Pedagogical Reasoning for Speaking Instruction:
A Longitudinal Study of Novice Language Teachers' Cognition

Zia Tajeddin
Tarbiat Modares University, Iran
<tajeddinz@modares.ac.ir>

Aso Biri
Tarbiat Modares University, Iran
<aso.biri@yahoo.com>

Hamid Allami
Tarbiat Modares University, Iran
<h.allami@modares.ac.ir>

Abstract

Pedagogical reasoning, as one of the major components of teacher knowledge base, is crucially important in teacher education. Motivated by the dearth of research in this area, this study investigated the pedagogical reasoning of four novice language teachers in relation to speaking instruction in order to further our understanding of language teacher cognition. For this purpose, a qualitative approach was adopted and classroom observations and post-observation stimulated recall interviews were conducted over a period of eight months. The analysis of the data related to pedagogical reasoning episodes and reasoning complexity indicated that novice teachers employed varied pedagogical arguments for different aspects of teaching speaking to justify their pedagogical decisions, which included instruction-based, students-based, teacher-based, and context-based arguments. The findings also pointed to the developmental changes in terms of the complexity and comprehensiveness of novice teachers' pedagogical reasoning. Although they initially tended to focus primarily on the subject matter and instructional activities, their reasoning gradually expanded to include students' cognitive and affective characteristics. The findings of this study contribute to the research on the teacher knowledge base and cognition. Having a clear understanding of novice teachers' pedagogical reasoning and how they utilize it to explain their classroom practices provides us with valuable insights into the process of learning to teach.

Keywords: Teacher Education; Teacher Knowledge Base; Teacher Cognition; Pedagogical Reasoning; Speaking Instruction; Novice Teachers

Language teacher cognition has contributed substantially to the current understanding of teacher education (Li, 2020). As Johnson (2006) put it, no factor has been more influential in

advancing our understanding of teachers' work than the emergence of teacher cognition research. Research on L2 teacher cognition has been prolific in the past few decades (Andrews, 2006; Borg, 2003, 2006; Cohen & Fass, 2001; Farrell & Lim, 2005; Kubanyiova, 2012; Li, 2017; Watson, 2015), and many aspects of teachers' cognition, including teacher knowledge, teacher beliefs, their instructional decisions, and teacher identity have received scholarly attention. This strand of research has contributed to our understanding of the mentality of language teachers. Moreover, it has provided second language acquisition (SLA) researchers and educational scholars with valuable insights into how teachers become engaged in the activity of teaching and how they cope with a multitude of issues happening in their classroom environments (Nishimuro & Borg, 2013). It is now uncontested that understanding language teaching would be difficult, if not impossible, without adding teacher cognition into the equation.

One aspect of teacher cognition which is argued to be crucially important in identifying a useful framework for understanding and examining the knowledge base of language teacher education is pedagogical reasoning (Kavanagh et al., 2020). It is one of the building blocks of pedagogical content knowledge (Deng, 2018), which allows teachers to utilize their instructional strategies in numerous instructional situations. Notwithstanding the crucial importance of pedagogical reasoning, it seems to have had scant visibility in teacher education research. Furthermore, studies on teachers' pedagogical reasoning in speaking instruction are quite a rarity in language teacher education. Against this backdrop, this study sought to examine the pedagogical reasoning of novice teachers in their initial teaching experiences in order to gain insights into how novice L2 teachers conceptualize their speaking-related teaching practices, and thus to advance our understanding of teacher cognition.

Literature Review

Teacher Pedagogical Reasoning

Pedagogical reasoning is "a process of transformation in which the teacher transforms the subject matter of instruction into forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by the students" (Shulman, 1987, p. 15). It is a theoretical construct that demonstrates the invisible cognitive dimension of professional thinking that informs discrete elements of teaching practice (Kavanagh et al., 2020). It is also referred to as instructional reasoning according to which teachers attach their pedagogical decisions to certain instructional purposes that arise in response to various issues in the classroom context (Tiilikainen et al., 2019).

Pedagogical reasoning is predicated upon a view of teaching that perceives it as reasoning and thinking. This view, as argued by Mullock (2006), highlights the significance of teacher thinking and the role that it plays in shaping teachers' classroom instruction, bringing to the fore the fact that what teachers do in the classroom originates from their thoughts, attitudes, beliefs, and knowledge about language learning and teaching. That is, it originates from their cognition. Pedagogical reasoning is considered the thought underlying informed professional practice that helps illuminate the 'why' of teaching (Loughran, 2019), providing us with a window into the unseen aspects of instructional practice (Loughran et al., 2016). From this perspective, as Shulman (1987) pointed out, teaching is a process of sound reasoning in which teachers think about and reflect on their instructional activities. In this process, teachers learn to utilize their knowledge base, including a network of facts, principles, and experiences, and

their cognition to provide the grounds for their choices and actions. Drawing on various types of knowledge, engagement in pedagogical reasoning helps teachers find more effective ways of representing a particular subject matter for learning, and therefore contributes to their pedagogical competence. This effort to better represent the subject matter not only enables teachers to construct a more comprehensive repertoire of pedagogical strategies but also, as Pang (2016) stated, helps them develop awareness to enhance the generation of these representations for specific language learners. Although the concept of pedagogical reasoning has begun to attract scholarly attention in the past few years, it is still considered one of the understudied areas in teacher education, and not many studies (e.g., Kavanagh et al., 2020; Loughran et al., 2016; Pang, 2016; Tiilikainen et al., 2019; Vesterinen et al., 2014) have investigated this aspect of cognition.

