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Articles

Effects of Exploratory Practice (EP) on Team Teachers' Perceptions in Japanese High Schools

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A team-teaching scheme involving local Japanese teachers of English (JTEs) and foreign assistant language teachers (ALTs) has been in place in Japanese high schools since 1987. Team teaching, including teachers' perspectives on their team-taught classes, has attracted research attention. However, how research in the form of Exploratory Practice (EP; Allwright & Hanks, 2009) affects team teachers' perceptions over time has not been documented. Data were collected for 4 months from team teachers in two high schools using various qualitative methods. Content analysis (Bogdan & Biklen, 2007) was employed to examine the data, and it was found that an EP experience mediated the participants' perceptions through different cognitive development processes, namely, *replacement*, *synthesis,* and *reconfirmation*. It was also revealed that the experience sometimes had only a minimal effect. The divergent effects seem to have stemmed from individual differences, pair discrepancies, contextual factors, and research conditions. The paper concludes with implications of the study.

日本では1987年以来、日本人英語教諭（JTE）と外国語指導助手（ALT）によるティームティーチングが英語授業内で実施されている。現在まで教師の意識調査を含めたティームティーチングに関する研究が盛んに行われているが、teacher research（教師主導的実践

研究）、特にExploratory Practice（探求的実践活動）(EP; Allwright & Hanks, 2009) が教師の認識にどのような影響を及ぼすかは検証されていない。本研究では２つの高等学校で働くティームティーチングペア２組から質的手法を通して４ヶ月に渡ってデータが収集された。データはその後content analysis（内容分析法; Bogdan & Biklen, 2007）を用いて分析された。その結果、教師のEPに影響された認識発達の過程は大きく３つ（置換、統合、再確認）に分類されることが判明した。同時に、EPの影響は時に最小限に留まることも明らかとなった。これらの影響に関する相違は教師個人の特徴、ペアの構成、周囲の環境、そして絶えず変化する研究過程に起因することが示唆された。本論では最後に、言語教師教育における実践的な提言を行う。

I n 1987, Japan began to use team teaching by local Japanese teachers of English (JTEs) and foreign assistant language teachers (ALTs) in English lessons through the government-sponsored Japan Exchange and Teaching (JET) Programme. The number of ALTs participating in the program has grown over the years to 4,372 in 2013 (Council of Local Authorities for International Relations [CLAIR], 2013). The government aims to promote this trend further by hiring 50,000 ALTs by 2023 so that there will be at least one ALT in all elementary, junior high, and high schools throughout the country (Japan Liberal Democratic Party [LDP], 2013). Within this context, team teaching, including teachers' perspectives of their team-taught classes, has attracted research attention (e.g., Hiramatsu, 2005; Miyazato, 2009). However, the ways in which team teachers' perceptions change over time as a result of professional development opportunities has been underexplored. This paper reports on a study that investigated how a research experience in the form of collaborative Exploratory Practice (EP; Allwright & Hanks, 2009) affected teachers' perceptions in their team-teaching contexts. This study, informed by a sociocultural perspective on second-language teacher education (SLTE; Johnson, 2009) and by the related concept of the Zone of Proximal Development (ZPD; Daniels, Cole, & Wertsch, 2007; Vygotsky, 1930s/1978), involved collecting data from two pairs of team teachers in two public high schools, using multiple qualitative methods (i.e., individual interviews, pair discussions, group discussions, and EP stories). Findings indicate that as a result of the participants joining an EP project that consisted of observing their own and other teachers' classes, taking part in pair and group discussions, and writing EP stories, they experienced various cognitive development processes, namely, *replacement*, *synthesis,* and *reconfirmation*. The paper concludes with possible implications of the study.

A Sociocultural Perspective on Second Language Teacher Education

SLTE generally deals with "research and practice relevant to the preparation and on-going professional development of teachers who teach English as a second/foreign language in diverse contexts" (Freeman & Johnson, 1998, p. 394). Because a sociocultural perspective is believed to provide a window into how different concepts and functions in human consciousness develop, it is regarded as a useful approach to understanding and supporting SLTE (Freeman, 2009; Johnson, 2009). Johnson contends that a sociocultural lens enables researchers to examine the inherent cognitive and social interconnection in teacher learning. One way to achieve this is teacher research. A sociocultural perspective, not as a methodology but as a theoretical lens, informs this study by showing the value of the ways in which teachers conceptualize their practice and learning.

