between lower, middle, and higher areas to articulate shape and development. This registral movement is not decorative; it contributes to modal exposition by showing how the *maqām* behaves across space. Likewise, ornamentation and articulation are able to function more meaningfully because they are not compressed into a hurried surface. They emerge as part of a paced expressive design.

A third feature is the stronger linkage between *taqsīm* and the composition that follows. In the longer examples, the relationship between improvisation and subsequent song or instrumental entry tends to feel more prepared and convincing. The *taqsīm* does not merely precede the next piece; it ushers the listener toward it. This preparatory function becomes particularly important when *taqsīm* is expected to establish atmosphere, orient the audience, or create continuity between modal improvisation and fixed composition. The temporal span needed for such preparation cannot always be reduced to a few seconds of recognisable phrasing.

These findings indicate that longer *taqsīm* is not inherently superior in every artistic situation, but it more consistently supports the core functions identified in this article: modal exposition, phrase development, expressive pacing, and listener orientation. The comparison therefore suggests that duration is not incidental. It shapes what *taqsīm* is able to become.

The emergence of the two-minute threshold

Across the corpus, the most significant analytical pattern is the emergence of a provisional, corpus-based benchmark of around two minutes. This threshold should not be misunderstood as a rigid universal law or a prescriptive rule for all performers and traditions. Rather, it emerges from comparative observation as the point at which *taqsīm* more consistently begins to achieve sufficient breadth for modal unfolding, phrase development, and perceptual fulfilment.

Below this approximate threshold, many examples remain musically intelligible but compressed. They may establish the *maqām* quickly, but they often do not yet sustain enough development to move beyond gestural signalling. The improvisation tends to function as a cue, a preface, or a transitional fragment rather than as a more complete improvisatory statement. Above this threshold, by contrast, *taqsīm* more often begins to display the features identified throughout this study: clearer modal dwelling, broader phrase continuity, more substantial ornamental and registral expansion, and stronger preparation for what follows.

The significance of the threshold lies not in the number itself, but in what the number allows. Within this corpus, examples clustered around two minutes provided a useful comparative reference point at which broader modal unfolding, phrase extension, and cadential preparation were more frequently observable. This is not a minimum requirement for *taqsīm*, nor a threshold that can be generalised beyond the selected corpus. It offers sufficient temporal affordance for the improvisation to breathe, extend its phrases, and dwell in the *maqām*. It's possible implications for listener engagement are theoretical and require empirical listener-response research. In this sense, the threshold is less a stopwatch-based judgment than an indicator of formal sufficiency.

At the same time, this threshold remains context-sensitive. Some highly skilled performers may create convincing miniatures, and some longer *taqsīm* may still lack coherence. The point of the present argument is not that time automatically guarantees quality, but that insufficient time often constrains the possibility of achieving quality in the first place. Duration, in other words, is not a guarantee of musical success, but it is a condition that makes certain forms of success more achievable.

Table 5: Comparative modal-development indicators across shorter and longer *taqsīm* examples

Analytical Feature	Shorter Examples (generally below ~2 minutes)	Longer Examples (generally clustered around ~2 minutes)
<i>Maqām</i> recognition	Often possible quickly for trained listeners	Also possible quickly, but reinforced through broader unfolding
Modal exposition	Present but often compressed	Clearer, more sustained, and more persuasive
Phrase development	Limited, fragmentary, or minimally elaborated	More continuous, varied, and developmental
Register movement	Often narrow or localized	Broader exploration across ranges
Ornamentation / technique	Present in compact form	More integrated into expressive pacing

Expressive pacing	Often rushed or abbreviated	More gradual, shaped, and affectively cumulative
Linkage to following composition	Functional but brief	Stronger sense of preparation and continuity
Listener orientation	May remain more legible to specialists than general listeners	May offer greater potential for continuity and engagement; this requires empirical listener research to verify
Formal impression	Gesture, cue, or transition	More fully developed improvisatory statement

The contrast shown here is analytical rather than absolute. The table summarises recurrent tendencies observed across the corpus and supports the argument that duration affects *taqsīm*'s formal, modal, and perceptual adequacy.