Speaking Instruction

Speaking skills are essential to the curriculum in L2 teaching as they enable learners to use the target language while interacting with others (Timpe-Laughlin et al., 2020). Speaking is also regarded as the most complicated and yet pivotal skill to acquire (Can, 2017). Two general approaches in this regard have informed speaking instruction in the past few decades. The first one focuses on the development of skills for accurate production and on isolated speaking skills. This approach, according to Burns (1998), is mainly concerned with structural accuracy, paying particular attention to the practice of language forms in order to raise L2 learners' awareness about the grammatical aspects of the target language. The activities within a direct approach involve analyzing structures of different spoken genres, learning formulaic expressions and institutionalized routines, discussing the use of feedback, learning activities to help learners build their grammatical awareness inductively, and developing metalinguistic knowledge. The indirect approach, on the other hand, as described by Goh and Burns (2012), emphasizes the fluency of speech by engaging learners in functional language use and providing opportunities to interact with other students in the classroom context. The assumption underlying this approach is that giving learners autonomy with a focus on the production of authentic and functional spoken language will eventually lead to transferring the speaking skills that they have developed through communicative activities to real-life contexts (Goh & Burns, 2012). The activities proposed in this approach highlight the importance of negotiation of meaning and sharing of information. These activities are information-gap activities, discussions, simulations, role plays, talking circles, and anecdotes.

Although these approaches have been taken up rather widely in the instructional circles and fit in well with the classroom context, their usefulness came under criticism given the fact that they failed to represent a comprehensive understanding of the processes involved in second language speaking development. Considering the shortcomings of direct and indirect approaches in providing a comprehensive framework for speaking instruction, Goh and Burns (2012) advocated a holistic approach that reflected a more comprehensive conceptualization of language, language learning, L2 learners, and speaking. Goh and Burns' framework, favors the adoption of a flexible positioning of these activities in order to maximize L2 learners' opportunities to attend to important features of communication and language use. Moreover, this flexible positioning has the potential to lower the cognitive demands that learners go through during processing their speaking.

Teacher Knowledge Base and Speaking Instruction

Although the skill of speaking has been held in high regard in the fields of applied linguistics and second language teaching, only a few studies (e.g., Baleghizadeh & Shahri, 2014; Can, 2017; Chen & Goh, 2014; Farrell & Vos, 2018; Rahimi & Zhang, 2015; Webster, 2019) have examined the teaching of speaking in teacher education research. Most of the relevant studies have examined teachers' understanding and practical knowledge of speaking instruction. Research has shown that the teaching context and the teachers' learning experiences, known as 'apprenticeship of observation', are influential factors in shaping their understanding of teaching speaking. For example, Baleghizadeh and Shahri (2014) explored teachers' understanding of teaching speaking and found a number of factors that contributed to teachers' conceptions of speaking instruction, including their prior learning experiences and the teaching context. Furthermore, they highlighted the importance of personal pedagogical knowledge (PPK) in shaping teachers' beliefs and conceptions of speaking competence, arguing that teachers' PPK enables them to make sense of their teaching and instructional practices. In another study, Chen and Goh (2014) investigated teachers' pedagogical content knowledge in teaching speaking. Three major factors, namely teachers' learning experiences, their self-perceived speaking ability, and their familiarity with instructional methodologies, were discovered to have a substantial impact on the teachers' knowledge.

Teaching experience is another factor that has received attention in the research on teaching speaking. In a study of teachers' speaking-related instructional knowledge about corrective feedback, Rahimi and Zhang (2015) compared novice and experienced EFL teachers' cognitions in terms of their feedback provisions in teaching English oral communication. The findings indicated that the teaching experience and context influenced teachers' practices of corrective feedback. The findings were also indicative of a statistically significant difference between novice and experienced teachers, pointing to novice teachers' rigidity and experienced teachers' flexibility in relation to their implementation of corrective feedback. One study by Can (2017) focused on the theme of teachers' perceptions in relation to teaching speaking. The findings revealed that teachers' lack of authentic teaching in actual classroom settings alongside the ineffectiveness of the teaching materials and the curriculum were responsible for learners' lack of speaking skills. It was also found that the teachers experienced anxiety in their speaking instruction, which was mainly due to their insufficient instructional knowledge and their failure in improving learners' motivation and participation in the class.

Research into teachers' beliefs about speaking instruction has received less attention to date. Farrell and Vos (2018) examined the relationship between teachers' beliefs and classroom practices of L2 speaking. The results indicated that the teachers' speaking-related practices were mainly a reflection of their beliefs. This correspondence between teachers' beliefs and practices and the fact that teachers' beliefs impact their decision-making in the class are reflected in previous studies (e.g., Borg, 2019; Kubanyiova, 2012). Borg (2003) highlighted the importance of teachers' beliefs and argued that they act as a filter through which teachers interpret new information and employ their instructional decisions.

Another area that has received attention is the developmental trajectory of teachers' practical knowledge in teaching speaking. In his study of teachers' practical knowledge development in speaking instruction, Webster (2019) pointed to the limited and atheoretical nature of teachers' practical knowledge. This was evident in the teachers' lack of reference to public theory related to the pedagogical approaches to teaching speaking. Webster referred to this issue as a practical

knowledge plateau and suggested that meaningful engagement with different professional issues is required to overcome teachers' atheoretical knowledge development. The developmental aspect of the teachers' knowledge base has been the subject of previous studies. Teachers' professional knowledge and understanding are constantly constructed and reconstructed by the sociocultural and institutional contexts (Li, 2013). As teachers gradually gain more teaching experience, they undergo a great deal of development throughout their careers (Anthony et al., 2015). Research has also shown that acquiring teaching experience leads to enhancing complexity and diversity in teachers' pedagogical knowledge. Gatbonton (2008) studied the pedagogical knowledge of novice L2 teachers and found that as they gained more instructional experience, they managed to acquire many teaching skills that were expected of experienced teachers. Similarly, Akbari and Tajik (2009) pointed out that gaining teaching experience contributed to the transformation of teachers' cognitions.