Recently, a sociocultural perspective has been used to examine various areas in SLTE. Golombek (2011), for instance, traced the cognitive development trajectories of student teachers through dialogic mediation that was operationalized by digital video protocols in the United States. She provided mediational strategies that were adjusted according to the needs of the participants and, through this approach, encouraged them to reorganize, refine, and conceptualize their cognition. Poehner (2011) explored the experiences of an in-service teacher who participated in Critical Friends Groups (CFG), a means to "collaboratively examine teacher and student work" (p. 191). She found that the collaborative CFG activities made it possible for a participant teacher to objectively view an issue concerning one of her students, reconceptualise it, and consequently adjust her practice. Tasker (2011) investigated, through a professional development activity (i.e., lesson study), the extent to which engaging in a study led to conceptualization changes in EFL teachers in the Czech Republic. Lesson study is a "framework teachers use to explore a gap between where their students are now, and where they would like them to be" (p. 205). Tasker's study lasted for 14 weeks and included three teachers. Findings showed that the lesson study had the power to change the ways the teachers conceptualized student learning. The participants in this study also collaboratively experienced inquiry-based professional development—EP—as a mediational tool in the field of SLTE.

Given that the participating teachers in this study were two pairs of team teachers, ZPD was a key concept in understanding the teachers' learning experiences from a sociocultural perspective. Vygotsky (1930s/1978) defined the ZPD as the distance between one's current developmental level, determined by one's ability to independently solve problems, and one's po-

tential developmental level, determined by one's ability to overcome problems in collaboration with more capable (or similarly capable) peers. The types, frequency, duration, and forms of interpersonal assistance involved are integral factors for individuals' development within their ZPDs. The development is likely to occur when teachers articulate, share, negotiate, and understand their practices (Freeman, 1993) as well as when they take risks, share frustrations, and show vulnerability (Tharp & Gallimore, 1988). The foci throughout this study were various forms of dialogic and cooperative teacher learning that pushed the boundaries of the teachers' ZPDs.

Teacher Research and Exploratory Practice (EP)

In this paper, the term *teacher research* is conceptualized as teacher-initiated inquiry into teaching practice in the teacher's professional context (Borg, 2013). It provides opportunities for teachers to participate in research as practitioners and researchers. An embedded notion of teacher research is that teachers can learn and develop by closely examining their own teaching and their learners' learning, collecting data, and using reflective processes (Barkhuizen, 2009; Borg, 2013). One of the most well-known types of teacher research for professional development is action research (Burns, 2012). Teachers who engage in action research aim to solve immediate problems raised in their classrooms via a spiral of actions, that is, developing a research plan, acting according to the plan, observing the effects of the action, and reflecting on outcomes for further cycles (Burns, 2005). According to Burns (2005), "related branches" of action research are action learning, practitioner research, and reflective practice. Along similar lines, and germane to this study, the notion that teachers, as well as their learners, should be the key protagonists in their own learning and research has given birth to a new type of teacher research: EP. There are significant differences between action research and EP. For instance, in the case of action research, the focus is on *problems* to improve lesson quality. In the case of EP, however, the focus is on understanding *puzzles* about teachers' and students' *quality of life*. Another difference is that although action research is cyclical and adds extra activities in the classroom for data collection, EP is a more flexible endeavour and includes various EP activities in the normal curriculum. EP is thus defined broadly as a sustainable way for teachers and learners to develop their own understandings of life in the classroom (Allwright, 2003, 2005; Allwright & Hanks, 2009).

The conceptual origin of EP came about when Allwright and Bailey (1991) called for a pressing change to practitioner research. They questioned the

scientific and statistically demanding types of teacher research popular at that time and suggested that these traditions led to classroom teachers not conducting research in their classrooms. Researchers in various contexts have since utilized EP as the theoretical framework for their investigations, and the characteristics and principles of EP have been extensively explored over the years (e.g., Allwright, 2003, 2005; Allwright & Hanks, 2009; Gieve & Miller, 2006; Yoshida et al., 2009). Allwright and Hanks (2009) formulated seven principles of EP for inclusive practitioner research:

The "what" issues
1. Focus on quality of life as the fundamental issue.
2. Work to understand it [quality of life], before thinking about solving problems.

