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Mapping assessor judgement-in-action: A transition network analysis of dialogic moves in interactive oral assessment

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Interactive Orals (IOs) are increasingly being adopted in higher education as an authentic and academically rigorous form of assessment. Despite the assessor's central role in *shaping the dialogic interaction*, research has focused predominantly on student experience and assessment design, with limited empirical investigation of how assessors enact real-time dialogic practices. This study addresses this gap by examining assessor dialogue during real-time IOs, with attention to the functions and sequencing of assessors' contributions. Drawing on audio-recorded and transcribed IO sessions from three courses across three institutions, involving seven assessors and 235 IO sessions in the larger study, the paper reports preliminary findings from 25 IOs involving two assessors with different levels of IO assessment experience. Assessor dialogue was coded into 13 substantive dialogic moves. Transition Network Analysis (TNA) was used to model transitions between dialogic moves and compared between experienced and novice assessors. Across 25 sessions, 723 assessor moves were coded. ACKNOWLEDGE was the most common dialogic move (30.4%), functioning as a central interactional hub. Six transitions significantly differed between the experienced and novice assessors. The largest difference was ELICIT to ACKNOWLEDGE, which was more probable for the experienced assessor, while ACKNOWLEDGE to ELICIT and REFRAME to REFRAME moves were more probable for the novice assessor. The initial findings suggest that assessor expertise may be expressed through how they take up student responses and orchestrate subsequent moves rather than the type of the questions. The paper proposes assessor *dialogic orchestration* as a useful conceptualisation of judgement-in-action and discusses implications for assessor training, moderation and assessment quality. However, the study does not establish that particular dialogic moves produce better student responses or assessment outcomes; these relationships require investigation in subsequent research.

Keywords: interactive oral assessment, dialogic orchestration, dialogic moves, transition network analysis, assessor training

Introduction

Interactive Orals (IOs) are assessments that engage students in an unscripted conversation with an assessor about an authentic scenario designed to reflect real-world professional situations (Sotiriadou & Logan-Fleming, 2025; Ward et al., 2023). They position the assessor as an active co-producer of the assessment. Unlike written

assessments, where judgement is applied retrospectively to a fixed artefact, an IO assessment unfolds in real time through the assessor's decisions about when to probe, when to challenge, when to redirect, and when to close the interaction (Davey et al., 2025; O'Riordan et al., 2026). In this context, the prompts selected and the moments of challenge or reframing shape the conditions under which student competence is revealed. Despite this, empirical research has focused almost exclusively on students' perspectives of the IO interaction. Studies have examined how IOs support graduate attribute development, reduce contract cheating risk, and how students experience the assessment encounter (Tan et al., 2022; Ward et al., 2023). In contrast, the assessor's real-time interactional practice has received markedly less attention, with most studies examining rubric design, scoring reliability, and post-assessment moderation rather than dialogic processes through which assessment unfolds (Davey et al., 2025).

Addressing this gap matters as evidence suggests that more experienced educators can interpret students' intentions more deeply than novice teachers (Lin et al., 2024). This raises the possibility that differences in assessor experience may influence how opportunities for students to elaborate, clarify, defend or develop their responses are created during an IO. Differences in assessor experience may therefore influence the nature and sufficiency of evidence available for assessment judgement. Whether such differences have consequences for assessment validity, reliability or equity remains an empirical question for subsequent research. To examine how dialogic transition patterns may differ between experienced and novice IO assessors this study uses Transition Network Analysis (TNA) (Tikka et al., 2025). TNA is intended to capture the temporal and relational dynamics of educational processes. It has been used in learning analytics to model temporal patterns in student collaboration and regulation (Saqr et al., 2025), which makes it a suitable method for examining how assessor and student dialogue unfolds during IO discussions. As the purpose of the study is to examine whether different levels of IO assessors' experience are associated with different ways of organising assessment dialogue, the study conceptualises assessor judgment-in-action as the observable sequencing of dialogic moves through which assessors elicit, interpret, develop, test and evaluate student responses. The study therefore focuses on the interactional enactment of judgement rather than attempting to infer the quality of the resulting judgement from interactional patterns alone. The study is guided by the following research questions:

RQ1: What dialogic move patterns characterise assessor interactions during IO assessments?
RQ2: How do transition patterns between dialogic moves differ among assessors with varying levels of IO assessment experience?
RQ3: What do observed transition patterns suggest about the development of assessor expertise and practice in IO assessment?

Conceptual framework

This study is informed by two theoretical perspectives and one analytical framework. First, dialogic perspectives on assessment and feedback emphasise that assessment is shaped by the interaction through which evidence and feedback are generated and taken up (Carless & Boud, 2018). From this perspective, the interaction between assessor and student is not simply a context for assessment but part of the process through which evidence becomes available for judgement. The way an assessor engages with a student may therefore shape the extent and form of what the student can demonstrate. Second, expertise theory (Ericsson & Smith, 1991) provides a basis for considering how experience may be expressed through observable patterns of behaviour. Expert performance in complex domains involves domain-specific knowledge and the capacity to respond to situational demands rather than relying solely on declarative knowledge. Applied to IO assessment, this suggests that differences in assessor experience may be reflected in systematic and adaptive transition patterns rather than simply in knowledge of course content or familiarity with the rubric. Third, TNA (Saqr et al., 2025) provides the analytical framework for examining these patterns. TNA conceptualises interaction as a sequence of transitions between coded states, allowing researchers to model the structure and temporal organisation of dynamic educational processes.