As demonstrated above, a number of studies have provided evidence for the importance of pedagogical reasoning and for the teachers' understanding of speaking instruction. Nevertheless, there is a paucity of context-specific and classroom-based studies in this regard, and research has yet to generate a genuine understanding of teachers' pedagogical reasoning in the teaching of the speaking skill. In particular, the field lacks insight into how novice teachers' cognition and pedagogical reasoning are represented in the context of teaching speaking in the classroom. As such, the current study grew out of a concern to explore teacher cognition in second language teaching, particularly in speaking instruction, and to understand how novice teachers' pedagogical reasoning is formulated and represented. This study aimed to fill this gap in teacher education research by tapping into the pedagogical reasoning skills that novice teachers utilize in their speaking instruction. To achieve the purposes of this study, the following research questions were addressed:

1. What are the components of novice teachers' pedagogical reasoning for speaking instruction?

2. How does novice teachers' pedagogical reasoning for speaking instruction develop over time?

Method

Participants

The current study was conducted in the Iranian EFL context. The setting was a local private language institute that offered general English courses to L2 learners at different proficiency levels, including elementary, intermediate, and advanced. The teachers employed in this institute came from various educational backgrounds and were recruited primarily based on their command of English and teaching skills. Moreover, similar to many language institutes in Iran, this institute ran a customized teacher training course that prospective teachers needed to pass in order to be qualified for teaching. Using global textbooks (such as the *Touchstone* series), this language institute promoted a teaching methodology that placed great emphasis on developing communicative competence in L2 learners.

Four novice teachers of English as a foreign language, one male and three females, with less than two years of teaching experience were recruited for participation in this study. The selected teachers, who will be referred to by their pseudonyms (Hamid, Sarah, Mona, Roya), were all involved in the activity of teaching at the language institute. These teachers were

selected on the basis of their instructional experience and their availability in the research context. They all had undertaken teacher training courses at the institute, but only one teacher (Roya) had completed a formal study in the field of Teaching English as a Foreign Language (TEFL). Table 1 provides more details about the teachers taking part in this study.

Table 1. Demographic information about teachers participating in this study

Teachers	Age	Gender	Certificate	Teaching Experience
Hamid	27	Male	Non-teaching	Less than two years
Sarah	25	Female	Non-teaching	Less than two years
Mona	27	Female	Non-teaching	Less than two years
Roya	28	Female	MA in Teaching	Less than two years

Instruments and Data Collection

Qualitative data collection procedures were adopted for this study. Two sources of data were used: (a) classroom observations, and (b) post-observation stimulated recall interviews.

As a frequently-used form of data collection, observation assists researchers in obtaining first-hand information and investigating actual behavior by examining people at particular research sites (Creswell, 2012). In the current study, each novice teacher was observed seven times during a period of eight months. The observations mainly took place at intervals of one month, and each observation lasted for approximately eighty minutes. However, in some cases, due to the busy instructional schedules of the participating teachers, there was a longer interval between the observations. The purpose of the observations, which were conducted by the second author, was to see the instructional decisions that the teachers made in response to various speaking-related issues happening in their classrooms. That is, these observations provided the researchers with an emic perspective into the actual practice of classroom speaking instruction. Field notes were used during the observations to record classroom occurrences, including teachers' pedagogical practices and students' participation. Meanwhile, the researcher's immediate thoughts were written down to provide starting points for post-observation interviews.

Post-observation stimulated recall interviews constituted the second source of data in this study. A stimulated recall interview is a type of "retrospective verbal report" (Baker, 2014, p. 142) in which participants receive some stimuli and then recount their recollection of a particular event that has taken place earlier. It is regarded as a useful qualitative data method, which is frequently used alongside classroom observations to provide researchers with more meaningful insight into teachers' cognitions while teaching. To uncover the teachers' thoughts and pedagogical reasoning, they took part in a stimulated recall interview where they were asked about their classroom experiences regarding the teaching of the speaking skill. In the interview sessions, each lasting about 25 minutes, the teachers were requested to focus their attention on the instructional decisions that they had made during their classroom, explaining and clarifying the pedagogical reasoning underlying their decisions about speaking. In these seven interviews, with each based on the notes taken during the classroom observations, the

teachers were asked to verbalize their reflections on the decisions that they had made while teaching speaking in the classroom. It should be noted that these interviews were conducted in English immediately after the classroom observations to enable the novice teachers to reflect upon their classroom practices.

Operationalizing Speaking Instruction

Speaking is regarded as a combinational and complex skill that involves various linguistic, cognitive, and affective elements (Goh, 2016). To operationalize the teaching of speaking and to select speaking-related episodes in both the observation and interviews, we relied on the view of speaking instruction as pointed out in Goh and Burns' (2012) teaching-speaking cycle. From this perspective, teaching speaking consists of a number of important stages including:

- *Providing linguistic input:* Learners receive linguistic support for the speaking tasks that they are about to do. Another activity that may happen in this stage is pre-task planning.

- *Conducting speaking tasks:* The goal of this stage is to provide L2 learners with a context to practice speaking.

- *Focusing on language skills:* This stage aims to provide learners with scaffolding to improve their linguistic accuracy. For this, the learners' attention is drawn to certain parts of the tasks that they had completed such as grammar, vocabulary, and pronunciation.