The "who" issues
3. Involve everybody as practitioners developing their own understandings.
4. Work to bring people together in a common enterprise.
5. Work cooperatively for mutual development.

The "how" issues
6. Make it a continuous enterprise.
7. Minimise the burden [the extra workload to conduct EP research] by integrating the work for understanding into normal pedagogic practice. (p. 260)

These EP principles have been used by a number of practitioner–researchers to enrich their classroom practices (e.g., Gunn, 2010; Rose, 2007). The EP principles allow researchers to conduct research *with* participants, not *on* participants, thereby replacing the traditional hierarchy. This study also incorporates an EP component because it is the type of teacher research of, for, and by teachers and learners, and an attempt was made to explore the effects over time of an EP experience on language teachers' perceptions within their particular and immediate contexts. This research was thus guided by the following question:

What effects does an Exploratory Practice experience have on teachers' perceptions over time in team-teaching contexts?

Method

The Participants

In recruiting participants, the first author made phone calls to JTEs living in a northern prefecture in Japan whom he, as a former JTE in the prefecture, believed were interested in this sort of inquiry on the basis of their active participation in professional training sessions and their high English proficiency. To avoid possible ethical issues, he did not seek any teacher participant with whom he had taught, and he did not contact schools where he had previously worked. Two pairs of team teachers (each pair consisting of a JTE and an ALT) from two different public high schools participated in this study (see Table 1). Aitani (female JTE) and Matt (male ALT) worked at Sakura High School, and Takahashi (female JTE) and Sam (male ALT) worked at Tsubaki High School (all names of participants and places are pseudonyms). The ALTs had never previously lived in Japan or in any parts of Asia.

Table 1. Participants in the Study

School	Sakura		Tsubaki	
Type of school	Vocational		Liberal Arts	
Participant name	Aitani	Matt	Takahashi	Sam
Type of teacher	JTE	ALT	JTE	ALT
Age	46	32	45	23
Gender	Female	Male	Female	Male
Nationality	Japan	Australia	Japan	USA
Degree received	Master's (English language teaching)	Bachelor (Visual arts)	Bachelor (English linguistics)	Bachelor (History; minor in Education)
Previous overseas experiences	Travelled to UK	Travelled to NZ, Asia and Europe	Lived in USA for 6 months	Travelled to China
Foreign language proficiency	Advanced (English)	Intermediate (Japanese)	Advanced (English)	Beginner (Japanese)
Total years of teaching	25	1	24	1
Number of years at the current school	6	1	5	1

School	Sakura		Tsubaki	
Working days at the school	Full-time	Monday and Tuesday	Full-time	Monday, Tuesday, and Wednesday
Number of team-taught classes per week as a pair and types of subjects	2 classes English Conversation English II		2 classes English Expression Oral Communication	

Data Collection

Data were collected from December 2011 to March 2012, in three phases: before the EP experience (Phase 1), during the EP experience (Phase 2), and after the EP experience (Phase 3). At the beginning of Phase 2, the participants were provided with information about EP principles and what participating in the EP project might entail (e.g., "There is no right or wrong way to do this," "You teachers are the centre of the research journey"). During Phase 2, the teachers participated in an EP project that involved observing their own and other teachers' classes, taking part in pair and group discussions, and writing EP stories. They repeated these sets of activities three times (i.e., Cycle 1, Cycle 2, and Cycle 3). Multiple types of data collection methods were used, as follows:

Phase 1: Before the EP Experience

• Narrative interview 1 (hereinafter referred to as NI1): Narrative interviews (see Appendix) allowed participants to take responsibility for their talk and generate detailed accounts (Chase, 2005). The participants could choose to be interviewed in either English or Japanese (all participants chose their mother tongue). The first author, who speaks Japanese as a mother tongue and has high English proficiency, interviewed the participants for about 90 minutes each in the counselling room at each school. All interviews were recorded using a digital voice recorder.

Phase 2: The EP Experience (Three Cycles)

• Classroom observation: The first author observed team-taught classes at each school at the beginning of each cycle. Each class was videotaped. The main purpose of the observations with a video camera was not to

collect data for this study per se but to provide a means to facilitate the teachers' reflection on their classroom practices during their pair and group discussions that took place later.

