Teacher Wait-Time and Learner Initiation: A Single Case Analysis

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Abstract
The prevailing pattern of classroom interaction is a tripartite exchange structure known as IRF (teacher initiation, student response, teacher follow-up/feedback; Sinclair & Coulthard, 1975). Although it has its own contributions to classroom discourse, it has been criticized on several grounds, particularly for affording minimum learner participation opportunities (Kasper, 2001). An alternative practice has been promoting learner initiation and agency through moving out-of-IRF. However, when the form of interaction is teacher-fronted, IRF becomes the centerpiece and moving out of it tends to be difficult. This paper aims at exploring first what learners need to take initiatives and exercise agency in teacher-fronted interaction, and second how teachers can play a facilitative role in this process. Conversation analytic study of an EFL teacher’s naturally-occurring interaction with learners during a homework review activity demonstrates how the teacher’s extended wait-time practice affords a learner the interactional space needed to initiate a question and voice her locus of trouble. Moreover, the teacher’s consistent extended wait-time practice after the learner’s initiation functions as an invitation bid for other learners to orient to the trouble and successfully negotiate it in their learner-learner interaction. Extracts of this study portray learners’ management to drive their own learning.

Keywords: IRF; conversation analysis; learner initiation; single case analysis; space; wait-time

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Introduction

One of the most prevalent practices in classroom interaction is the IRF sequence (teacher initiation, student response, teacher follow-up/feedback; Sinclair & Coulthard, 1975). In the words of Wells (1993), “if there is one finding on which learners of classroom discourse agreed, it must be the ubiquity of the three-part exchange structure” (p. 1).

As to its value, some researchers consider the IRF as 'the essential teaching exchange' (Edwards & Westgate, 1994, p.124) and sometimes as a norm of conduct (Hicks, 1995, p. 6). In practice, teachers have adopted the IRF as a ‘ritualized behavior' because it brings about control and efficiency (Van Lier, 1996). Musumeci (1996) suggests four reasons why it prevails in classroom interaction. First, it is in line with teachers and learners’ expectations. Second, teachers have experienced that some learners are desperately waiting for (positive) feedback. Third, it concurs with power relations in most classes. When IRF is at work, the teacher controls over who can talk, when and about what (Greenleaf & Freedman, 1993). As a result, the asymmetrical role relationship between teachers and learners would be established and sustained. Finally, it is the most effective means of moving the discourse forward and overcoming the thorny problem of time constraints (Walsh, 2006).

However, some criticisms have been leveled against the use of the IRF exchange due to its affording of minimum opportunities for language learning, particularly for developing communicative competence (Kasper, 2001), and also for placing severe limitations on learner contributions to classroom discourse (Nunan, 1987). The main concern over the use of the IRF is best encapsulated in the words of Legutke and Thomas (1991, p. 9):

The way it is structured does not seem to stimulate the wish of learners to say something, nor does it tap what they might have to say … Learners do not find room to speak as themselves, to use language in communicative encounters, to create text, to stimulate responses from fellow learners, or to find solutions to relevant problems.

As a result, quite recently, scholars and practitioners have widely acknowledged the importance of learner initiation through moving out of IRF (Garton 2012; Waring, 2009, 2011). It is believed that when
learners take initiatives, e.g. by raising questions or providing comments, they are actually paving the way for exercising agency, i.e. managing and directing interaction in light of their needs and goals (Allwright, 1984; Van Lier, 2008).

Waring (2011) defines learner initiation as “any attempt to make an uninvited contribution to the ongoing classroom talk, where ‘uninvited’ may refer to (1) not being specifically selected as the next speaker or (2) not providing the expected response when selected” (p. 204).

**Extract 1**

*Teacher*: What’s your favorite hobby, Reza?

*Ali*: Excuse me, why do all teachers always ask about our hobbies?

*Teacher*: (laughter) what else should we ask about?

This extract portrays an instance of moving out of IRF. The teacher nominates a learner (Reza) and asks him about his hobby in a referential question. Another learner (Ali) self-selects himself as the next speaker, takes the floor, and makes an uninvited contribution. Although this contribution occupies the R position in the sequence, it does not constitute the R of the IRF sequence. Even if the nominated student (Reza) had made the same contribution, it would again have been an initiation due to being unexpected.

