Diagnostic Abilities of Novice Teachers

Abstract

This paper discusses diagnostic abilities of novice teachers of English as a foreign language in Poland as demonstrated through analyzing critical incidents (CIs). A case study, designed to explore patterns and regularities in cognitive processes that practitioners activate to examine disorienting situations in their educational context, provided evidence of effective mental work of beginner teachers at the verbal and conceptual levels. Specifically-structured written reports on what the instructors considered critical moments in their teaching practice served as a tool to verbalize how they represent, interpret, and value phenomena in the FL classroom by activating and integrating various sources of professional knowledge. The data analysis, which included both identification of the character of mental representations the subjects stimulated during the recall as well as higher order thinking operations on these representations, led to the conclusion that the inexperienced teachers show a degree of efficacy to register relations and variation in classroom realities, to problematize the unproblematic, to take position on matters, and to formulate relevant feedback for their future didactic moves. This encourages a hypothesis that teachers’ diagnostic abilities are not necessarily determined by the current state of their professional expertise and that limited classroom experience does not suppress adequate cognitive and affective responses to problems in beginner practitioners.

Keywords: novice teachers, diagnostic operations, critical incidents, cognitive processes

The conceptualizations of what makes an expert language teacher have evolved over the years along with the mainstream methods in TEFL. While decades ago teachers were assumed to be “doers” whose highly competent controlling behavior in class was decisive for effective language learning, more recently, the quality standards in formal instruction shifted the gravity towards teachers’ thinking, namely their observant and analytical abilities that allow them to navigate essential adjustments to the specificities of educational context (Burns, Edwards, & Freeman, 2015; Gabryś-Barker, 2012; Boshuizen,
Bromme, & Gruber, 2004). Much of the current view of novice teachers remains unchanged, though, and predominantly focuses on their underdeveloped capacity to efficiently respond to emerging challenges. Indeed, research demonstrates that it is accumulated classroom experience that mostly supports teacher learning and brings newcomers from the periphery of the professional group to its core (Farrell, 2007; Borg, 2006; Day, 2004; Hargreaves, 2003; Richardson, 1996).

The study reported in this paper adopted a cognitive perspective on expertise, which holds that a degree of cognitive energy deliberately expended to (1) recognize nuances in observed events, (2) define problems, (3) integrate relevant mental resources for controlled reasoning about their causes, and (4) exercise professional judgment about their significance for FL learning is equally important in reorganizing knowledge representations (Tripp, 2012; Tsui, 2005; Bereiter & Scardamalia, 2003; Freeman 2002; Rogers, 2002; Johnson, 1998). Sternberg and Horvath (1995) long proposed to fully accept unexpected configurations of attributional similarities between beginner and advanced practitioners. The attribute of insight is one such category, within which variances among its members are determined by demonstrated cognitive abilities, not years of practical experience. In this view, it is reasonable to assume that novices, who are yet to build a repertoire of mental models of classroom situations to help them regulate and accelerate their strategic behavior, might still be capable of conducting diagnostic operations and evaluating both problems and their responses to them (Perry, 2003).

In principle, whether classroom events induce teachers’ critical analysis or not depends on how they represent them mentally. The cognitive processes involved in constructing representations include perception, attention, and memory, but meaning-making is additionally motivated and influenced by prior knowledge, beliefs, moral standards, emotions, and other context-dependent psychological factors. The occurrences in class recognized by practitioners as perplexing, upsetting, or intriguing are highly likely to prompt conceptual work channeled into finding a rational explanation of what happened and reducing the sense of cognitive dissonance (Guerra & Wubbena, 2017).

The purpose of this study was to investigate mental effort put by EFL instructors in diagnosing critical incidents in teaching. Specifically, the acts of diagnosing, verbalized by the participants in written reports, were expected to reveal how they review available evidence, reason, and formulate professional claims about disturbing situations they had encountered in the class. The results exposed some characteristics of good diagnosticians in the least experienced participants. What follows is an overview of the diagnostic abilities as perceived in cognitive psychology. Next, the study and its findings are discussed with regard to the identified characteristics. The concluding part of this paper offers recommendations for teacher training and suggestions for further studies into novices as experts.
Identifying Effective Diagnosing

Diagnosing is a process of problem-solving, which requires that reasoners explicitly define a gap in their current knowledge and manipulate existing mental representations to establish relationships between them, draw causal inferences, formulate rules, and propose solutions that optimally fill the gap (Strasser, 2010; Thagard, 2005; Pretz et al., 2003). These computational operations produce change in teachers’ cognitions, that is, revised understandings of instructional principles and classroom phenomena, the application of which will affect their didactic behaviors in the future.

The first and necessary condition for effective diagnosing is comprehensive evidence, on the basis of which instructors will hypothesize about the origins of events and interpret their meaning (Johnson, 1998). This foundation for reasoning consists of physical and non-physical manifestations of information, including not only the parameters of the learning context, but also the actions, thoughts, and emotions the teacher showed him/herself. Situational awareness (SA), defined as increased attention that enables the individual to distinguish constituents of critical incidents (Endsley, 1995), has been observed to grow in both more and less experienced professionals through simulation- and reflection-based training (Salminen-Tuomaala et al., 2020). The finding supports a fundamental principle of information processing that perception and attention are controlled processes in their part, hence unrelated to one’s professional status. Novice instructors can successfully regulate these processes and discriminate elements of classroom situations, just as experienced teachers do (Rogers, 2002). Tripp (2012) claims that it is the openness to “competing ways of seeing” (p. 27) that increases teachers’ sensitivity to subtleties of the circumstances and enables them to proceed with legitimate analysis of events.