- Pair discussion: Immediately after each classroom observation, each pair of team teachers and the first author discussed the class observed on that day. The involvement of the first author during the discussion was limited to providing direction for discussion and asking questions (see Appendix). The language used in the discussions was English because that was the only language that could be understood well by all participants. The aim of the discussions was to gain a deeper understanding of the classes by mining a small amount of data over and over from multiple perspectives rather than by viewing an entire lesson once from one perspective (Fanselow, 1992). Based on their interests, the teacher participants selected a 5-minute video clip from the observed class (recorded for 50 minutes at Sakura High School and for 45 minutes at Tsubaki High School) after watching the videotape several times. Once the clip had been selected, careful analysis of the activity that was the focus in the clip followed. In pair discussions during Cycle 1, it was necessary to determine the *theme* that was going to be explored for the remaining cycles in order to narrow the topic as well as to have a degree of consistency over time. The pair at Sakura High School (Matt and Aitani) chose "Teacher instructions for student classroom activities" as their theme. They wished to understand the ways in which they gave instructions when explaining activities. The pair at Tsubaki High School (Sam and Takahashi) selected "Teacher feedback for individual students' presentations" so that they could understand how they gave feedback in class. Each discussion continued for about 1 hour, and all discussions were recorded.

- Group discussion: A few days after the pair discussion was held at each school, all four teachers and the first author gathered and conducted a group discussion for about 90 minutes at a neutral venue (i.e., a community centre). The first author remained silent much of the time during the discussion except when he prompted and guided discussion (see Appendix). As in the pair discussions, the language used in the group discussion was English, and all discussions were recorded.

- EP story: The teachers wrote EP experience stories in English at the end of every cycle. With permission from the teachers, the stories were sent via email to all the teachers participating in the study so that there was an open process of sharing and discovery. It is important to note that

the first author was also part of this process, during which he disclosed his honest emotions and beliefs about teaching and research, a process referred to as self-disclosure (Egan, 2000). The EP story writing also became a means by which the teachers and the first author could monitor the progress and direction of the EP project.

Phase 3: After the EP Experience

• Narrative interview 2 (hereinafter referred to as NI2): In an identical format to the first narrative interview, the first author interviewed the teachers for about 90 minutes each in the counselling room at each school (see Appendix). All interviews were recorded.

Data Analysis

All audio data from interviews and discussions were recorded with a SANYO digital voice recorder (ICR-PS182RM). The first author carried out the transcribing and translating work at the research sites. Both authors analysed, through content analysis (Bogdan & Biklen, 2007), approximately 23 hours of detailed interviews and discussions constituting 283 pages (English only) and 129 pages (Japanese with English translation) as well as 31 pages of typed documents (i.e., EP stories). Content analysis is an inductive method that allows researchers to synthesize data, create codes and categories, and search for patterns amongst these. In this study, the method was applied *within-case* to learn as much as possible about the experiences of each of the four teachers as well as *across-case* to learn about the idiosyncrasies specific to each school (i.e., teachers at Sakura High School and teachers at Tsubaki High School). The across-case application also allowed the identification of possible divergences and convergences between the JTEs (Aitani and Takahashi) and the ALTs (Matt and Sam). These strategies enabled meaningful interpretation of the participants' particularities and commonalities at the individual, school, and JTE/ALT level.

Findings

As a result of the content analysis referred to above, one recurring topic that was identified, both within case and across case, was the teachers' *changing* (i.e., developing) perceptions of individual teachers and students, teaching practices, student learning, institutional policies, and research. In other words, the EP project mediated the participants' perceptions through

different development *processes*. In discussing the significance of cognitive development processes, Vygotsky (1930s/1978) stated that "we need to concentrate not on the *product* of development but on the very *process* by which higher forms [of thinking] are established" (p. 64, emphasis in original). We determined, via further analysis, several codes connected to the teachers' changing perceptions, such as *alternation*, *discovery*, *reinforcement*, *integration*, *maintenance*, and *confirmation*. Although researchers (e.g., Golombek, 2011; Johnson, 2009; Poehner, 2011; Tasker, 2011) use such terms as reorganization, refinement, reconceptualization, rethinking, and transformation interchangeably to describe cognitive development processes, in this study three distinct, though interrelated, terms were identified from the various codes such as those presented above and were then used to illustrate the different cognitive development processes. These are: (a) replacement, (b) synthesis, and (c) reconfirmation.