The significance of learner initiation has been recognized in both theory and practice. Within the input-output model of language acquisition (Gass & Selinker, 2001), a learner receives input from the environment, processes the input inside the brain, and produces output. Not only should this input be available to the learners, but also it should be linguistically and cognitively accessible to them (Kumaravadivelu, 2006). In other words, comprehensibility is a necessary (but not sufficient) condition of input (Krashen, 1985). Pica, Young, and Doughty (1987) found in their study of native speaker/ non-native speaker dyads that learner initiatives lead to more interaction and thus increase comprehension of input. Learner initiation entails clarification requests, confirmation checks, comprehension checks, repairs and the like (Kumaravadivelu, 1993; Walsh, 2002) which promote negotiation of meaning and lead to input modification. In other words, learner initiation is an attempt to fine-tune the input to one’s level of L2
development. In addition to receiving input of higher comprehensibility, learners can actually create an opportunity for themselves to produce comprehensible output (Swain, 1985) via taking initiatives. Therefore, according to Ellis (1998) “a classroom is acquisition-rich when learners are given a chance to control the discourse” (p. 147). Within Vygotsky’s (1978) sociocultural theory, learning is conceptualized as participation in classroom interaction (Donato, 2000). Exercising initiative is one form of actively participating in classroom discourse (van Lier, 1984). Learning from this perspective is not dependent upon the amount of comprehensible input, but upon ‘the opportunities for meaningful action that the situation affords’ (van Lier, 2000, p. 252). As to Critical pedagogy (Freire, 1970), learners have been the ‘oppressed’ members of classroom context as long as the ‘banking model of education’ is in practice. In his authoritative book, *pedagogy of the oppressed*, Freire argues against the model in which learners are considered as “empty vessels to be filled by the teacher” (p. 79). Instead, he argues in favor of a dialogic ‘problem-posing model’ that empowers learners to voice their concerns. When learners exercise agency and take initiatives, they are actually making and managing the transition from the banking model to the problem-posing model. From a pedagogic perspective, learner initiation means ‘individualizing the instruction’, ‘matching the instruction to one’s particular needs’, and ‘creating participation opportunities for oneself and for other learners’ (Allwright, 1984). Slimani (1989) has also suggested that “although there is usually much less learner-initiated than teacher-initiated content in classrooms, it is from the former, rather than the latter, that learners claim to have learned the most” (cf., Thornbury, 1996, p. 282).

In spite of the considerable significance attached to learner initiatives, such initiatives manifest themselves quite infrequently in classroom discourse, specifically when the focus of the class is on form and accuracy. In form and accuracy context, turn-taking sequences are tightly controlled by the teacher and the form of classroom interaction is teacher-fronted (Seedhouse, 2004). In this context, IRF becomes the centerpiece and initiation is hard to take, but not impossible. Therefore, what can make initiation feasible in teacher-fronted classroom interaction?
A handful of conversation analytic studies have dealt with the issue of learner initiation in classroom discourse. Those studies mainly focused on it nature, typology, and outcomes. For example, in her study of an ESL classroom, Waring (2009) detailed a student’s success in moving out of a series of IRF sequences during a homework review activity and the participation structure that the initiation triggered in the unfolding discourse. Jacknick (2009), in her doctoral thesis, considered initiations on a continuum of difficulty based on the degree to which the initiation is projected by or affiliates with the prior teacher turn. Still in another study, Waring (2011) audio- and video-taped seven ESL classes to extract cases of learner initiation and to propose an empirically-based typology of learner initiatives. She identified three types of initiatives: (1) initiating a sequence (type A); (2) volunteering a response (type B); (3) exploiting an assigned turn (type C). Garton (2012) examined 11 EFL lessons in Italy, identified relevant episodes containing learner initiatives and described the functions of learner initiative in the unfolding patterns of interaction.

However, to the best of our knowledge, the sources of learner initiation in teacher-fronted interaction seem to be underrepresented in the literature. Moreover, the role of the teacher in generating opportunities for learners to voice their problems and provide comments in their initiatives has remained under-researched.