Affective thoughts about distressing events occur naturally in the recall process. In the literature, the attributes of emotion have been recognized as part of our remembering selves and as such are embedded in personal narratives (Goldie, 2000). If the attention is largely captured by subjective perceptions and feelings, a picture of a past situation might get contaminated, and so its further analysis. An emotionally intelligent approach to one’s experiences involves subduing rather than fueling affective responses to retrieved memories, which makes biases cognitively manageable (Jagtap & Guaro, 2016; Gross & Thomson, 2007). McManus (2011) emphasizes that emotional literacy raises our self-awareness but is impossible to develop without situational awareness.

The second constituent of diagnosing—the identification of causal forces behind events—involves systematizing and classifying the collected information. The ability to think, that is, to acquire and manipulate concepts, is the fundamental aspect of human intelligence and cognition, not the prerogative of
experts, although organizing mental representations as hierarchical knowledge structures available for continuous verification has been accepted as a characteristic of expertise across domains (Holyoak, 2005). Mollon (2000) explains that in order to reasonably hypothesize, we need to turn what is pre- or subconscious into our explicit understanding of reality. This prevents us from acting upon a feeling of knowing and instead mobilizes our mental resources to surface the conceptual foundation for our actions, to seek congruence between thought and behavior, and to produce an important learning outcome (Alexander et al., 2011).

Psychological studies indicate that individual differences in cognitive capacity (working memory, intelligence, executive functions, or inhibitory control) and previously established understandings determine how we validate premises we operate on, map connections between knowledge representations, and formulate propositions about observed phenomena (Kottmeyer, Van Meter, & Cameron, 2020; Gray & Holyoak, 2019). On the other hand, Kahneman’s (2011) dual-processing model of the brain, in which System 1 generates intuition-driven associations while System 2 makes the higher-order computational effort in problem-solving situations, demonstrates the limitations of human reasoning. It has been argued that System 2 is inclined to boil down analogical processes to heuristics (West, Toplak, & Stanovich, 2008). According to Kahneman (2011), this inclination reveals systematic errors in the thinking mechanism and might have a detrimental impact on one’s professional growth, for mental shortcuts freeze rather than revise personally-held systems of beliefs (Schraw & Robinson, 2011; Eysenck & Keane, 2010; Martin, 2009). The assumption is hence encouraged that if extensive experience and retentive memory does not prevent people from a cognitive bias, inexpert practitioners are not radically different from their senior counterparts.

Those who deliberately activate the doubter (System 2) and ask probing questions about their experiences are likely to reduce potential shallowness of performed analysis, that is, to minimize inaccuracies in establishing causal relations between events (Tripp, 2012; Tsui, 2005). Also, they might gain a better understanding of what beliefs, principles, moral standards, and values make up their personal theories about TEFL (Borg, 2003). Logical reasoning does not manifest through searching for ultimate truths. On the contrary, Bereiter and Scardamalia (2003) call it a “make-it-better” heuristic, which aims at improving ideas, opening problems, assessing actions, and exploring possibilities for further considerations.

The ultimate stage of effective diagnosing is building claims about FL teaching and learning. According to Tripp (2012), formulating professional judgments about the state of affairs is a matter of making “expert guesses” (p. 125), which manifest teachers’ knowledge, in-depth inquiry, and wisdom. The verifiable nature of those guesses resists the pressure to always provide
accurate assumptions, yet it encourages systematic re-evaluation of available evidence, established understandings, and workable solutions. Tripp’s typology of judgments includes four kinds of conclusions teachers arrive at in their daily practice, the characteristics of which differ with regard to the length of processing, source of orientation, and outcome (Table 1).

Table 1
Four Kinds of Professional Judgments (Tripp, 2012)

<table>
<thead>
<tr>
<th>source of understanding</th>
<th>practical</th>
<th>diagnostic</th>
<th>reflective</th>
<th>critical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>professional expertise</td>
<td>reasoning</td>
<td>personal values and beliefs</td>
<td>professional expertise and reasoning</td>
</tr>
<tr>
<td>length of processing</td>
<td>short</td>
<td>prolonged</td>
<td>short/prolonged</td>
<td>prolonged</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>outcome</th>
<th>workable solutions to problems</th>
<th>increased awareness of one’s own decisions</th>
<th>attitudes</th>
<th>verified standards and knowledge representations</th>
</tr>
</thead>
</table>

While practical judgments are informed by application of professional expertise and represent instant answers to classroom problems, diagnostic judgments are based on prolonged reasoning and examination of one’s own didactic moves. Reflective judgments identify the influence of personal beliefs on one’s performance, and critical ones aim to verify the current knowledge, including its subjective dimension. Good diagnosticians adopt all the strategies to interpret the meaning of emerging difficulties and to take a competent position on matters. As research demonstrates, regular structured attempts to break down meaningful events (critical incidents) and to articulate legitimate rationalizations can help inexperienced teachers acquire the ability as early as during pre-service training programs (Gabryś-Barker, 2012).