Replacement is the process by which the participants' prior perceptions were abandoned and replaced with new perceptions. If the participants' previous perceptions were integrated with new perceptions—in other words, new perceptions were accommodated into the participants' previous perceptions—these cases were classified as *synthesis*. *Reconfirmation* means that the participants' prior perceptions were maintained and any changes in these rejected. It is unlikely that participants will completely abandon all their previous perceptions and replace these with new perceptions, synthesize their prior perceptions and new perceptions equally, or reconfirm their initial perceptions and reject all new perceptions. The different processes, therefore, could be conceived as falling along a continuum with replacement at one end, synthesis in the middle, and reconfirmation at the other end (see Figure 1).
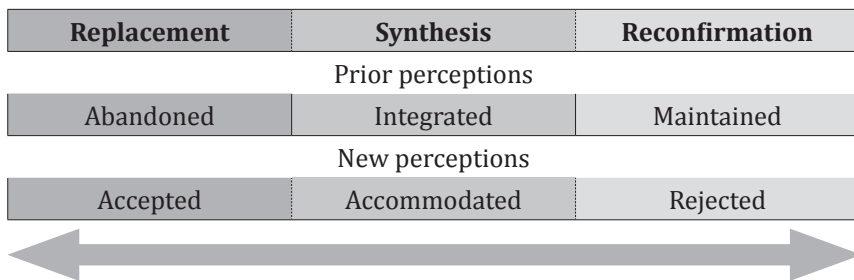
Replacement	Synthesis	Reconfirmation
Prior perceptions		
Abandoned	Integrated	Maintained
New perceptions		
Accepted	Accommodated	Rejected

Figure 1. Perception development processes.

We deal with these processes below and provide illustrative examples of each of them. The focus of this study was particularly on the effects of the EP intervention on the teachers' perceptions of their teaching practices. Although several of their perceptions appeared to have been affected, such as those concerning JTEs, ALTs, and student learning, it came as no surprise that the EP effects on teachers' perceptions of their own teaching were most salient in the data, given that: (a) the EP project consisted of a number of activities directly related to teaching in team-teaching contexts (e.g., viewing video clips of team-taught classes) and (b) the teachers decided to investigate certain aspects of classroom teaching as their chosen themes: how instructions were provided in class (at Sakura) and how feedback was provided in class (at Tsubaki). However, the EP project seemed to have a minimal effect on the perceptions of one teacher, Takahashi. She felt that the project did little to influence her perceptions. This matter is addressed after the discussion of the three processes.

Effects of the EP as a Mediational Tool on Team Teachers' Perceptions

Replacement

Replacement is used to refer to cases in which new perceptions take the place of the participants' previous perceptions. In this category, cases that are located towards the left end of the continuum in Figure 1 are included. Because replacement means the abandoning of previous perceptions, this process could be considered to be the strongest effect of the EP project. It was found that two teachers (Matt and Aitani) most evidently experienced this process.

In his first interview, Matt, the ALT in Sakura, identified the role of ALTs as follows: "The ALT's role is to introduce native level language, to interact with students and let them experience conversing with a native speaker" (NI1). Regarding the role of JTEs, he said, "The JTE's role in the team-teaching environment is to direct in a similar way to the ALT, but really to provide the platform with Japanese translation for the native speaker to teach in an effective way" (NI1). After the EP project, however, he appeared to have radically changed his perceptions of the teaching roles of ALTs and JTEs, from being static in nature to being more fluid:

> It's really come to me that for us to successfully team teach, it's all about fluidity and changing up our methods. So sometimes I'll have a more dominant role in the room, and next class, Aitani has the dominant role . . . . No matter how much you plan

a class, the occasion will arise where the need for improvisa-
tion comes about. (NI2)

Aitani, the JTE in Sakura, also indicated that she had replaced her earlier
perceptions of team teaching. In the second pair discussion, she said to Matt:

Before I did the first cycle, I had an opinion about team teach-
ing. Like if we are to do team teaching, the activity should be
something special. But after the first cycle, after we talked
together, I changed my mind. Like the activity itself doesn't
need to be special. If we do the activity together . . . we can say
that the teaching experience is effective and meaningful. (Pair
discussion)

Her newly generated perception regarding team-taught classes reap-
peared in her final EP story:

When we first started this project, I blindly tried to make up
some *special activities*. . . . I had been fooled by the word *special*.
And the moment I noticed it, I felt that the new possibilities of
activities are widely opened before us. . . . TT [Team-teaching]
situation has become far more than just a useful experience.
(EP story)

Aitani no longer believed that team teaching needed to be special or dif-
ferent from her individual teaching. As soon as she realized this, she saw
team teaching to be full of possibilities. Aitani also mentioned, in her final in-
terview, a replaced perception related to giving instructions in team-taught
classes:

Before this project, when there was an ALT, I was trying very
hard to explain the ALT's instructions while the ALT was pro-
viding instructions in order to help the students understand it.
But after we started our team teaching in 2A, I decided to take
an optimal balance when Matt was explaining . . . . I now avoid
the situation in which both teachers are speaking at the same
time. (NI2)

Aitani consciously inspected the teaching practices of her team and began
to provide support only when necessary (see Vygotsky, 1930s/1963), rather
than give instructions to the students in tandem with Matt. Her perceptions

of team-teaching instructions for student activities thus made a significant turn.

Synthesis

Synthesis is used to describe the process whereby participants' previously held perceptions of teaching were integrated with new perceptions. In this category, cases that are close to the middle point of the continuum in Figure 1 are included. Three teachers (Matt, Aitani, and Sam) showed clear evidence that they had synthesized their previous and new perceptions.

Matt synthesized his perceptions, particularly regarding the value of well-prepared questions and activity instructions. During the first group discussion he made the following comments after watching a video clip of his class:

> Some of the questions were more challenging, and some groups really did need help quite a bit. . . . In one question in particular, it was my fault. It was not well designed, didn't give them enough information, and it was impossible for them to understand from the scene what it could mean. So I realized they needed some help. (Group discussion)

By looking at the students' reactions both in class and in the video clip, he realized his questions and instructions were not as well thought out as he had imagined and thus developed new approaches to preparing and executing his teaching.

Aitani provided another example of synthesizing perceptions. She previously thought that she had to use only English in class, but by the second cycle, she felt that it was not always necessary and that she could help her students by using Japanese when they were at a loss:

> [I used Japanese] to remove their fears and misunderstanding. I think it's sometimes good to use Japanese to help them understand . . . . I don't think I changed my attitude completely, but I must confess that I didn't have the sense of restriction about using Japanese, as I felt last time. (Pair discussion)

Aitani did not change her attitudes enough to warrant replacement of her previous perception, as indicated by her statement: "I don't think I changed my attitude completely." However, her perception of L1 use underwent synthesis, and she reported that she felt more comfortable using Japanese in the second observed class.

Matt and Aitani also *collaboratively* synthesized their perceptions of teaching. In their final pair discussion, for example, they were asked about their concerns regarding their chosen theme of giving instructions. They externalized their current understandings about it and reconceptualised it:

> Matt: The students' English ability [is my concern] . . . . I think it's not constructive to be delivering instructions using language that isn't in that band of proximity. That defeats the purpose altogether of someone being in the room to assist in their educational experience. It has to be limited to the delivery that is native and natural and challenging but is also within their reach.

> Aitani: But I think your English and instructions, the level of language are totally OK with my students. Of course it's difficult for them but I think it's a bit difficult, it's a bit above their ability, so some good students would want to understand more, would like to listen to your English more. So I don't think it's totally a bad thing to use difficult, complicated expressions.