**Research questions**

1. What do learners need to move out of IRFs and take initiatives in teacher-fronted interaction?

2. How can teachers encourage learners to take initiatives and exercise agency in the classroom?

**Methodology**

The tenets of conversation analysis (CA) inform the methodology of this study. Since CA is by definition “the study of recorded, naturally occurring talk-in-interaction” (Hutchby & Wooffitt, 2008, p. 12), the design of this study contains: (a) making recordings of natural interaction; (b) transcribing the recorded data; (c) analyzing selected episodes; and (d) reporting the research (Ten Have, 2007).

The data come from a larger corpus of 10 two-hour adult EFL classes video-taped at a language institution in the northern part of Iran,
the province of Mazandaran. The data for this study were taken from an intermediate-level coeducational class whose teacher was a 27-year-old experienced M.A. holder in TEFL at the time of data collection. In his class, there were 13 students, eight females and five males, whose ages ranged from 19 to 31. The class met twice a week in the afternoons. To observe research ethics, informed consent was obtained from the participants of the study.

The lesson was videotaped using a wall-mounted camera already installed in the class for observational purposes. Therefore, the teacher and the learners had gotten used to the presence of the camera since it had been there for more than a year. To record classroom interaction as it naturally occurred, we assumed the role of complete observers and did not attend the class, nor did we ask for any extracurricular activities.

The two-hour video-recording was transcribed line-by-line in its entirety using the modified version of the system developed by Jefferson (1983) with some slight modifications (see Appendix). Various interactive features, including beginnings and endings of turns, the duration of pauses, latching turns, overlapping intonation, gesture, and the like, were documented in the transcript to make it more comprehensive and accurate. Afterwards, we read through the transcript over and over to identify episodes of teacher-fronted interaction entailing learner initiatives.

**Single Case Analysis**

Conversation analysis (CA) describes a single phenomenon or a single domain of phenomenon by examining a collection of instances (Schegloff, 1987). One aspect of CA is single case analysis where the analyst describes a single phenomenon not through examining a collection of instances, but by analytic explication of a single fragment of talk (Hutchby & Wooffitt, 1998; Schegloff, 1987). The purpose of single case analysis is to develop a richer and deeper understanding of a phenomenon (Raymond & Heritage, 2006) via portraying its structuring and subtleties in a single utterance, speech act, or episode (Hutchby & Wooffitt, 1998). In other words, single case analysis does not try to uncover a new phenomenon; rather, it aims at uncovering a particular aspect of interaction previously unnoticed in a single episode (Mori, 2004). Validity of analysis is not contingent upon the frequency
of instances, but on the adequate descriptions of how a certain feature works in a system (Waring, 2008).

Accordingly, we focused on a single episode happening within ‘form-and-accuracy context’ (Seedhouse, 2004) in which learners take initiatives. Extract 2 depicts the organizational structure of the selected episode. This is part of a homework review activity, which is a typical example of teacher-fronted interaction.

**Extract 2**

<table>
<thead>
<tr>
<th>Episode</th>
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<tbody>
<tr>
<td>435 T</td>
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<tr>
<td>436 L3</td>
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<td>437 T</td>
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<td>438 L5</td>
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<td>447 T</td>
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<tr>
<td>448 L9</td>
</tr>
<tr>
<td>449 T</td>
</tr>
<tr>
<td>450 L2</td>
</tr>
</tbody>
</table>
451 T = example with fewer =
452 L2 = ↓ yes, but maybe it is wrong =
453 T = ↓ ok, go ahead =
454 L2 = There is fewer traffic in Babolsar in winter =
455 L3 = less traffic (2.0)
456 L6 yes, less traffic. Traffic is uncountable.
457 L2 = No, we have number two (1.0) too MANY traffic (3.0)
458 L6 traffic JAMS, not traffic. For traffic we say less =
459 L3 = because it is uncountable. For countable we say uːm fewer.
((the teacher looks at L2)) (2.5)
460 L2 so, too MUCH traffic, and less traffic ((nodding))
(0.5) because it is uncountable. ↑ Yes =
461 T = ↓ yes.