On the whole, research on the cognitive work of diagnosis, and novice teachers thinking and acting expertly in particular, is rather limited. In Johnson’s (1996) case study, for example, an inexperienced instructor reflected in a personal journal on her didactic experiences (mostly failures). The novice was capable of recognizing, analyzing, and evaluating her teacher-centered methodology in a surprisingly transparent and informed manner. She could explain not only why ignoring questions from her students (the approach she conceptually disapproved of) served as the easiest way to ensure that the lesson content be covered as planned, but also how it affected the learners. Gatbonton (2008) compared in her study the verbal recall of what novice and experienced instruc-
tors were thinking about while teaching, and she concluded that the pedagogical knowledge activated by the beginners was similar to that of seniors, especially with regard to such categories as procedure and comprehension check, progress review, or students’ prior knowledge. Finally, Tripp’s (2012) training program in AR for Australian educators demonstrated that novice practitioners promptly developed cognitive competence to raise pertinent questions about problematic situations they had faced in the classroom, to make reasonable inferences about their potential causes, and to construct critical evaluation of the events. In doing so, some outperformed their more experienced counterparts.

Clearly, more empirical data is required to understand how entry-level instructors formulate judgments about FL instruction and what these judgments are primarily fueled by. Sternberg and Horvath (1995) reasonably argue that as long as the same criteria are applied to measure the performance of early and late-stage practitioners, they will naturally expose deficiencies in the former. Instead, it is recommended to examine what cognitive resources novices can successfully activate and integrate to evaluate classroom events and their own didactic behavior.

**Study Methodology**

The case study, the results of which are presented below, sought to distinguish regularities in the way teachers of English perform diagnostic operations, that is, respond cognitively to classroom circumstances that they recognize as potentially decisive for a better understanding of English teaching and learning. The study was based on the assumption that critical incidents, considered as problem situations, stimulate operations on mental representations, including rules, concepts, images, analogies, and emotions. These operations lead to causal inferences and indicate both the sources and relevance of knowledge activated for this purpose. Consequently, the research questions aimed to determine:

1. How the participants mentally represent problem situations;
2. What sources of professional knowledge and abstract constructs they integrate to analyze these situations;
3. What reasoning skills they exercise to identify the causes of critical incidents;
4. What types of claims/judgments they build as a result of the diagnosing process.

Written reports, in which the participants described, analyzed, and evaluated critical incidents in their teaching settings over a period of time, constituted the elementary units of inquiry and the source of both qualitative and quantitative data. The examination of the material was hence guided, on the one hand, by
the idiosyncrasies of content communicating teachers’ thoughts at the three stages of the task, and, on the other hand, by the frequency of occurrences of distinguishing features across the texts.

The process of collecting data exceeded two years and resulted in a total of 73 reports, 33 of which were generated by novice teachers (T1:10; T2:11; T3:11).

Participants

There were seven study participants: Polish teachers of English as a foreign language. They were all qualified instructors; however, their classroom experience ranged from a couple of months to 17 years. The division into entry-stage (T1, T2, T3: less than two years of teaching practice) and middle/late-stage professionals (T4, T5, T6, T7: more than five years of teaching practice) precisely reflected the age composition of the group (20s vis-à-vis 30s/40s). Recruited from different work environments, including primary, secondary, and higher state education as well as an English language school, the participants remained in a professional relationship with the researcher. In her capacity as Director of Studies, the latter supervised the work of T1, T2, and T3 in a private educational establishment, where they landed their first EFL positions. T2 and T3 were university graduates in English Studies with adequate methodological practicum granted, while T1 held an MA in Applied Linguistics at Durham University, UK, and was new to the Polish schooling system. She lived and studied in the USA until, in her mid-twenties, she decided to return to her Polish roots and teach English in her birthplace. A unique cultural background that she represented was a relevant factor contributing, as discussed below, to her execution of the diagnostic task.

Procedure

Each of the participants was instructed to write at least ten reports aimed at diagnosing critical incidents (CIs) in their teaching contexts within the stretch of a school year. The concept of critical incidents (problem situations) was introduced to every teacher, and guidelines how to navigate the search provided:
— think of a situation which distracted you from work as it disagreed with accepted norms, a didactic challenge which you managed/failed to handle on the spot;
— something upsetting, amusing, insulting, exciting, or embarrassing that you have noticed, done, or heard as a teacher;
— an event or a lesson procedure that you distinctly remember although it was your usual teaching routine;
— a classroom episode that aroused your curiosity;
— or a moment of realization that your knowledge about teaching English as a foreign language was inadequate for the situation.

The options above show that the participants had a free choice from positive and negative teaching experiences. Two samples, related to a successful and upsetting occurrence in the classroom, were analyzed at the introductory stage of the study, with the emphasis placed on their distinct structure: (1) description of the event, (2) its analysis, and (3) professional judgment. In this respect, the following outline was supposed to assist the teachers throughout the task:

Description
— present the background of the incident;
— summarize events, your (re)actions and emotions;
— point to the critical moment.

Analysis
— identify the problem (assign professional concepts/categories to the parts of the incident / establish causal relationships between them);
— specify the question(s) which the incident brought up;
— name your responsibility;
— think of alternative scenarios for the incident and its outcomes.

Judgment
— evaluate the significance of the incident vis-à-vis your expertise in EFL teaching as acquired through your teacher training, English learning and teaching experience, the subject literature, personal theories, or colleagues;
— construct feedback for future reference in your teaching practice.

To prevent potential influences on the study outcomes, interventions into the process of report writing were kept to a minimum. Still, three updates were received from the teachers after two, five, and nine months into their work. This way, the participants had a chance to raise questions or communicate concerns. The individual contributions to the study were completed upon receiving electronic submissions from the teachers, which, as signaled above, took much longer than expected/planned.