> Matt: Maybe the way I should say is it's more me repeating things and speaking for too long that makes it inappropriate, probably not the actual vocab used . . . . Probably what is best to do is, as you said, speak less, demonstrate in other ways. My instinct is to speak more and try to cover my tracks with more words. (Pair discussion)

Matt and Aitani appear here to be referring to their students' ZPD ("it's not constructive to be delivering instructions using language that isn't in that band of proximity"). It is interesting, however, that while Aitani and Matt were discussing their students' English ability, they themselves were co-constructing their own ZPDs with regard to teaching practices. In particular, Aitani seemed to have acted as a supportive colleague with critical comments (Edge, 2002), who provided Matt with interpersonal assistance (Tharp & Gallimore, 1988) ("I don't think it's totally a bad thing to use difficult, complicated expressions"). The exchange of ideas between the two took place based on their personal experiences and within their ZPDs, thereby perhaps enabling them to learn as teachers and develop their perceptions of teaching in a timely and effective manner (Wertsch, 2007).

Sam, the ALT in Tsubaki, explained how his perceptions, especially in terms of their chosen theme, teacher feedback, were affected by newer ideas

he acquired during the project: "We focused on feedback given in the context of them [the students] speaking . . . . We have learned what kind of feedback we give and how we can give it in other ways besides grading papers" (NI2). Previously, Sam did not attend closely to what feedback entailed and considered it to be limited to grading papers outside the classroom. The EP project, however, enabled him to accommodate new perceptions of feedback, that is, as being responses to his students' answers in class.

Reconfirmation

Reconfirmation is used to describe cases in which participants maintained their previous perceptions as they were. If the participants' previous perceptions were strengthened and turned into something different, this perception process was interpreted as synthesis (or replacement for extreme cases). Included in the reconfirmation category were cases located towards the right end of the continuum in Figure 1.

Sam and Takahashi provided convincing evidence that they had reconfirmed their previous perceptions. Agreeing with what the team teachers at Sakura said during the second group discussion, Sam commented that calling on one student in class while the other students are not engaged in any task is not an effective teaching technique:

> I would have tried to make sure the kids will stay on task a little bit. Because when only one student is working, the longer they are without having something to do, the more they will fall out. This is the same for all kids. (Group discussion)

Sam seemed to have held the perception that one type of teaching practice (i.e., calling on students one by one) was ineffective based on his experiences ("This is the same for all kids"), and he reconfirmed this perception through discussing the idea with other project members.

Takahashi, the JTE at Tsubaki, also reconfirmed the perceived advantages of her team-teaching style and determined to keep doing what she had been doing for her students:

> Before I started this project, I didn't think so much about team teaching. My interest was focusing on . . . conducting English classes in English! . . . . So this project didn't affect my own teaching style so much, but it kind of reinforced my belief. I was like, "OK. I will keep doing like this!" (Group discussion)

The EP project was not so influential in changing Takahashi's perceptions, but it led her to reconfirm for herself the benefits of her current teaching practice. Noticeable here, besides her perception reconfirmation, is that the immediate interest of Takahashi at the time of the project concerned teaching English in English, which was a policy to be instituted by the government in April 2013. The disconnection between Takahashi's immediate interest (i.e., teaching English in English) and the project's overall focus (i.e., team teaching) no doubt influenced the degree and type of EP effect on her perceptions.

Minimal Effect

The final category is *minimal effect*. One participant, Takahashi, stated repeatedly that the EP experience did not affect her perceptions. She shared her opinion quite categorically in her final interview:

> I haven't changed anything through this project . . . . I changed my teaching motto about 10 years ago. And I have continued to create language classes where students and I can learn and communicate together since then . . . . Especially my teaching goals and the roles of teachers, I didn't change them . . . . I want them [ALTs] to be in the classroom as a communicator . . . . So the ideal English classes I imagine remain the same. That doesn't need to change, and it was not changed. (NI2)

Takahashi also said that her perceptions of teacher feedback were not affected: "I cannot think of anything I have learned about feedback from this project" (NI2). Her comments suggest that the effects of EP on teachers' perceptions depend at least on (a) teachers' previous perceptions and experiences, (b) the degree and duration of teachers' previous perceptions, and (c) teachers' interests and the focus of the research. These factors have also been discussed in relation to teacher research and teacher cognition (e.g., Barkhuizen, 2009; Borg, 2006, 2013; Freeman, 2002).