Results
Upon recording, transcribing, and selecting the relevant episode, we meticulously examined its turn-takings, sequences, and structural organization to uncover the phenomenon that can make interaction conducive to learner initiations. The ‘seen but not noticed’ phenomenon that keeps emerging from the single case analysis is wait-time which is of two types (Rowe, 1974a, 1974b). Post-solicitation wait-time (or wait-time type I) refers to the duration of silence after the teacher’s utterance, specifically question whereas wait-time type II, also known as post-response wait-time, pertains to the accumulation of pauses on the side of the learner. To explicate the role that this phenomenon plays, the overall structure of the episode has been divided into its constituents, i.e., sequences. In presenting the four sequences of the episode, four concepts from the field of second language acquisition (SLA) have been used, i.e. clarification request, information request, hypothesis testing, and confirmation check.

Extract 3  Clarification request
A clarification request is ‘a request for further information or help in understanding something the interlocutor has previously said’ (Pica, et al., 1987, p. 124).
435 T  =↓yes, that’s right (0.5) ((turning to L3))
Number ↑six =

436 L3  ="what time does the last train leave?" (0.5)
can you tell me when the last train leaves=

437 T  =“can you tell me when the last train leaves.”
It is true,>but because we
have what time, it's good to say what time. Can
you tell me what time the last train leaves?<
(0.5) Or when is also acceptable. That's right.
"Good”,↑thank ↓you so much. Now let’s go to
the next part. (4.0)

→ 438 L5  = excuse me, I have a problem with fewer and
less.=

Extract 3 is a continuation of checking homework activity in which
the teacher calls on individual learners to read aloud answers to
(previously done-at-home) exercises. Here, the grammatical focus is on
writing indirect questions using the given Wh-questions. In turn 435,
the teacher first gives the F (feedback) on a response provided in the
previous turn; thereby, he completes the IRF string. Then, he launches
a new sequence in the same turn by nonverbally nominating L3 and
naming the item number. L3 reads aloud her answer in turn 436. The
teacher latches on to the learner’s turn to evaluate her response. After
providing feedback in turn 437, the teacher explicitly announces a
sequential boundary; that is, all practice items of the part have been
dealt with and it is time to move on to the next part. At this juncture,
wait-time of four seconds naturally occurs. This period of silence
affords L5 the space to self-select herself in turn 438, initiate a new
sequence, and pose her problem. In her initiative, L5 orients to a
previously-checked exercise and asks the teacher to clarify two adverbs
of quantity which were the grammatical focus of the exercise.

Extract 4 Information request
An information request is concerned with ‘obtaining information about
the language which goes beyond the simple understanding of a
previously encountered utterance (spoken or written). It can include a
request for further explanations about the lexis, grammar, or syntax of previous phrases or expressions’ (Garton, 2012, p. 37).

\[447 \text{T} \quad = \downarrow \text{yes, "very good" (looking at L5)} \text{ Ok} \]
\[\uparrow \text{Maryam? (2.0)} \uparrow \text{Clear? (1.5)} \]

\[\rightarrow 448 \text{L9} \quad \text{Can you please give example for less and=} \]

After confirming (yes with a falling intonation) and providing explicit positive feedback (very good sotto voce on what has been discussed in the previous turns of the sequence, the teacher launches a comprehension check by uttering ‘ok’ together with L5’s first name with a rising intonation. L5 does not latch on to the teacher’s initiation. The teacher implements wait-time of two seconds in turn 447. Afterwards, he uses a lexical item with a rising intonation (↑Clear?) which is specifically designed to check an interlocutor’s understanding. Again, wait-time of one and a half second occurs without L5’s attempt to take the floor and respond. The accumulation of pauses (4.5) gives L9 the interactional space to move out of the IRF, initiate a new turn, and exercise agency. L9 directs interaction, in turn 448, in light of his need, i.e. further information (exemplification).