DISCUSSION

Duration beyond recognition: from modal cue to formal sufficiency

The distinction between rapid recognition and fuller realisation helps clarify an important issue in *maqām* studies. Scholarship on Arab music has long emphasised the importance of modal identity, expressive force, and performance atmosphere (Racy, 2003; Marcus, 2007). However, the present study suggests that modal recognition should not be mistaken for modal exposition. To recognise *Rast*, *Bayātī*, *Hijaz*, or *Nahawand* within a few seconds is not the same as hearing those *maqāmāt* unfold persuasively across time. In this respect, the article proposes that *taqsīm* must be assessed not only in terms of whether the modal field is detectable, but also in terms of whether the improvisation has been given enough temporal space to dwell, develop, and orient the listener. Duration therefore becomes relevant not because *maqām* needs minutes to be identified, but because *taqsīm* needs time to become musically convincing.

Temporal threshold as a pedagogical and analytical concept

The temporal threshold is an analytically useful concept because it avoids two extremes. On the one hand, it resists the simplistic view that “short can be just as complete as long” in every instance, regardless of what the music actually does. On the other hand, it avoids the equally crude claim that longer automatically means better. What the findings show is that time functions as an enabling condition. A performer may still fail within a longer span, just as a highly skilled performer may occasionally produce a compelling miniature. Yet in most of the examples analysed here, durations below the approximate threshold were more likely to constrain development than to support it.

The pedagogical implications are especially important. If *taqsīm* is taught primarily as a short pre-song introduction, then performers may internalize it as a compressed cue rather than a developmental form. Where pedagogy emphasises modal unfolding, phrase architecture, *ajnās* awareness, register exploration, and continuity of expression, longer *taqsīm* may emerge more naturally because the performer has been trained to think in broader temporal units. The issue is therefore not only how long a *taqsīm* lasts, but what concept of *taqsīm* underlies the performance. In this sense, duration becomes a visible outcome of pedagogy.

Listener reception, perceptual unfolding, and the non-specialist audience

Here the distinction between expert recognition and perceptual fulfilment becomes particularly significant. Auditory cognition research suggests that sound can be processed very rapidly, but meaningful organisation, expectation, and pattern-based engagement emerge through unfolding

perceptual activity (Bregman, 1990; Denham & Winkler, 2017/2018; Szabó et al., 2016). In musical contexts, this means that the ear may detect cues early, while the sense of coherence and aesthetic satisfaction develops over a longer span. Koelsch (2011) and Griffiths and Warren (2004) support this distinction between immediate sensory processing and richer perceptual organisation, while Huron (2006) and Meyer (1956/1961) remind us that expectation and continuation are central to musical meaning.

Margulis's work is also relevant here. Her emphasis on repetition and continuity as contributors to musicality suggests that listener engagement often depends on temporal reinforcement rather than isolated signals alone (Margulis, 2013; Margulis & Simchy-Gross, 2016). Applied to *taqsīm*, this implies that even when a *maqām* can be indicated quickly, a longer duration may still be needed for the listener to experience the improvisation as musically inhabitable rather than merely identifiable. This is especially true for non-specialist audiences, for whom the pleasure of *taqsīm* may lie less in taxonomic recognition than in atmosphere, pacing, texture, and the sense that the music has had time to say something.

For this reason, the present study argues that the adequacy of *taqsīm* cannot be measured only against specialist hearing. A *taqsīm* that is intelligible to experts within seconds may still feel incomplete to general listeners if it is curtailed before continuity, elaboration, and expressive momentum have had time to develop. In this respect, the two-minute threshold is valuable not because it reflects a neurological law, but because it marks a practical zone in which perceptual fulfilment becomes more achievable for a wider range of listeners.