In the present study, dialogic moves constitute the observable interactional states and transitions between them constitute the behavioural sequences of interest. TNA therefore provides the methodological basis for operationalising differences in interactional organisation as empirical objects of study. Together, these

perspectives support the study's central proposition that assessment dialogue can be understood as a temporally organised process and that differences in assessor experience may be reflected in the sequencing and organisation of dialogic moves during IO assessment. These patterns can be identified, compared, and used for an evidence-based approach to assessor training. TNA models observable behaviours as temporally ordered transitions between states, represented as directed, weighted networks (Saqr et al., 2025). The resulting network provides a visual and mathematical representation of how assessors organise assessment dialogue over time. TNA has been applied productively in learning analytics to model learner engagement and collaborative problem-solving (Saqr et al., 2025) and, more recently, to compare novice and experienced teachers' behavioural transitions in team teaching contexts (Liu et al., 2025). To our knowledge, this is the first application of TNA to IO assessment and assessor behaviour specifically.

Study design and method

The study adopts a comparative observational design. Data were collected from three university courses across three institutions. The larger dataset comprised 235 recorded IO sessions across three courses at three institutions (Course 1: 25 sessions; Course 2: 40 sessions; Course 3: 170 sessions), involving seven assessors. This paper reports a preliminary analysis of Course 1, comprising 25 IO sessions conducted by two assessors. Ethics approval was obtained (HREC/2026/0423) and assessors provided informed consent for their IO transcripts to be analysed. IOs were conducted via video conferencing platforms producing transcripts and audio recordings. Assessors received the same training by course coordinators (e.g., rubric and assessment instructions) prior to conducting the IO. Assessor experience was defined specifically in relation to conducting IO assessments rather than general teaching experience. Participants were profiled according to the number of IOs previously assessed, participation in moderation processes, and completion of IO-specific training. The study did not assume that experience automatically equates to assessment quality. Rather, IO assessment experience was treated as a proxy indicator of developing familiarity with the assessment process. The purpose of the study was therefore not to determine whether one assessor or level of experience represented a "better" assessor, but to examine whether assessors with different levels of IO assessment experience exhibited different dialogic transition patterns during assessment interactions.

Coding scheme

The primary unit of analysis was the *assessor dialogic move,* operationalised in this study as a discrete assessor turn or sub-turn performing a recognisable interactional function. The definition was developed for the present study to capture the observable functions through which assessors elicited, developed, evaluated, redirected or closed assessment dialogue. The coding framework was informed by prior work on sequential interaction and assessment dialogue (Bakeman & Gottman, 1997; Carless & Boud, 2018), but the specific categories and their operational definitions were developed and refined through engagement with the IO transcripts.

The coding scheme initially comprised 11 dialogic categories (see Table 1). Iterative engagement with the transcripts resulted in the addition of EXTENDER and INTERRUPTER categories, producing 13 substantive dialogic categories. UNKNOWN was retained as a non-substantive category to identify technical, administrative or otherwise non-assessment-related utterances and was excluded from the substantive analysis.

Table 1.
Coding scheme for assessor dialogic moves

Code	Definition	Example
ELICIT	Open prompt initiating a new line of inquiry	"Can you walk me through your reasoning here?"
PROBE	Follow-up that deepens or extends the student's preceding response	"And why would that be the case?"
CLARIFY-REQ	Request for clarification of an ambiguous student statement	"Could you say a bit more about what you mean?"

Code	Definition	Example
CHALLENGE	Challenges accuracy, completeness, or reasoning; invites defence or revision	"Others would argue the opposite – how would you respond?"
REFRAME	Offers a different framing or perspective; invites re-engagement from a new angle	"What if we approached this from a systems perspective?"
JUDGE-TALK	Criterion-linked evaluative statement, explicit or implicit	"That's the kind of analysis we're looking for."
ACKNOWLEDGE	Brief neutral acknowledgement maintaining dialogue flow; includes visible nodding online	"OK"; "Right, I see." [live feedback]
SIGNPOST	Metacommunicative statement about IO structure or direction	"I'd now like to move to the second section."
REDIRECT	Moves dialogue to a new focus in response to the interaction	"Let's park that and come back to the data."
WAIT	Deliberate assessor pause exceeding three seconds; no dialogic move enacted	[Observable silence or off-screen note review]
CLOSE	Signals conclusion of the IO or a major section	"That's all the questions from my side."
EXTENDER	Encourages elaboration on the current topic	"That's interesting. Tell me more."
INTERRUPTER	Interrupts the current narrative and redirects the discussion	"You've told me about X. What about Y?"
UNKNOWN	Technical, administrative or non-assessment-related utterance	"I can't hear you"; "Your microphone is off."