**Extract 5 Hypothesis testing**

Hypothesis testing refers to those cases in which learners ‘try out’ their understanding of new language (Allwright & Bailey, 1991).

\[449 \text{T} \quad = \downarrow \text{sure (standing up and going to the board))} \]
\[\text{ (4.0)} \]

\[\rightarrow 450 \text{L2: \quad Teacher, I have a sentence=} \]
\[451 \text{T: \quad =example with fewer=} \]

\[\rightarrow 452 \text{L2: \quad =\downarrow \text{yes, but maybe it is wrong=} \]
\[453 \text{T: \quad =\downarrow \text{ok, go ahead =} \]

To comply with the request made by L9’s initiation in extract 4, the teacher utters ‘sure’ with a falling intonation and goes to the board for making an example. In the meantime, wait-time of four seconds occurs. L2 makes use of this interactional space and takes initiative. In turn 450, she asks the teacher to let her read out the example she has made so that she can try out her own understanding, i.e. hypothesis testing.
Extract 6  Confirmation check

Allwright and Bailey (1991) define confirmation checks as ‘the speaker’s query as to whether or not the speaker’s (expressed) understanding of the interlocutor’s meaning is correct’ (p. 123).

454 L2 =There is fewer traffic in Babolsar in winter=
455 L3 =less traffic (2.0)
456 L6 yes, less traffic. Traffic is uncountable.
457 L2 =No, we have number two (1.0) too MANY traffic (3.0)
458 L6 traffic JAMS, not traffic. For traffic we say less=
459 L3 = because it is uncountable. For countable we say u:m fewer. ((the teacher looks at L2)) (2.5)

60 L2 so, too MUCH traffic, and less traffic ((nodding)) (0.5)
   because it is uncountable. ↑Yes=

461 T = ↓ yes.

This extract portrays an instance of learner-learner interaction in which learners negotiate a locus of trouble, i.e. adverbs of quantity (fewer & less). The unfolding of this sort of interaction owes to the teacher’s withdrawal from providing the F move. The teacher does this by implementing extended post-response wait-time (or wait-time II); the learners manage to sustain the floor with the help of the interactional space that the teacher’s wait-time implementation has brought about. In turn 454, L2 tests her hypothesis and reads out the example she has made. L3 immediately latches onto it and provides feedback. This is a sudden reversal of role; that is, L3 adopts the teacher’s role in providing comments on contributions. After L3’s comment, the teacher does not take the floor to make evaluations. Wait-time of two seconds gives L6 the space to orient to the comment, confirm it, and provide a justification. L2 latches onto it in turn 457 and provides a counter-example. Here, the teacher does not do the ‘terminal act’ of evaluating and closing the sequence; rather, he does the ‘continuation act’ of waiting so that the sequence gets expanded by learners' further contributions. In the next two turns (458 & 459), L3 and L4 expand the sequence by orienting to the main locus of trouble and to the point made by L2 in turn 457. After L3’s contribution to the discourse, the teacher
looks at L2 and affords post-response wait-time for L2 to take the floor. This learner initiated negotiation-rich opportunity reaches its main outcome when L2 takes up the turn for confirmation check.

**Discussion and Conclusion**

In this paper, we made an attempt to explore what learners need to depart from uninterrupted IRF sequences and how teachers can help learners to achieve this goal when the focus of the class is on form and accuracy and the type of interaction is teacher-fronted. Since this is a conversation analytic study, we observed, videotaped, and transcribed a classroom interaction, taken from a corpus of 10 two-hour lessons, emerging from a homework review activity. Analyses of the extracts from the selected episode have uncovered interactional space as the prerequisite for learner initiation and agency, and teacher’s extended wait-time practice as a phenomenon that brings about ample space for learners to have a higher visibility profile in classroom interaction.

The sequential structuring of learner initiation in teacher-fronted interaction has been examined to find answers to the two research questions of the study. Analyses of the extracts have revealed that for learners to move out of IRFs and exercising initiatives, they should have interactional space. Since teachers have control over the amount of space learners have in, particularly teacher-fronted, interaction (Walsh, 2011), they can play a significant role in creating, allowing, and opening up ample interactional space, and consequently, encouraging learner initiations. As shown in the above extracts, teachers’ extended wait-time implementation, either after the teacher’s turn or after the learner’s turn, can afford learners what they need to break the IRF discourse chains and occupy the ‘I’ position in the sequence.