Malay–Arab comparison and the problem of deficit framing

One of the challenges of this study is how to interpret the contrast between the local *gambus*-player examples and the Arab-player / recorded comparison corpus without falling into an unproductive binary of deficiency versus authenticity. The intention of the article is not to claim that local *gambus*-player *taqsīm* is inherently inferior or that Arab practice alone provides the normative benchmark for all improvisation. Such a position would be musically reductive and academically weak. At the same time, the differences observed in this corpus cannot simply be neutralized as harmless variation if they repeatedly coincide with limited modal development, compressed phrase structure, and reduced durational scope.

The more productive interpretation is pedagogical rather than essentialist. The contrast between the corpora suggests that different teaching environments, listening cultures, and performance assumptions generate different temporal habits. In settings where *taqsīm* is transmitted as a deeply unfolding modal practice, performers may develop greater confidence in sustaining improvisation beyond immediate signaling. In settings where *taqsīm* is treated primarily as a brief introductory convention, performers may stop earlier not because they lack musicality altogether, but because the form itself has been pedagogically narrowed.

Shair's (2024) work on the *mawwāl* is useful here because it reminds us that improvisatory genres within Arab music are not exhausted by recognisable openings or formulaic cues. Their identity also depends on how they unfold, shape expectation, and sustain expressive space. That insight supports the argument advanced here: the meaningfulness of an improvisatory genre cannot be reduced to its opening markers alone.

Broader implications for improvisation studies and maqām pedagogy

Beyond its specific corpus, this study contributes to a broader set of questions in improvisation studies. First, it suggests that duration itself can be an analytical category, not just a descriptive statistic. Improvisation scholarship has often emphasised spontaneity, creativity, structure, and social context. The present article adds that the amount of time available for improvisation may fundamentally shape whether those qualities can become audible in the first place.

Second, the article contributes to *maqām* pedagogy by highlighting the need to teach *taqsīm* as a temporal practice, not merely as a set of modal cues. Students may learn to identify *maqāmāt* quickly and still remain unable to sustain a convincing *taqsīm*. This means that pedagogy should include not only scale content, *ajnās* structure, and tonal hierarchy, but also phrase pacing, modal dwelling, developmental continuity, and the relation between improvisation and the composition that follows. In practical terms, one implication is that students should be trained to think beyond very short *taqsīm* excerpts and toward sustained modal elaboration.

Third, the article proposes a useful methodological distinction for future research: the gap between detectability and sufficiency. A *maqām* may be detectable very early, yet the *taqsīm* may remain insufficient as a form. This distinction may also prove useful beyond Arab music, including in studies of *taksim*, *alap*, or other modality-bearing improvisatory practices where duration, pacing, and formal adequacy interact in complex ways.

Finally, the article offers a case-based contribution from Malay–Arab improvisatory practice that speaks beyond regional specificity. The point is not that all traditions must converge on one ideal duration, but that the relationship between time, modal exposition, and listener reception deserves more attention across improvisatory traditions. *Taqsīm* provides a particularly revealing site for this inquiry because its identity lies precisely in the unfolding of modal and expressive space.

CONCLUSION

This article has argued that duration is not a secondary or incidental attribute of *taqsīm*, but a musically consequential condition that shapes whether the improvisation can function convincingly as a modality-bearing form. While expert listeners may recognise a *maqām* within seconds through characteristic phrase openings or intervallic cues, rapid recognition does not in itself guarantee modal exposition, expressive pacing, or formal completeness. The central claim advanced here is that *taqsīm* should be evaluated not only by its immediate detectability, but by the extent to which it has sufficient temporal space to unfold.

Within the corpus examined, a duration of roughly two minutes appeared to function as a provisional analytical benchmark, with examples clustered around the two-minute mark more consistently sustaining modal exposition, phrase development, and expressive pacing. This threshold is not proposed as a universal law, nor as a prescriptive benchmark to be imposed across all repertoires and performance settings. Rather, it functions here as an analytical finding: a practical point below which *taqsīm* more frequently risks remaining gestural, abbreviated, or underdeveloped, and above which it more often begins to achieve broader formal sufficiency. The significance of the threshold lies less in the number itself than in what that span of time makes musically possible.