- *Repeating speaking tasks:* A particular task is repeated to encourage learners to practice speaking.

- *Directing L2 learners' attention to learning:* The purpose of this stage is to help learners self-regulate and monitor what they have learned as a result of doing particular tasks in the class.

- *Providing feedback:* In this stage, the teacher provides error correction and feedback on the learners' speaking performance.

In the context of the current study, the moments in the classroom observations where teachers were engaged in the different stages of speaking instruction were regarded as speaking-related episodes. These speaking-related episodes were later used as prompts in the follow-up interviews.

Data Analysis

Data analysis in this study consisted of three stages. Initially, the stimulated recall interview data were subjected to qualitative content analysis to identify the units of analysis. At this stage, sentences or arguments that the novice teachers used in explaining and justifying their classroom practices were extracted. To determine whether the teachers were engaged in pedagogical reasoning, Horne's (2007) notion of Pedagogical Reasoning Episodes was employed. Pedagogical reasoning episodes are moments in teachers' talk where they describe issues related to their instructional decisions that are "accompanied by some elaboration of reasons, explanations, or justifications" (Horne, 2007, p. 46). From all the interview data, the sentences that had justifying, evaluative, or generalizing forms of discourse were selected as pedagogical reasoning episodes.

The second stage of the data analysis concentrated on the content of novice teachers' reasoning where the pedagogical reasoning episodes were elaborated and coded in terms of the featuring pedagogical arguments. Afterward, employing the constant comparative method (Glaser & Straus, 1967), categories related to the novice teachers' pedagogical reasoning in making instructional decisions were constructed. Based on the common themes, these categories were further analyzed and clustered to create themes. This stage of the analysis yielded four themes, namely student-based, instruction-based, context-related, and teacher-based arguments.

The final stage of the data analysis aimed at examining the pedagogical reasoning episodes through the lenses of emerging developmental paths. To characterize the complexity and the development of novice teachers' pedagogical reasoning in relation to speaking instruction, the relevant stimulated recall interview data were analyzed according to the concept of Reasoning Complexity (Tiilikainen et al., 2019). On the basis of this concept, reasoning complexity increases when a novice teacher's instructional decision is linked with several pedagogical arguments. That is, the joint appearance of several pedagogical arguments to explain and justify a particular classroom decision is interpreted as a sufficient condition for higher degrees of pedagogical reasoning complexity. Another element that was taken into account in the analysis of pedagogical reasoning development related to the shifts in novice teachers' focus where they moved from a focus on the subject matter to a focus on the students, and from a simple to an increasingly more comprehensive understanding of their classroom decisions. To achieve this purpose, the teachers' justifying and evaluative forms of discourse were analyzed across the stimulated recall interviews through microgenetic analysis so as to track moment-to-moment behavioral changes that might point to the development of novice teachers' pedagogical reasoning. The rationale for adopting a microgenetic analysis emerges from the fact that development can be better understood when the history of the development of a particular phenomenon is specified and examined across specific learning events (Belz & Kinginger, 2003).

The last step in the qualitative analysis of the findings involved summarizing and re-examining the pedagogical arguments and the developmental paths in novice teachers' pedagogical reasoning. To accomplish this re-examination, after the coding process and the identification of pedagogical reasoning episodes and pedagogical arguments were completed, the related data were given to another researcher for comments. After two rounds of constant discussions and revision, discrepancies were resolved.

Results

Identification of Pedagogical Reasoning

The first research question sought to identify the arguments featuring in novice teachers' pedagogical reasoning. To achieve this purpose, the relevant pedagogical reasoning episodes from the stimulated recall interviews were subjected to analysis, resulting in the identification of 4 themes and a total number of 22 categories. These themes included:

    (1) Instruction-based arguments

    (2) Student-based arguments

    (3) Teacher-based arguments

    (4) Context-based arguments

Table 2. **Teachers' major pedagogical arguments**

Pedagogical Arguments	Number	Percentage
Instruction-based	138	48
Student-based	67	23
Teacher-based	43	16
Context-based	37	13
Total	285	100

As Table 2 shows, the majority of teachers' pedagogical arguments focused on instructional matters (n=138, 48%) and students (n=67, 23%). More than one-sixth of the arguments related to teachers (n=3, 16%), while the remaining arguments (n=37, 13%) referred to different contextual factors.

Table 3 displays the 22 categories comprising the 4 themes. Six categories (e.g., facilitating students' speaking, providing linguistic input, and engagement) constituted instruction-based arguments. Ten categories (e.g., motivation, interests, autonomy) fell within student-based arguments. Teacher-based arguments included three categories (e.g., teacher knowledge, teacher experience). The fourth theme, i.e. context-based arguments, contained three categories, such as institutional requirements and classroom setting. In what follows the main categories akin to each theme are described.

As Table 3 shows, many of the teachers' pedagogical arguments had an instructional focus, which constituted the first theme. The teachers employed a range of instruction-based reasoning while explaining their pedagogical decisions. Facilitating students' speaking (n=65) emerged as a consistent basis of the teachers' pedagogical decisions in the classroom. Providing linguistic input (n=34) was the second most important pedagogical argument expressed by the teachers. While elaborating on their classroom decisions, the teachers raised a number of other pedagogical arguments as well, including engagement (n=16), contextualizing the content (n=10), authenticity (n=8), and reviewing (n=5). For instance, excerpts #1-2 demonstrate how facilitating learners' speaking and providing linguistic input featured in the teachers' pedagogical reasoning.