Inter-rater reliability was assessed on a 25% random subsample of transcripts using Cohen's kappa, with a minimum acceptable threshold of .75 specified a priori for acceptable agreement (Liu et al., 2025).

Data preparation and analysis

Transcripts were checked for completeness, formatting and de-identification before coding. A random sample of 20% of sessions were checked against audio recordings to verify transcript accuracy. Errors identified through this process were corrected and, where necessary, additional audio checks were completed. Assessor speech was segmented into coding units, with longer turns divided where necessary so that each unit represented one primary dialogic function.

Coding was iterative, with the codebook refined through team discussion where interactional behaviours were not adequately captured by the initial categories. The resulting coded sequences were analysed using TNA. Each dialogic move was represented as a node and each transition from one move to the next as a directed edge. Edge weights represented conditional transition probabilities: the probability that one move followed another. The analysis examined both the overall transition network and differences between the two assessors (TA1 and TA2). A permutation test based on 1,000 random reshuffles of session-level group labels was used to test differences in edge-level transition probabilities. Differences were calculated as Experienced minus Novice. Positive values therefore represent transitions more probable for the experienced assessor, while negative values represent transitions more probable for the novice assessor (see Figure 1).

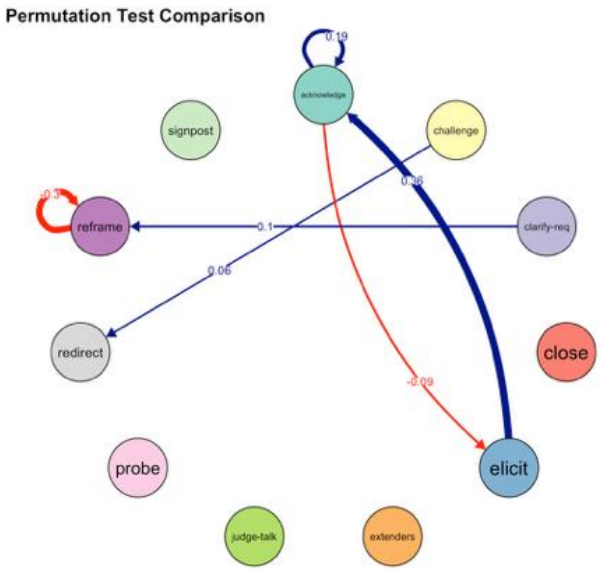


Figure 1. Comparison of dialogic move transitions between more and less-experienced assessors based on the permutation test

Key findings

Analysis of the 723 assessor moves suggests that differences in IO assessment experience may be reflected in how assessors sequence and take up dialogic moves. Assessor dialogue is characterised by recurring patterns of elicitation, acknowledgement, probing, challenging and closing, with acknowledge emerging as the most common move (30.4%) and a central hub in the interaction network. The experienced and novice assessors differed most clearly in how they sequenced these moves rather than simply in which moves they used. The experienced assessor was more likely to acknowledge following elicitation, and to move from clarification to reframing and from challenge to redirect, whereas the novice assessor was more likely to move from acknowledgement back to elicitation and to repeat reframing. These patterns suggest that assessor experience may be reflected in how assessors take up student responses and organise what happens next, rather than simply in their ability to ask questions or apply the rubric. The findings therefore position IO assessment as a dynamic, co-constructed interaction in which assessor judgement is enacted throughout the conversation.

Contributions and implications

This study contributes to IO assessment scholarship by making the assessor's real-time interactional practice visible and conceptualising assessor judgement-in-action as an enacted process rather than solely an outcome represented by a final grade. It extends assessment research by shifting attention from the student grade to the interaction through which evidence for judgement is generated. It supports the development of *dialogic orchestration* as a conceptual lens for understanding how assessors select, sequence and adapt dialogic moves in response to emerging student evidence. Methodologically, the study demonstrates how TNA can be used to examine assessment interactions as temporal and relational processes rather than as isolated assessor behaviours. By making transitions between interactional moves visible, the approach provides a way of examining aspects of judgement-in-action that may otherwise remain implicit in conventional analysis of assessment practice.

Practically, the findings suggest that IO assessor development could extend beyond rubric familiarisation and question design to include how assessors respond to student answers, when to probe, challenge, clarify, reframe or redirect, and when sufficient evidence has been generated to close the interaction. Importantly,

the findings should not be interpreted as indicating that one dialogic move is inherently better than another. Different moves may serve different interactional purposes, and their value may depend on the student's response, the assessment task, the evidence required and the point reached in the interaction. The potential training implication is therefore not to prescribe a fixed sequence of "good" moves, but to develop assessors' capacity to recognise emerging evidence and adapt their interaction accordingly. A key direction for future research is to examine whether particular transition patterns are associated with differences in the quality, completeness or evaluative value of the evidence students provide.

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