Data Analysis

The content of the reports went through a few stages of segmentation. First, based on the writers’ lexical choices and their prevalence, it was determined what kinds of situations attracted the participants’ attention to be represented as critical incidents. For example, expressions like a drama started, or it was a real let-down, as opposed to the students were mesmerized by my idea, or it was a rewarding experience, indicated negative and positive experiences respectively. The initial stage of analysis also included the thematic
categorization of critical incidents, namely aspects of teaching they covered. The identified common areas of focus were: (1) the participants’ didactic decisions/behavior, (2) their observations of learners/colleagues, and (3) feedback they received from learners, their parents, and supervisors.

Second, mental constructs and concepts that the teachers relied on in their diagnostic task were established by using Gatbonton’s (2008) methodology of breaking sentences into so-called thought units. Thought units in this study refer to language chunks (words, phrases, or clauses) communicating complete ideas, and so were termed Meaningful Thought Units (MTUs). Those were examined at both functional and conceptual levels. The functional labeling of MTUs corresponded to the structure of the participants’ task, namely describing, analyzing, and evaluating critical incidents, whereas the conceptual identification of MTUs was based on the nature of representations and consequently categorized as cognitive (C), imagery (I), and affective (A) constructs. The cognitive MTUs were analyzed for evidence of professional orientation. This resulted in recognizing several broad categories commonly related to in the reports, such as procedural and conceptual knowledge, context, feedback, past experience, knowledge of students, search for understanding, self-critique, self-knowledge, beliefs, and problem areas. The sentence below provides a sample of how segmentation and processing of the collected material was executed.

Teacher: ‘In class, I made them repeat the wrong pronunciation many times,

DESCRIPTION MTU (the teacher recalls what she did) + COGNITIVE MTU (procedural knowledge—the teacher is aware of her didactic choices to manage the learning content).

Teacher: ‘which means its auditory representation was created and stored, even if temporarily.

ANALYSIS MTU (the teacher interprets her action) + COGNITIVE MTU (conceptual knowledge—the teacher understands the linguistic consequences of her mistake for the learners; she logically links the frequent repetition of a word with the possibility of learning its wrong form).

With regard to emotionally loaded thoughts in the participants’ reports (affective MTUs), the analysis was narrowed to the intensity of identified units. Average and strong representations were assigned 1.0 and 2.0 respectively. Their classification was based on discourse analysis, where, for example, the statement I was trembling all over my body with excitement and joy was granted 2.0 while I was impressed by their work merely 1.0.
Lastly, the categorization of the material, supported by NVivo QSR Application, opened up possibilities to analyze it. For example, it was observed that T2 repeatedly referred to learners’ behavior in his reports. The comments he made in CI1: *At the end of the lesson, one of the boys was quite frustrated*, CI5: *I saw they wanted to be noticed*, CI8: *The boy realized he was actually good at English and apparently he appreciated the praise*, and CI10: *She said nothing, but I could tell she did not buy my explanation* appeared analogous in that they revealed the teacher’s tendency to pressurize his perceptions of students’ behavior into absolute certainty, although they were based on his subjective impressions.

The trajectories of teachers’ thoughts were investigated so as to establish how practitioners proceeded from outlining problem situations, to determining causal relations between their constituents, developing conclusions based on identified premises, and assessing one’s own decisions. This allowed for inferences about the teachers’ understanding of classroom realities and their judgments as impacted by their professional knowledge as opposed to their personal values, attitudes, or preferences. Statements like *I’m positive that the boy was used to being rebuked by his teachers and parents all the time, and he expected the same from me*, or *Getting mentally ready for a challenge brings peace to heart* were recognized as reflective thoughts rested on personally-held systems of beliefs, the propositional value of which was rather unsubstantiated. By contrast, an MTU such as *The effectiveness of note-taking is dependent to some extent on the way the information is organized on the board/slides* was classified as demonstrating a didactically justified claim that a chaotic and accidental use of the whiteboard is of doubtful assistance to the process of language learning. To determine the character of professional judgments the participants formulated, Tripp’s (2012) typology, discussed above, was used as the benchmark, including practical, diagnostic, reflective, and critical evaluations.

**Results**

As discussed above, the effectiveness of the diagnosing process at each of its stages rests upon a range of abilities, a level of which might show variances in and among practitioners. The areas of diagnostic competence identified in the novice study participants regarded all aspects of the task execution, such as establishing mental representations of events (Research Question 1), integrating sources of professional knowledge (Research Question 2), applying higher-order thinking strategies (Research Question 3), and formulating critical judgments about one’s experiences (Research Question 4). The examples below illustrate that beginner teachers show potential as diagnosticians. Two instances per
person will be discussed, yet the acquired data provides further confirmation of the desired features in the novice instructors.

Teacher 1

Mental Representations

The series of critical incident (CI) reports composed by T1 was characterized by an exceptionally suppressed expression of feelings. The number of emotionally-loaded thought units she communicated at both the description and analysis stages of diagnosing were the lowest of all (Table 2).