Table 3. The frequency distribution of teachers' pedagogical arguments

Instruction-based arguments		Student-based arguments		Teacher-based arguments		Context-based arguments	
Facilitating students' speaking	65	Motivation	15	Teacher knowledge	27	Institutional requirements	23
Providing linguistic input	34	Interests	11	Teacher experience	12	Classroom setting	10
Engagement	16	Autonomy	10	Teacher difficulties	4	Limited Time	4
Contextualizing	10	Self-monitoring	7				
Authenticity	8	Anxiety	6				
Reviewing	5	Proficiency	5				
		Ability	4				
		Knowledge	4				
		Age	3				
		Future learning	2				
Total:	138	Total:	67	Total:	43	Total:	37

Excerpt #1

As you might have noticed, two of the students were not very good and made some grammatical mistakes. I want you to know that this is some kind of plan that the teacher has to work on one of the skills over time, not in one session. As you said I corrected some of the mistakes apart from grammar. It was about speaking and vocabulary because my focus was to promote their speaking skill. (Hamid, interview #3)

Excerpt #2

This was to help them learn the structures. Practicing the same conversation helps them to learn the structures, and it also helps them to become more familiar with the questions that they are going to ask. (Sarah, interview #2)

In excerpt #1, Hamid provides a pedagogical argument trying to explain why he did not correct the grammatical errors that his students had made in the class. The predominant element in Hamid's understanding is apparently the assumption that the major objective in a speaking class is to promote communication. Therefore, he avoids unnecessary error correction to encourage his students to continue speaking. On the other hand, Sarah has a different focus in her pedagogical argument. In excerpt #2, she recounts the way she practiced a particular conversation a few times in the class to help her students better learn the grammar points of that session. Although she was mainly concerned with teaching grammatical structures, she also had her students' speaking performance in mind. This can explain why she tried to deliver the related grammar points indirectly by providing more practicing opportunities for L2 learners in the class.

Student-based arguments (n=67) constituted the second theme of the teachers' pedagogical reasoning. As shown in Table 3, the teachers employed a range of student-based arguments, taking both affective and cognitive factors into account. However, as it can be seen, they anchored their pedagogical arguments to students' affective characteristics by considering students' motivation (n=15), interests (n=11), autonomy (n=10), and anxiety (n=6) in explaining their pedagogical reasoning. With regard to cognitive and individual factors, language learners' age (n=3), proficiency level (n=5), self-monitoring (n=7), ability (n=4), and background knowledge (n=4) emerged in the teachers' reasoning. Two examples are provided in excerpts #3-4 to show the teachers' consideration of learners' autonomy and motivation in their pedagogical reasoning.

Excerpt #3

I asked these concept-checking questions because I wanted the learners to figure out the grammar themselves. In this way, their autonomy increases. (Roya, interview #4)

Excerpt #4

Like today's session, I use some pictures, drawings and some other things in my classes. It can be good for both the teacher and the students because after a while they might get bored by doing the same thing over and over again. Using pictures and videos is motivating for learners. (Mona, interview #5)

As the above excerpts indicate, the teachers were not solely concerned with the linguistic aspects of their classes. Rather, they attended to the learners' affective characteristics in their instructional activities. While Roya accounts for her students' autonomy in her decision to use concept-checking questions in the class, Mona points to motivation as an important factor in her instructional decisions. She does not want her classes to be monotonous and dull after a while as a result of following the exercises in the course book.

Teacher-based arguments (n=43) was the third theme that figured in the teachers' pedagogical reasoning. In this theme, the teachers' experience (n=12), knowledge (n=27), and difficulties (n=4) were considered important in their pedagogical arguments (see excerpts #5-6).

Excerpt #5

The aim of this review – which is based on my experience – is that I think that if I review and I make sure that they understand the previous session completely then I can start something else. (Mona, interview #2)

Excerpt #6

I can say that it is based on my experience in the last two years. My experience tells me that whenever the learners are part of the activity, they like it better and they will learn more effectively. (Sarah, interview #7)

In excerpt #5, Mona refers to the experience that she accumulated from her previous classes to explain a certain classroom decision. She learned that a new session is likely to be more productive once she reviewed the previously taught linguistic points including grammatical structures and lexical expressions. In another extract, Sarah draws on a similar pedagogical argument. Based on her instructional experience, she acknowledges that an optimal speaking class should be learner-centered in which learners are actively involved in classroom practices. She explains that this kind of instructional environment will lead to more productive learning outcomes.

Furthermore, the teachers utilized pedagogical arguments that were based on contextual factors (theme 4). While making judgments about their instructional decisions, they pointed out institutional requirements (n=23), classroom setting (n=10), and limited time (n=4) in their pedagogical reasoning as factors that contributed to adopting particular decisions in the classroom. Excerpt #7 shows the impact of contextual factors on the classroom practices of the teachers.

Excerpt #7

The words that we call 'blocking words' must be taught completely with the specific method of …… [pointing to the language institute]. This method is called MECDIBLE – meaning, elicitation, CCQ (concept checking questions), drilling, individual drilling, boarding, labeling, and examples. This method is flexible and sometimes we can omit one or two of them. (Hamid, interview #2)

In this excerpt, Hamid talks about adopting a set of techniques to teach new words and expressions. This method, which is advocated by their institute, requires teachers to follow certain steps in vocabulary instruction. According to this method, teachers are not allowed to use L1 in the class and should try their best to clarify the meaning of new words directly in

English. This method, as Hamid mentions, also requires teachers to provide relevant examples for students and encourage them to practice using new words in sentences.