Beyond its specific case material, this article proposes that duration deserves greater attention in the study of *maqām*-based improvisation and in improvisation research more generally. The concept of temporal threshold may offer a useful framework for future studies examining how modality-bearing forms become legible, complete, and affectively persuasive across different traditions. Further work might expand the corpus, incorporate listener-response methods, compare additional genres such as *taksim* or *mawwāl*, or test how varying durations are perceived by specialist and non-specialist audiences. What this study has sought to establish is that in *taqsīm*, time is not merely a container for improvisation. It is one of the conditions through which improvisation becomes form.

REFERENCES

- Alkaei, Z., & Küssner, M. B. (2021). Taqsim as a creative musical process in Arabic music. *Frontiers in Psychology*, 12, Article 640409. <https://doi.org/10.3389/fpsyg.2021.640409>
- Bregman, A. S. (1990). *Auditory scene analysis: The perceptual organisation of sound*. MIT Press.
- Denham, S. L., & Winkler, I. (2017/2018). Predictive coding in auditory perception: Challenges and unresolved questions. *European Journal of Neuroscience*, 51(5), 1151–1160. <https://doi.org/10.1111/ejn.13802>
- Feldman, W. (1993). Ottoman sources on the development of the taksim. *Yearbook for Traditional Music*, 25, 1–28. <https://doi.org/10.2307/768680>
- Griffiths, T. D., & Warren, J. D. (2004). What is an auditory object? *Nature Reviews Neuroscience*, 5(11), 887–892. <https://doi.org/10.1038/nrn1538>
- Hargreaves, D. J., & North, A. C. (1999). The functions of music in everyday life: Redefining the social in music psychology. *Psychology of Music*, 27(1), 71–83. <https://doi.org/10.1177/0305735699271007>
- Huron, D. (2006). *Sweet anticipation: Music and the psychology of expectation*. MIT Press. <https://doi.org/10.7551/mitpress/6575.001.0001>
- Koelsch, S. (2011). Toward a neural basis of music perception: A review and updated model. *Frontiers in Psychology*, 2, Article 110. <https://doi.org/10.3389/fpsyg.2011.00110>
- Marcus, S. L. (2007). *Music in Egypt: Experiencing music, expressing culture*. Oxford University Press.
- Margulis, E. H. (2013). Repetition and emotive communication in music versus speech. *Frontiers in Psychology*, 4, Article 167. <https://doi.org/10.3389/fpsyg.2013.00167>
- Margulis, E. H., & Simchy-Gross, R. (2016). Repetition enhances the musicality of randomly generated tone sequences. *Music Perception*, 33(4), 509–514. <https://doi.org/10.1525/mp.2016.33.4.509>
- Meyer, L. B. (1956/1961). *Emotion and meaning in music*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226521374.001.0001>
- Nettl, B. (1974). Thoughts on improvisation: A comparative approach. *The Musical Quarterly*, 60(1), 1–19. <https://doi.org/10.1093/mq/LX.1.1>
- Racy, A. J. (1991). Creativity and ambience: An ecstatic feedback model from Arab music. *The World of Music*, 33(3), 7–28.
- Racy, A. J. (2000). The many faces of improvisation: The Arab taqsim as a musical symbol. *Ethnomusicology*, 44(2), 302–320. <https://doi.org/10.2307/852534>
- Racy, A. J. (2003). *Making music in the Arab world: The culture and artistry of tarab*. Cambridge University Press.
- Raja Yusof, R. Z. (2025). Sacred tone: The spiritual and psychoacoustic dimensions of the Arabic maqamat. *Journal of Creative Arts*, 2(1), 88–110. <https://doi.org/10.24191/jca.v2i1.5042>
- Raja Yusof, R. Z. (2025). The effects of maqam-based oud therapy on emotional and physiological responses: A study in Malaysian listeners. *Jurai Sembah*, 6(2), 81–90. <https://doi.org/10.37134/juraisembah.vol6.2.2.2025>
- Raja Yusof, R. Z. (2025). The misidentification of maqam Kurd as maqam Bayati among gambus players in Malaysia: Historical perspectives and theoretical implications. *The International Journal of Arts, Culture & Heritage*, 13, 205–235. <https://doi.org/10.62312/asw.ijach.13.8.2025>