Table 2
The Distribution of Affective MTUs in the Descriptive and Analytical Segments of Critical Incidents Reports of T1 (Bolded Red) versus the Other Participants, Including Beginner and Experienced Practitioners

<table>
<thead>
<tr>
<th>The descriptive segment of CI reports</th>
<th>The analytical segment of CI reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective MTUs (%)</td>
<td>Affective MTUs (%)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>13,4</td>
<td>5,3</td>
</tr>
<tr>
<td>6,5</td>
<td>4,5</td>
</tr>
<tr>
<td>17,2</td>
<td>21</td>
</tr>
<tr>
<td>11,7</td>
<td>26,8</td>
</tr>
<tr>
<td>12</td>
<td>31,4</td>
</tr>
<tr>
<td>14,7</td>
<td>10</td>
</tr>
<tr>
<td>16,8</td>
<td>10,8</td>
</tr>
</tbody>
</table>

Similarly, the intensity of these units scored the lowest at the respective phases of the task performance (Figures 1 and 2).

Figure 1
T1’s Affective Thought Units in Description
While comments reflecting factual and imagery content in other participants’ reports were commonly intertwined with their attitudes towards learners, their behaviors, observed problems, and reached decisions, T1 placed the focus on HOW the events unfolded and WHY (cognitive MTUs), rather than WHAT affective states they evoked in her (affective MTUs). The critical incident (CI6) presented below constitutes evidence of what might be considered the teacher’s emotional detachment. The underlined section indicates the only affective reaction the situation provoked in the instructor:

One of the crucial elements of English teaching is the materials that are used in the classroom because they are one of the main driving forces behind learning. Everything that teachers use to teach language could be considered as teaching material. The different types of materials available for classroom use is a vast topic and the following teaching reflection is focused on the textbook as a base for language teaching, in contrast with the potential of authentic materials.

At the beginning of the school year I needed to evaluate and choose textbooks for each one of the courses at our school. When analyzing different textbooks, the main framework I used was the approach and methodology of the textbook. Methodological factors were the main guidelines I used to evaluate the validity of the textbook. Topics and realia were secondary. One of the main aspects I paid attention to was the way in which language (grammar and vocabulary) is presented in the textbook. For example, I looked at whether or not grammatical structures are preceded by exposure to language in use, such as texts and activities oriented
at non-linguistic themes with the language elements implied in it. I also considered the elements of practice and whether or not students are given enough controlled practice of the grammar structures before they move to free practice and language use in freer speech. Also, the presence of tasks with non-linguistic goals was crucial because I perceived it as a necessity to activate the language taught. Methodology factors were pivotal.

Finally, I chose the Cutting Edge for most of my adult groups. As the course progressed, one of the lessons in the elementary/pre-intermediate group was designed around a grammar point. The aim of the instruction was to enable the students to use the Present Simple 3rd person singular forms of verbs correctly and fluently. It was supposed to be a speaking lesson with a non-linguistic task. The lesson was preceded by typical grammar lessons where students were exposed to texts with the desired grammar point in it. They had plenty of exposure to the language as I considered it a crucial factor. Practice activities followed to give students a chance to use the grammar point in controlled activities and to focus on the form.

For the following lesson I prepared a speaking task to activate the language and enable the students to use it freely. Students were first given a listening task where they focused on how others did the same task, so the students were given a base (Willis, 1996). They listened to a textbook audio recording where different people analyzed holiday course adverts and chose various courses for their friends, according to their friends’ likes and dislikes. The following is an example of an extract from the text-script:

Maybe the sailing course is good for her because she likes spending time outside and she always goes swimming on Fridays.

Students had a proper listening task where they had exposure to the language use and they also had a chance to analyze the language forms used by the speakers to complete the task. Next, the students were given the speaking task. They first read some course adverts. Then they listened to some textbook characters talking about their hobbies, likes, and dislikes. The aim of the task was for the students to decide on the best course for each character, as a group. As stated in Willis’s framework (1996), the task had a non-linguistic goal, but was likely to activate the grammar point. During the task completion I was surprised by how reluctant my students were to complete the task and they weren’t engaged in the task at all. I tried to prompt them, and I simplified the task by breaking it into smaller steps. For example, I asked the students to first list the likes and dislikes of each of the characters. Then I asked them to come up with one course for one of the characters and then to agree or disagree on it with other students. However, it did not change anything. My students were evidently bored and failed to engage in the task. According to my perception of the situation, the students failed to engage in the task because they did not see the point of
talking about some fake characters from the textbook. They seemed to find it pointless to choose a holiday course for people they don’t know, or even for people that do not exist. As a teacher, I failed to take into consideration the fact that authenticity of classroom materials is a major motivational factor for ESL students (Dörnyei, 2001). I considered the methodological factors of textbook design over the authenticity of audio materials. I disregarded the fact that affect is as important as effective teaching methods in class (Arnold, 1999). In a spur of the moment, I adapted the speaking task and told the students to talk about their own likes and dislikes in pairs. Then they were supposed to choose a holiday course for one another and present their ideas for the class, instead of choosing it for artificial people from the textbook. I did this based on the assumption that personalizing content in the ELT classroom is crucial for language acquisition (Krashen, 1981). As a result of this change, the students were more eager to complete the task and seemed to have found the need to actually use the language in class. Therefore, such situation could carry a conclusion that authenticity of materials could be of higher value in the ELT classroom than effective methodological approach.

Factors responsible for such an unusual strength of emotional retrieval remain unknown, but it seems reasonable to speculate that her cultural and educational background, as mentioned earlier, played a role in forming quite uncommon perceptions of classroom realities.