Pedagogical Reasoning Trajectory

The second research question aimed to explore the developmental paths in the novice teachers' pedagogical reasoning. Utilizing the notion of pedagogical reasoning complexity and adopting a microgenetic approach to data analysis helped identify cognitive changes in the teachers' pedagogical reasoning in relation to speaking instruction. Overall, two major developmental changes were observed in teachers' pedagogical reasoning. First, they moved from simple reasoning to an increasingly more complex and comprehensive understanding of their pedagogical reasoning. This was evident in the number of pedagogical arguments that the teachers utilized to explain their speaking-related instructional decisions (Table 4).

Table 4. Teachers' pedagogical arguments in the first and last sessions

Session 1, n=34	Session 7, n=56
Facilitating speaking, n =7	Facilitating speaking, n=11
Providing linguistic input, n =5	Providing linguistic input, n=7
Teacher experience, n=4	Institutional requirements, n=4
Teacher knowledge, n=4	Engagement, n=4
Institutional requirements, n=4	Students' motivation, n=4
Engagement, n=3	Students' anxiety, n=3
Students' interest, n=2	Students' autonomy, n=3
Students' motivation, n=2	Teacher knowledge, n=4
Setting, n=2	Contextualizing, n=3
Authenticity, n=1	Reviewing, n=2
	Teaching difficulties, n=2
	Teacher experience, n=2
	Setting, n=2
	Students' proficiency, n=2
	Self-monitoring, n=2
	Students' future learning, n=1

As seen in Table 4, the number of pedagogical arguments articulated in the last interview (n=56) was considerably higher than those verbalized in the first interview (n=34). Furthermore, the variability of the verbalized pedagogical arguments in the last interview (n=10) was higher than those articulated in the first interview (n=10), with the teachers attending to more novel categories in the seventh interview.

When asked about the reason for encouraging his students to make short conversations in the class, Hamid advanced the following argument in interview #1 (excerpt #8):

Excerpt #8

*I just wanted to get them to talk, and I thought using a conversation from
the textbook was a good start.* (Hamid, interview #1)

In interview #7 (excerpt #9), Hamid gave a more comprehensive argument. In addition to viewing it as a good opportunity for students to practice speaking, he believed that it would eventually help them have a better speaking performance.

Excerpt #9

*Well, having a conversation with partners is one of the targets in the class
which helps them practice speaking more. The thing is that they will use
whatever they have learned and this leads to a better production. It can also*

help them with their communication skills, and you know it is exactly in that
situation that their language knowledge is activated and they are in a context
that is related to the topic. (Hamid, interview #7)

Before students do a particular task, Sarah usually began telling a story related to the topic of the session. The following examples indicate how she went through changes in her pedagogical reasoning of this strategy in the class. In interview #1 (excerpt #10), she pointed out that:

Excerpt #10

I believe that using stories in the class, especially personal stories, helps
my learners to better understand the topic. I was actually trying to give
them a context for today's topic. (Sarah, interview #1)

Later, in interview #7, she demonstrated a more comprehensive understanding of story-telling and included her students' motivation in her reasoning. She mentioned that telling stories not only encourages students to speak more in the class but also provides them with motivation to improve their language learning (excerpt #11).

Excerpt #11

I normally use stories as a context because context clarifies meaning and
function and gives learners a reason to communicate and use what is being
taught. It also motivates and engages learners by showing them how the
language is meaningful to them and allows them to build connections with
the language and where and how it can be used. (Sarah, interview #7)

The following excerpts show how Mona experienced a change in her understanding of asking comprehension questions before speaking tasks in the class. In the first interview (excerpt #12), she explained her pedagogical reasoning in this regard by indicating that she tried to follow the teaching methodology promoted at the institute step by step.

Excerpt #12

I learned this technique in TTC. I learned that asking comprehension
questions is a good way to encourage students to speak in the class. This is
actually one of the most important components of the teaching methodology
here in the institute. (Mona, interview #1)

However, later on, in interview #7 (excerpt #13), she moved away from observing the institutional requirements as her major reason for verbalizing a more personalized argument in her pedagogical reasoning. More importantly, she attempted to evaluate the effectiveness of this particular technique and pointed out how it could be effective in enhancing students' speaking performance in the class.

Excerpt #13

I used this method to engage my students at the beginning of the class. This
helps us to warm students up and prepare them for the following activities in
the class. It also serves an ice-breaking function and helps students to start
speaking English. (Mona, interview #7)

When asked about the reasoning behind giving students planning time before they did a particular task, Roya, in interview #1 (excerpt #14), maintained that:

Excerpt #14

I think it is very important because if I want them to be able to handle the task and finish it correctly, they need some time to think and come up with ideas. (Roya, interview #1)

While in the earlier interview she pointed to the function of planning time only in terms of assisting learners in the completion of a task, in interview #7 (excerpt #15), she provided more comprehensive reasoning and acknowledged the impact that it has on promoting students' speaking.

Excerpt #15

This is a very useful method in the class because it gives students the opportunity to think about what they are going to say. I mean, they can use this time to think about grammar and vocabulary, and they can also get help from their classmates. This planning time, I think, has a good effect on their language production. (Roya, interview #7)

The second developmental change was that despite their tendency to attend to the subject matter and instructional activities in the first interview, the teachers gradually assigned more significance to their students' characteristics in their pedagogical reasoning. Compared with the first interview, the teachers' pedagogical reasoning in the seventh interview became more oriented toward their learners' cognitive and affective characteristics. While in the first interview the teachers advanced 4 student-related pedagogical arguments, the number of these pedagogical arguments increased to 15 in the seventh session (see Table 4).

In what follows, excerpts from the interview data are given to demonstrate the pedagogical reasoning development of the teachers in this area.