The findings of this study are in line with those reported by Rowe (1974a, 1974b). She observed in her study of elementary science classes that, after asking questions, teachers wait in most instances less than a second for a student to respond. If the student makes a response, they give feedback or ask a follow-up question in again less than a second. Rowe found that lengthening wait-time of both types up to three or more seconds can increase both the number of unsolicited but appropriate learners’ responses and the frequency of their questions. In a similar vein, Honea (1982) designed a time-series study to investigate the effects of using an extended wait-time on the characteristics of
teacher and student discourse in a sample of 24 high school students in a social studies class. It was found that teachers tend to talk less and students have more interaction among themselves as a result of wait-time extension. Yaqubi and Pourhaji (2012) examined, in their conversation analytic study of EFL classes, the structuring of teachers’ limited wait-time practice in relation to learners’ participation opportunities in a meaning and fluency micro-context. They found that limited wait-time tends to play an obstructive role in interaction; it decreases learners’ participation opportunities through closing down their interactional space. Contrary to Walsh’s (2006) suggestion for the appropriateness of IRF sequences when the focus is on form and accuracy, grounded in the data and in line with Waring (2009), we believe that learner space is a ‘coveted commodity’ and should be prioritized in every aspect of learning.

This study raises teachers’ awareness about the significance of interactional space and the role that wait-time can play in classroom interaction. Teachers need to incorporate wait-time into their repertoire of interactive practices. The episode analyzed in this study indicated an instance of the teacher’s classroom interactional competence (CIC), i.e., “ability to use interaction as a tool for mediating and assisting learning” (Walsh, 2006, 132), as the teacher implemented wait-time as a ‘tool’ for instigating and sustaining quality interaction. The quality of interaction was promoted because the teacher’s wait-time implementation was in line with the pedagogic goal of increasing learner participation.

The findings of this study can be analytically generalized to Waring’s (2016) theory of pedagogical interaction. Extract 5 where the teacher gives L2 the space to test her hypothesis is in line with Waring’s principle of competence in the sense that the learner is asserting her competence and the teacher is attending to this principle by validating L2’s contribution. Turns 450-460 in which the teacher gives learners the space to control over the discourse by initiating, responding, and giving feedback by themselves and negotiate the locus of trouble in their learner-learner interaction provide an instance of complying with the principle of contingency, i.e., being responsive to the moment. The teacher preserves the integrity of the moment through implementing wait-time and not disturbing the learners’ ongoing frames.
In closing, this article has by no means depicted the whole picture of the structuring of and the relationship between teacher wait-time practice and learner initiation in classroom interaction. Since this study just considered a single class and episode, further studies should explore in more detail the subtleties of its implementation in a larger sample size. Moreover, further research should examine the relationship between wait-time and other nonverbal features, e.g. gesture, and their combined effect on learner contributions to classroom discourse. Last but not least, wait-time is not traceable just in form and accuracy context, so future research is warranted to investigate this interactive practice in other contexts.

References


Appendix

Transcription conventions

(.) untimed perceptible pause a turn

underline stress

CAPS very emphatic stress

↑ high pitch on word

. sentence-final falling intonation

? yes/ no question rising intonation

, phrase-final intonation (more to come)

: lengthened vowel sound (extra colons indicate greater lengthening)

= latch (direct onset or no space between two unites)

→ highlights point of analysis

[ ] overlapped talk; in order to reflect the simultaneous beginning and ending of the overlapped talk, sometimes extra spacing is used to spread out the utterance

"soft" spoken softly/ decreased volume

> < increased speed

( ) (empty parentheses) transcription impossible

(words) uncertain transcription

(3) silence; length given in tenth of a second

$words$ spoken in a smiley voice

(() comments on background, skipped talk or nonverbal behavior

{( ) words.} { } marks the beginning and ending of the simultaneous occurrence of the verbal/ silence and nonverbal; absence of { } means that the simultaneous occurrence applies to the entire turn.

L1: L2: etc. identified Learner

T teacher

"words" words quoted, from a textbook for example