The increased load of affective remarks towards the end of the CI series might be accidental if not related to the scale of fiascos T1 chose to diagnose in CI8, CI9, and CI10. These depicted her desperate yet vain attempts to maintain control over a class of eleven-year-old football players, full of overwhelming vitality, according to the teacher. A gradual change was observed in the character of those MTUs, though. Laconic lexical choices, which the instructor frequently used in the initial reports, such as fail and failure, were replaced now with the use of language that labelled her specific didactic behavior, for example frantic decision, hysterical move, unnecessarily apologetic. It might be that T1 reached a point in the study where she found the umbrella terms insufficiently defining.

Although it is undetermined to what extent the minimal emotional load of the descriptive and analytical parts of T1’s reports was strategically regulated, information processing freed of affective tension gave the instructor an advantage to approach the selected incidents in a less cognitively distorted manner. In this respect, her diagnostic performance can be viewed as much more effective when contrasted with the distribution of affective MTUs in the reports of her beginner counterparts (Figures 3 and 4).
Concept Building—A Source of Professional Orientation

As discussed earlier, concept building constitutes the foundation for analytical operations within the diagnostic task. When examining classroom events, T1 regularly referred to general professional categories, including lesson planning, procedures, learners’ prior knowledge, comprehension check, and many more. In this regard, as illustrated in Figure 5, she ranked the highest among the beginner participants, and the third highest of all.
The instructor also made attempts to establish her own understanding of such aspects of the teaching/learning process as learner autonomy or accuracy/fluency duo. One outstanding example of framing a concept can be found in a report regarding a desperate act of the teacher tearing a young learner’s test in front of the class in response to the boy’s naughty behaviour. Recognized as highly turbulent and unprofessional, the incident caused the young practitioner to contemplate teacher authority. The following excerpt shows the verbalization of her reflective thoughts:

The lesson I learned was not to avoid injustice. It was an obvious piece anyway. I realized that the teacher is not only expected to register and respond to events in class, but also see her own behavior as a component of the lesson, which, when controlled, might actually achieve more than hysterical pedagogical moves. It does not belong to the category of planning and acting upon what has been planned, and hence can be easily overlooked. However, allowing the negative emotions to grow inside and vent eventually is like excusing myself as an imperfect human being yet not accepting others as such. The fact I am a teacher does not give me ultimate power. Quite the opposite, the master, by definition, has reached the point in development where he can accept much more than non-masters because he can see and understand more. Yes, on June 4th, 2015, I decided to become a master one day.

The passage demonstrates the teacher’s ability to not only explicitly and meaningfully refer to such abstract constructs as injustice, controlled behavior, emotion release, or power, but also to incorporate them into the conceptual basis of her newly set professional goal—mastery. To see this ability surface in a young instructor’s narrative proves her both a mature professional and an active learner.

Teacher 2

Reasoning Processes

It was observed that in his 11 analyses of critical incidents, T2 effectively identified premises and built valid claims about three classroom situations, one of which appeared to be a highly-delicate multi-dimension issue. It concerned compromised honesty and integrity of the teacher after he (1) lied to a student about the meaning of an advanced lexical item he was not familiar with, (2) “died” of total embarrassment, (3) managed to recover emotionally, and (4) once more failed to admit his wrong when the student confronted him publicly in the following class.
The line of reasoning T2 verbalized in the CI10 exemplifies an impressive interpretative work, where the instructor proceeded along the time/space developments and contemplated the following unobservable cause-effect relationships within the situation:
— well-deserved humiliation;
— his ego behind the act;
— the perspective of the learner;
— potential damage inflicted on her;
— alternative scenarios;
— expectations held by different EFL ages and levels;
— teacher reputation.

The exploration of these constituents and their configurations, which covered 15 out of 33 meaningful thought units (MTUs) of the report, allowed T2 to point to his fear of being unmasked as incompetent as the major problem area and to conclude that it is the teachers’ transparency, shortcomings in their professional knowledge included, that significantly benefits the learning process on both ends:

My university teacher used to say that transparency is a merit in the profession. It is not a shame not to know all the answers as long as you make systematic effort to learn. You are a person whose car would not start on a winter morning, who had a sleepless night because of heavy road works outside the window, who failed to remember about his mother’s birthday, or who has just got engaged and brings tons of emotions to class. You are a person who knows things and does not know things. Your students should see you happy and unhappy. Your students will believe you then. This is what she used to say. This thought was like a blow on my head. How illuminating!

While in the majority of his CIs, T2 tended to apply heuristics and simplify both reasoning and judgment, the conceptual elaboration performed in this case, paired with the closing reflective thought above, demonstrated a remarkable degree of higher order thinking.

**Defining Experiences and Learning Outcomes**

The way T2 interpreted critical incidents and their outcomes attracted special attention during the data analysis. The instructor admitted his didactic failures in ten out of 11 CI reports. In general, his distressing experiences related to critical feedback he received from his superiors or students (these are symbolized in Table 3 as F–); disturbing observations he made in and outside the classroom (O–); and his compromising didactic actions (A–). For example, he chose to diagnose his misjudgment of learners’ manners, ignorance of CEFR,
an immature response to personal needs communicated by an adult student, or a deep anxiety provoked by a conversation with a teenager’s parent. The reports were abundant in emotionally loaded expressions which straightforwardly reported fault in his personal insecurities or inexperience. The instances range from: *I had no idea what structures in use draw a line between B1 and B2; I found myself in trouble; I blushed like a teenage boy; I felt so embarrassed and I was angry with myself; to I was making fool of myself.*