In excerpt #16, from interview #7, Hamid elaborated on his pedagogical reasoning in relation to asking comprehension questions during speaking tasks and argued that what he did in the class was to contribute to students' autonomy.

Excerpt #16

Instead of explaining them directly, we tend to let them discover what is really happening. As you saw today, that was part of [pointing to the institute] framework. We encourage the students to step forward and try to understand things on their own. I mean, I'm trying to give them some autonomy in the class. It is important to know that it is not all done by them or the teacher. Both have their own roles in the class. (Hamid, interview #7)

While explaining her pedagogical reasoning for providing no feedback on her students' speaking performance, Sarah, as seen in excerpt #17, considered students' affective characteristics. She argued that she avoided correction at the beginning of the class on the grounds that it could be discouraging to her students.

Excerpt #17

Normally I don't correct students in the warm-up section because if I interrupt them and correct their mistakes at the beginning of the class, they become discouraged. They might get the feeling that they don't know how to speak and they just make mistakes. That is why I don't correct them because I want to give them the courage and the motivation to talk without worrying about their mistakes. (Sarah, interview #7)

Mona, in interview #7 (excerpt #18), considered her students' anxiety about speaking tasks as

Excerpt #18

I try my best in the class to make the speaking tasks less frightening for my students. Sometimes I get this feeling in my classes that some of my students start getting very nervous and anxious because they don't know the grammar or vocabulary that they need to complete a task in the class. So to help my students to overcome this anxiety, I try to give them some useful grammar structures and expressions. I do this before a task and also during the task if I find it necessary. (Mona, interview #7)

Roya, as seen in excerpt #18, explained that in an attempt to make feedback more productive, she encouraged her L2 learners to monitor and think about their speaking performance.

Excerpt #18

After the speaking task was over, I spent a few minutes giving them feedback about their speaking performance. Because I wanted them to better understand their mistakes, I asked them to do this in groups and with their partners in the class. This is one of my goals in the class actually. I try to push them to monitor their own speaking in the class. (Roya, interview #7)

Discussion

This study examined the pedagogical reasoning of novice EFL teachers with a specific focus on speaking instruction. The findings showed that the teachers employed a range of different arguments to explain their pedagogical decisions. The existence of reasoning in novice teachers' justification of their classroom decisions provides more support for the view in teacher cognition and teacher knowledge base research that teaching is an active process of thinking and decision-making (Borg, 2003). As a result of this, informed by their cognitions and influenced by the sociocultural, historical, personal, and professional dimensions of their lives, teachers' development "is shaped by (and in turn shapes) what teachers (individually and collectively) think and feel about all aspects of their work" (Borg, 2019, p. 4). Research has demonstrated that teachers' instructional decisions are the product of some form of thinking. In other words, what a teacher does in the classroom is guided by certain thoughts and mental acts that have been driven by their learning experience, educational backgrounds, and sociocultural contexts (Kubanyiova, 2012; Li, 2012).

Furthermore, the findings of this study regarding the pedagogical reasoning of the teachers can be grounded in the previous studies that have sought to articulate the complexities of teaching. Acknowledged the complex and multi-dimensional nature of the activity of teaching, Thompson et al. (2018) referred to the complexity of teaching by highlighting the paradoxes

and contradictions that teachers encounter in the classroom context. They held that this complexity originates from the paradoxical nature of instructional practices where teachers deal with contradictory goals in teaching learners of various backgrounds and, therefore, continuously adapt their instruction to a variety of pedagogical situations. Another explanation as to why the teachers participating in this study utilized pedagogical arguments to elaborate on their classroom practices lies in the fact that teachers' instructional decisions do not happen in a vacuum. Rather, as emphasized by research on pedagogical reasoning and instructional reasoning (e.g., Loughran, 2019; Tiilikainen et al., 2019), these decisions are indeed influenced by invisible cognitive networks of thinking that are argued to underline informed professional practice. Teaching is construed as a dynamic activity where teachers, relying on their pedagogical reasoning and professional judgment, navigate through different instructional dilemmas by consistently choosing between alternative courses of action (Kavanagh et al., 2020).

As to the teachers' development in their pedagogical reasoning, the findings of this study revealed that they gave increasingly more comprehensive and complex reasoning when they justified and evaluated their classroom instructional decisions in relation to teaching speaking. Such a development can be explained by the fact that as novice teachers engage more in the activity of teaching in the course of time and encounter the realities of the educational context, their initial conceptions of teaching and their beliefs, attitudes, and knowledge undergo major changes. The literature on novice and pre-service teachers have pointed out that they embark on their teaching profession equipped with a body of knowledge about language learning and teaching (Gelfuso, 2018; Gray, 2020). This earlier conceptualization, referred to as apprenticeship of observation by Lortie (1975), is believed to derive from many years of learning a foreign language as a language learner or watching L2 teachers teach. In this regard, Körkkö et al. (2016) argued that by the time teachers enter teacher education programs, they have already been equipped with years of experience and memories of instruction, and thus their process of learning to teach and professional development have already been underway. These internalized memories of instruction and implicit teaching models, as Chang-Kredl and Kingsley (2014) pointed out, constitute an important part of teachers' careers and function as a point of departure to promote the formation of their perceptions and understanding of classroom teaching and learning.