- Raja Yusof, R. Z. R. M. (2025). Intonaphobia: A culturally conditioned deficiency in microtonal perception among Malay gambus musicians in maqām traditions. *Melayu: Jurnal Antarabangsa Dunia Melayu*, 18(2), 155–176. [https://doi.org/10.37052/jm.18\(2\)no1](https://doi.org/10.37052/jm.18(2)no1)
- Sarath, E. (1996). A new look at improvisation. *Journal of Music Theory*, 40(1), 1–38. <https://doi.org/10.2307/843921>
- Shair, N. (2024). Investigating a vocal improvisatory genre (mawwāl) in Arab music: A case study of a mawwāl performance by Wadī‘ al-Šāfi. *Music Analysis*, 43(1), 114–135. <https://doi.org/10.1111/musa.12227>
- Shannon, J. H. (2003). Emotion, performance, and temporality in Arab music: Reflections on tarab. *Cultural Anthropology*, 18(1), 72–98. <https://doi.org/10.1525/can.2003.18.1.72>
- Signell, K. (1980). Improvisation in Near Eastern musics. *Music Educators Journal*, 66(5), 133–136. <https://doi.org/10.2307/3395791>
- Şimşek, M. (2011). The function of taksim in Ottoman classical music. *Asian Music*, 42(2), 73–99.
- Şimşek, M. (2014). Taksim: An improvisatory art in Turkish classical music. *Ethnomusicology Forum*, 23(3), 335–356. <https://doi.org/10.1080/17411912.2014.957212>
- Solis, G., & Nettl, B. (Eds.). (2009). *Musical improvisation: Art, education, and society*. University of Illinois Press.
- Spector, J. (1970). Classical ‘ud music in Egypt with special reference to Maqamāt and genres. *Ethnomusicology*, 14(3), 419–433. <https://doi.org/10.2307/849799>
- Stevens, C. J. (2012). Music perception and cognition: A review of recent cross-cultural research. *Topics in Cognitive Science*, 4(4), 653–667. <https://doi.org/10.1111/j.1756-8765.2012.01215.x>
- Szabó, B. T., Denham, S. L., & Winkler, I. (2016). Computational models of auditory scene analysis: A review. *Frontiers in Neuroscience*, 10, Article 524. <https://doi.org/10.3389/fnins.2016.00524>
- Touma, H. H. (1971). The maqām phenomenon: An improvisation technique in the music of the Middle East. *Ethnomusicology*, 15(1), 38–48. <https://doi.org/10.2307/850386>

DISCOGRAPHY

- Fadzil Ahmad, & Said Ahmad Bagil. (n.d.). [Gambus recordings]. AHAS Production.
- Kenangan Johor. (n.d.). Yayasan Warisan Johor.
- Naseer Shamma, & Al-Oyoun. (2015). Arab chamber music [Recording].
- Noraniza Idris. (2000). Iktiraf [Recording]. Suria Records.

Appendix A

CORPUS SOURCES AND RECORDING METADATA

The following table documents the provenance and exact analytical boundaries of each item in the corpus. Where informant recordings are used, the consent column records whether recording consent was obtained.