Table 3

<table>
<thead>
<tr>
<th>CI/1</th>
<th>CI/2</th>
<th>CI/3</th>
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<th>CI/5</th>
<th>CI/6</th>
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<th>CI/11</th>
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<tbody>
<tr>
<td>T2</td>
<td>F–</td>
<td>F–</td>
<td>A–</td>
<td>A–</td>
<td>A–</td>
<td>O–</td>
<td>A–</td>
<td>A–</td>
<td>A–</td>
<td>A+</td>
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In seven of these cases, though, the teacher pictured positive outcomes and new habits he developed in the wake of highly upsetting occurrences. An illustrative example is his CI11, which reveals how the instructor’s complete dependence on the textbook in lesson planning (1) stopped him from adjusting the lesson content to his students’ interests and prior knowledge, (2) provoked their unfavorable reactions, and (3) forced the teacher to spontaneously modify the in-class activities. T2 realized that it was a huge mistake to think that *a meticulously planned chapter in the book will do the thinking for us* and that *both recommended ideas and our own designs must be approached critically unless we think of teaching as a source of easy money.* Alongside, he was more than happy to discover that he was able to fix the problem after the learners’ rolled eyes opened his.

It is unidentified whether the realization that alternative didactic choices could bring more effective learning outcomes did amend the teacher’s mindset and actions permanently. Still, his analytical thought processes could denote the contextual mode of reflection, which, as advocated by Taggart and Wilson (1998), examines the relationship between how things work in real life and how they presumably should work. Attention redirected to the system of knowing potentially benefitted the young teacher in that he initiated the cognitive activity which aimed to realize his objective—adaptation of behavior (Zimmerman & Schunk, 2011). This also presupposes an open-minded approach of the teacher to his didactic decisions and their assessment.

It is true that the study navigated the participants towards emotionally loaded events in their classroom practice as the content for systematic inquiry; however, they all had absolute discretion as to how their considerations were handled. T2’s (sub)conscious choice to see unpleasant experiences as an
impetus for improvement and encouraging feedback for future developments indicates that the practitioner’s perceptions are an integral part of information processing and learning, which is consonant with Golombek and Johnson’s (2004) research findings emphasizing the catalytic role of attitude in teacher professional growth. T2 steered his mental processing from his current didactic understandings towards more expert cognitions, namely, informed assumptions about FL teaching and learning that might assist his problem-solving and decision-making processes in the future.

**Teacher 3**

*Controlled Search for Workable Solutions*

One of T3’s CI reports regarded methodological concerns she had while teaching in a local state school. The problems the instructor identified within the first few months of service were the following:

— she “had to” use rigid and unapproachable grammar terminology to present the teaching material to her young learners;
— she established insufficiently clear lesson objectives;
— she handed in the inept format of homework (ex. 1, 2, 3/p. 7 Workbook).

Her deliberate search for more effective alternatives took a year and involved participating in conferences and studying relevant literature. She consulted her experienced fellow teachers as well but found their input rather useless due to their “conservative and outworn views” on state-school FL instruction. The teacher’s exploratory efforts resulted in a re-discovery of formative assessment, which prompted her to revolutionize her conduct. She personalized lesson contents, customized class routines, employed the “Can Do” strategy for defining learning outcomes, and implemented a creative idea of “Revision Jar” for short consolidation-oriented activities the kids enjoyed doing on a regular basis.

What can be justifiably considered as a symptom of expertise in T3’s experience is her responsive attitude to what she recognized as a didactic challenge. The fact that she was committed to tax herself and engage in methodological inquiry might be called *early idealism*, which Maynard and Furlong (1995) defined as increased eagerness among novice teachers to understand and improve their practice. She might as well demonstrate disposition to maximize processing operations on the existing models of situations so as to transform her professional knowledge. Her active investment of cognitive resources in problematizing and redefining didactic tasks is a distinct expert quality.

*Formulating Critical Judgments*

The same novice instructor was observed to make four attempts at formulating critical judgments within the scope of 11 reports (Figure 6). One of them
demonstrates an exceptional transparency of her diagnostic effort. It regards the concluding remarks about the reprimand she gave a kid for highlighting content in the notebook. By order of the teacher, the use of colours was strictly limited to her written feedback, so the girl violated a cardinal class rule. The pupil’s explanation that colours helped her study made the teacher realize how doubtful was the validity of the norm she excitingly applied to her classroom. Even more importantly, she identified that the source of her tacit conceptualization was the approach adopted by her own teachers, which she thoughtlessly replicated. Her words lucidly illustrate that the incident brought the values which prompted her behavior to her attention and critical examination:

Thanks to this situation, I came to my senses. It made me realize that I set the rule which would make my life easier (while checking their notebooks) and not theirs. It was totally unreasonable and not well-thought. It might have been because when I was a student my teachers used to say: *Red is a color for teachers!* Nobody dared to disobey this command. I might have subconsciously fallen into a trap of setting similar principles. Rules are extremely important but only when they serve a didactic purpose. In this case, the principle was pointless. The student gave me a lot to think about. I spent days pondering over her response: BUT IT HELPS ME…

The novice teacher successfully navigated her mental work towards a critical judgment by recognizing and evaluating the standards upon which she acted. Her mental effort resulted in a transformed understanding of the role of rules in the FL classroom.