However, these initial perceptions are unlikely to remain fixed and consistent in novice teachers' minds. Previous studies have pointed to the adaptability of teachers' knowledge and shown that as they gradually gain more instructional experience, they undergo a great deal of change and development throughout their career (e.g., Anthony et al., 2015; Von Esch & Kavanagh, 2018). Socialization into the established institutional practices and engagement in various instructional activities is regarded as another major factor that culminates in the revision of the teachers' nascent knowledge base. In this regard, Li (2013) emphasized the importance of macro and micro contexts in shaping teachers' instructional decisions and argued that teachers' pedagogical practices are largely influenced not only by the social and cultural contexts but also by the institutional context. This professional growth of novice teachers can also be perceived from the sociocultural perspective of teacher education put forward by Johnson (2009). The sociocultural perspective builds on the view that learning and the development of the mind take place in social contexts and argues that contextual factors exert a powerful influence on teachers' professional development. It, therefore, conceptualizes teachers as agents and learners of the activity of teaching who participate in a learning

community. It is within these communities and as a result of the affordances provided by the sociocultural contexts, as Li (2020) maintained, that teachers' professional knowledge, beliefs, and understanding are constantly shaped and reconstructed. In other words, contextual factors play an important part in socializing teachers into a particular professional culture, enabling them to adopt the practices and beliefs that are held and valued within the institutional context.

Changes in the pedagogical reasoning complexity of the teachers in this study can also be interpreted by taking into account the differences between novice and experienced teachers. Gatbonton (2008) differentiated novice and experienced teachers in terms of their position on the teacher development continuum where novice teachers are situated in the earlier stages and experienced teachers in the later stages. Considering the ample opportunities that experienced teachers have already had in grappling with various practical issues, Gatbonton argued that their thinking and pedagogical knowledge are more likely to be stable and less variable. On the contrary, due to their position in the beginning stages of teacher development, not only novice teachers' thinking but also their practical knowledge is characterized as having many elements that are in a state of flux rather than being stable. Although novice teachers in the current study demonstrated improvement in terms of pedagogical reasoning complexity, instances of development in their pedagogical reasoning were restricted to changes of a largely atheoretical nature. This is in line with Webster (2019), who found an evident lack of reference to theoretical concepts in teachers' explanations of their instructional practices. Webster added that the practical knowledge plateau coupled with teachers' lack of engagement with professional discourses represented major obstacles to the scant visibility of theoretical knowledge in teachers' development. The atheoretical development of novice teachers' knowledge and pedagogical reasoning identified in this study is related to the long-standing debate in the educational literature on the relationship between theory and practice. Investigating the relationship between SLA research and language pedagogy from the perspective of teachers, Nassaji (2012) found that although teachers might express an enthusiasm for the usability of SLA research in improving their language teaching, they believed that such research cannot provide practical suggestions related to teaching. The teachers also reported that the knowledge and insight that they gain as a result of teaching experience can be more relevant to their instructional practices rather than the knowledge gained from research. Studies in teacher education have also highlighted the relationship between theory and practice (Cochran-Smith et al., 2015, 2017; Kim & Kim, 2017; Ribaeus et al., 2020). Loughran (2019) expressed concerns regarding the teachers' reluctance to engage in research-oriented and theoretical discussions to improve their teaching experience. Considering their educational environment where only doing the activity of teaching gains crucial importance, as Loughran (2019) argued, teachers cannot be expected to spend time discussing or unpacking their teaching knowledge in theoretically robust manners.

Conclusion

This study investigated the pedagogical reasoning of novice teachers in teaching speaking in order to provide a better understanding of teacher cognition. The findings provided evidence that novice teachers employ a various range of pedagogical arguments to elaborate and evaluate their instructional decisions in the class. Additionally, the findings revealed that as novice teachers engage more in the activity of teaching speaking and deal with different pedagogical issues in their classrooms, their pedagogical reasoning develops and becomes more comprehensive. The findings of this study can benefit teacher education programs. Having a clear understanding of the pedagogical reasoning of novice teachers and how they make use of their instructional judgment to explain their classroom practices provides us with valuable insights into the process of learning to teach and the development of pedagogical expertise. Moreover, the findings offer teacher educators and educational researchers an additional lens to better grapple with the difficulties that novice teachers undergo in their professional careers. The understanding that the findings of the current study offer regarding speaking instruction from the perspective of novice teachers can also contribute to the knowledge base of L2 teacher education.

One limitation should be considered in the findings of this study. Given that this study was limited to novice teachers, an important step for future research is to compare the pedagogical reasoning employed by both novice and experienced teachers in order to tap more into the role of teaching experience in teachers' instructional decisions. Additionally, focusing on novice teachers' instructional decisions and pedagogical reasoning in speaking instruction, this study did not take other skills into consideration. Thus, it would be interesting to study pedagogical reasoning in other areas of English instruction including listening, reading, and writing.

About the Authors

Zia Tajeddin is Professor of Applied Linguistics at Tarbiat Modares University, Iran. His main areas of research include language teacher education and L2 pragmatics. He co-edits the Springer book series of *Studies in Language Teacher Education*. He is the co-editor of two international journals: *Second Language Teacher Education* (Equinox Publishing) and *Applied Pragmatics* (John Benjamins). He has numerous published works in international journals and has recently published *Lessons from Good Language Teachers* (Cambridge University Press, 2021), *Pragmatics Pedagogy in English as an International Language* (Routledge, 2021), and *Teacher Reflection: Policies, Practices and Impacts* (Multilingual Matters, 2022). ORCID ID: 0000-0002-0430-6408

Aso Biri is currently a Ph.D. candidate of TEFL at Tarbiat Modares University, Iran. He is interested in English language teacher education, and his research focuses specifically on the knowledge base of teachers.

Hamid Allami is an Associate Professor of Applied Linguistics at Tarbiat Modares University, Iran. His research interests include sociolinguistics, discourse analysis, pragmatics, and interlanguage pragmatics. ORCID ID: 0000-0001-7882-856X

To Cite this Article

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