Code	Performer / pseudonym	Instrument	Maqām	Duration (mm:ss)	Date / year	Track & source	Consent	Taqsim start–end
M1	Informant A	gambus	<i>Kurd</i>	0:20–0:35	2014–2017	Author field recording, Johor (MA research)	Verbal	From 0:00 (opening)
M2	Informant B	gambus	<i>Nahawand</i>	0:20–0:35	2014–2017	Author field recording, Johor (MA research)	Verbal	From 0:00 (opening)
M3	Informant C	gambus	<i>Hijaz</i>	0:20–0:35	2014–2017	Author field recording, Johor (MA research)	Verbal	From 0:00 (opening)
M4	Informant D	gambus	<i>Kurd</i>	0:20–0:35	2014–2017	Author field recording, Johor (MA research)	Verbal	From 0:00 (opening)
J1	Uncredited	gambus	<i>Kurd</i>	1:30	n.d.	<i>Isteri Cemburu</i> — Kenangan Johor (Yayasan Warisan Johor)	N/A (published)	0:00–1:30
J2	Fadzil Ahmad & Said Ahmad Bagil	gambus	<i>Kurd</i>	0:58	n.d.	<i>Joget Memikat Janda</i> — Fadzil Ahmad vs Said Ahmad Bagil (AHAS Production)	N/A (published)	0:00–0:58
J3	Fadzil Ahmad & Said Ahmad Bagil	gambus	<i>Kurd</i>	0:53	n.d.	<i>Malam Pengantin</i> — Fadzil Ahmad vs Said Ahmad Bagil (AHAS Production)	N/A (published)	0:00–0:53
J4	Uncredited	gambus	<i>Nahawand</i>	0:58	n.d.	<i>Naam Sidi</i> — Kenangan Johor (Yayasan Warisan Johor)	N/A (published)	0:00–0:58
J5	Fadzil Ahmad & Said Ahmad Bagil	gambus	<i>Kurd</i>	0:55	n.d.	<i>Ramadhan Bulan Mulia</i> — Fadzil Ahmad vs Said Ahmad Bagil (AHAS Production)	N/A (published)	0:00–0:55
J6	Fadzil Ahmad & Said Ahmad Bagil	gambus	<i>Kurd</i>	0:54	n.d.	<i>Seruan Petani</i> — Fadzil Ahmad vs Said Ahmad Bagil (AHAS Production)	N/A (published)	0:00–0:54
J7	Fadzil Ahmad & Said Ahmad Bagil	gambus	<i>Nahawand</i>	0:48	n.d.	<i>Ya Allah Ya Saidi</i> — Fadzil Ahmad vs Said Ahmad Bagil (AHAS Production)	N/A (published)	0:00–0:48
J8	Uncredited	gambus	<i>Kurd</i>	0:36	n.d.	<i>Yaladan</i> — Kenangan Johor (Yayasan Warisan Johor)	N/A (published)	0:00–0:36
J9	Norani Idris	gambus	<i>Kurd</i>	0:28	2000	<i>Ya Salam</i> — Noraniza Idris, Iktiraf (Suria Records, 2000)	N/A (published)	0:00–0:28
J10	Uncredited	gambus	<i>Kurd</i>	1:26	n.d.	<i>Zapin Merindu</i> — Kenangan Johor (Yayasan Warisan Johor)	N/A (published)	0:00–1:26
A1	Hany ElBadr y	ney	<i>Rast</i>	1:55	2015	<i>Ishraq</i> — Oyouun, Arab Chamber Music (2015)	N/A (published)	0:00–1:55
A2	Hussein El Ghoundour	violin	<i>Saba</i>	1:55	2015	<i>Hilal Saba</i> — Oyouun, Arab Chamber Music (2015)	N/A (published)	0:00–1:55
A3	Saber AbdelSattar	qanun	<i>Nahawand</i>	1:55	2015	<i>Zaman el-Nahawand</i> — Oyouun, Arab Chamber Music (2015)	N/A (published)	0:00–1:55
A4	Naseer Shamma	oud	<i>Bayātī</i>	2:03	2015	<i>Bein el-Nakheel</i> — Oyouun, Arab Chamber Music (2015)	N/A (published)	0:00–2:03