**Figure 6**  
The Occurrence of the Four Kinds of Judgments in the Novice Teachers’ CI Reports
Figure 6 shows that all of the inexperienced study participants attempted to go beyond instant workable solutions to the problems they encountered (red line) and recognition of their emotional responses to these problems (green line). While these types of professional judgments involve rather limited processing power, the justification of didactic choices (yellow line) and verification of the validity of the underlying principles require sound logical reasoning. T3 and her beginner counterparts’ reports provided evidence of controlled mental work on their existing knowledge, which counts as diagnostic effort as well as readiness for further professional growth.

**Discussion**

The characteristics of good diagnosticians were identified in inexperienced teachers of English in the study of diagnosing critical incidents. The qualitative and quantitative analysis of empirical data showed that the three beginners were intellectually capable of steering their attentional processes and generating various types (cognitive, affective, imagery) of mental representations of problematic situations. They stimulated multiple sources of knowledge, professional categories, and abstract constructs in search for a better understanding of these situations. Finally, they established causal relationships between events and made effort to articulate critical feedback for their future didactic reference. The collected data is valid as it provides evidence on the existence of qualities in the novice participants that enable them to successfully execute command over their own cognitions. The findings extend the previous research by Gatbonton (2008) in that they point at overlapping features among experienced and inexperienced practitioners and support Sternberg and Horvath’s (1995) hypothesis about the potential variances in the profiles of FL teachers, including the facility in novices to effectively diagnose problems, that is, to optimally represent, categorize, conceptualize, and define disturbing classroom events.

The major limitation of the study regards its scope and hence insufficient amount of empirical material to confidently establish patterns/regularities in the participants’ reasoning. This prevents generalizations and theory building about cognitive faculties of beginner instructors. Also, doubts might be raised about written recall as a reliable research procedure due to its subjectivity. Indeed, the process of thought verbalization is biased to a degree, yet it remains one of very few alternatives to study teachers’ cognitions. Discourse as personal as practice-based accounts communicates how a conscious human being interacts with the unexpected, responds to stimuli, uses schemata to rationalize thoughts and actions, makes elements of the story fit together, and adopts a subjective
stand on (professional) life (Goldie, 2000). In this sense, it operates as a consistent instrument for externalization of the unobserved dimension of instruction, which legitimizes observations and interpretations it prompts. Besides, the conditions under which the participants performed the diagnostic task could not be more natural. The teachers referred to occurrences that constituted their customary classroom practice, including planning, instructing, problem-solving, and reflecting. The situations whose meaning they chose to understand with the aid of structured analysis reveal the reality that researchers do not have access to.

Reasonably, further work is encouraged to fully address the challenging questions about the levels of expertise in novice teachers. Numerous aspects of their behavior should be placed under investigation. It is yet to determine, for example, what psychological factors can successfully mediate the development of mechanisms for entry-level instructors to enhance cognitive processes in light of their deficient classroom experience. Equally fascinating could be comparative studies on larger groups of pre-service teachers engaged in narrow-focus cognitive tasks, for example material design, which can result in recognition of strategies “expert” (good) trainees implement in action. The significance of such research effort lies in the fact that professional competence detected in learners should receive adequate response from teacher trainers.

Practical implications for TEFL education arise from the results yielded by this study. Diagnostic abilities, which essentially include search for, application, and evaluation of relevant information in both the external and internal environments, can be successfully enhanced in teacher training programs through simulation and scaffolding. Although it is recognized that higher order processing is largely dependent on the stability and distinctiveness of the accumulated knowledge, effectively navigated structured practice of analyzing what choices the trainees make, why, and what consequences they might have for the learners can serve as a tool to promote the pursuit of broader understanding of the teaching/learning process. At the same time, diagnosing problems as a hands-on rather than conceptual dimension of teacher education might result in teachers-to-be surfacing and exploiting their cognitive and affective strengths and weaknesses. As Dörnyei (2001) claims, teacher learning is largely based on context-confined feedback, which often determines one’s efforts to develop professionally. The influence of the training stage should be then both formative and stabilizing as it offers beginner instructors not only sheltered conditions to make, realize, and rectify didactic mistakes, but also a unique opportunity to build a sense of teacher identity that draws on observed/detected capacities, not deficiencies.
Conclusions

The concept of expertise in teaching has been challenged in the literature, especially the assumptions that the professional growth is linear and that accumulated experience provides a secure foundation for excellence (Bereiter & Scardamalia, 2003; Tsui, 2005). Non-experts are not uncommon among EFL teachers with several years of classroom conduct. Neglected language skills, technological illiteracy, or fossilized instructional practices are just a few problems that can easily go unnoticed under the label of “seniority.” At the same time, intellectual vigor, emotional maturity, informational resourcefulness, high perceptiveness, strong self-awareness, and other attributes that entry-level teachers potentially bring into the classroom on top of their professional training are overlooked. It is important, therefore, that an objective scholarly approach to didactic competence examines all its diverse manifestations, including outstanding performance of novices.

The paper postulates that it is justifiable to refine the benchmarks against which expertise in teaching is measured and to recognize that cognitive distinctions exist within, not only among, practitioners. A representation of excellence should essentially embrace the interaction of constructive and destructive forces behind teacher learning at every stage of their career. This includes the search for and acknowledgement of diagnostic abilities in novices, whose professional development might be influenced in a degree by recognition they receive from early years in the profession.

References


Ewa Tołoczko

**Diagnostische Kompetenzen von angehenden Lehrkräften**

**Zusammenfassung**


*Schlüsselwörter*: angehende Lehrkräfte, diagnostische Prozesse, kritische Vorfälle, kognitive Prozesse