However, her teaching partner, Sam, had different ideas about Takahashi's EP experience. During his final interview he expressed his beliefs about what effects the EP experience might have had on Takahashi's perceptions of teaching practices:

> I don't know if she has learned anything, but maybe more re-inforced the idea of our roles and that our roles are working and that we are to some extent achieving our goals. . . . I get the

feeling . . . she has learned that what we are doing is what we
want and where we should be at. (NI2)

In line with Sam's comments, there were in fact instances where Takahashi
seemed to have reconfirmed her previous perceptions (see *Reconfirmation*
section above). A benefit of this is that reconfirming previous perceptions,
being cognizant of current teaching practices, and talking about them can af-
fect teachers' perceptions as well as lead to their professional development
as teachers (Freeman, 1993; Golombek, 2011; Johnson, 2009; Vygotsky,
1930s/1963). Therefore, the EP project most likely mediated Takahashi's
perceptions, however small she might have reported the effects to have been.

Discussion

As the identified categories (i.e., replacement, synthesis, reconfirmation,
and minimal effect) suggest, an important finding in this study is that the
EP project as a mediational tool influenced the perceptions of each partici-
pant in various ways. There is, however, a pattern to the way the processes
differed. In particular, the JTE at Sakura, Aitani, replaced and synthesized
her perceptions but did not reconfirm her previous perceptions and was
therefore the most influenced by the EP project, whereas the JTE at Tsubaki,
Takahashi, confirmed her previous perceptions several times and did not
show much evidence of replacing or synthesizing her perceptions. She was
therefore the least affected participant.

In relation to these findings, one issue to consider is the extent to which
the teachers, as professionals, might have felt compelled to give a positive
presentation of self in public in order to reduce the risk of losing face. For
instance, Takahashi, and to some extent Sam, might have reconfirmed their
previous perceptions more than they replaced or synthesized them. Sam, for
example, stated: "What we are doing is what we want and where we should
be at" (NI2). This possibly inhibited meaningful self-examination during
the EP project (see Golombek, 2011). In contrast, Aitani, and to some de-
gree Matt, replaced and synthesized their previous perceptions and openly
shared their uncertainty, vulnerability, and frustration (Tharp & Gallimore,
1988). For instance, in Group discussion Matt said: "In one question in par-
ticular, it was my fault. It was not well designed." This might suggest that
they had built up appropriate collegial bonds with other project members
and felt safe participating in the project. Trusting others and feeling secure
is believed to be a prerequisite for professional growth and a key to conduct-
ing successful collaborative teacher research (Poehner, 2011; Tasker, 2011).

Another issue, related to the above, concerns the experience the participants had as pairs. Sam made a comparison between his pair at Tsubaki and the pair at Sakura: "We didn't really seriously change very much with our class in the process of this. And I know the other group did" (NI2). Both Sam and Takahashi at Tsubaki reconfirmed previous perceptions of their teaching more readily than Matt and Aitani at Sakura, and Sam and Takahashi neither replaced nor synthesized their perceptions as much as Matt and Aitani did. The data in general, together with Sam's comments, suggest that although the effects of the EP project on the participants' perceptions vary from one individual to another, individual teachers' EP experiences might have been affected by their teaching (research) partner at the same school. This is hardly surprising, given that each pair had taught in the same school for some time in addition to the period of the EP project and shared the experience of the same EP project activities as a pair (e.g., pair discussions). Nevertheless, it is still interesting to note that each teacher had come to hold shared interests, goals, and styles with their teaching partner, which affected their own and their partner's ZPDs during the EP project. This seemed to have led to the participants experiencing similar outcomes to those of their partner, but different from those of the other pair.

The divergent effects of the EP project on the participants' perceptions were likely to have stemmed from (a) individual characteristics, such as the participant's prior perceptions and experiences; (b) pair discrepancies, such as their experiences as a pair; (c) contextual factors, such as school research culture; and (d) research-related matters, such as focus of the research, timing of data collection, and project members. As a result of these disparities, as well as other unidentified elements, the effects on the individual participants' perceptions of EP were multifarious. Future studies on teacher research, perhaps those using EP, that take into account these individual, collaborative, contextual, and research-related factors may shed further light on these issues within the field of teacher research and SLTE.

Conclusion

We have shown in this paper that the EP project, which included multiple activities such as class observations and various kinds of discussion, mediated the participants' perceptions of team-teaching practices in different ways. The effects of EP on the participants' perceptions were categorized into three cognitive processes: (a) replacement, (b) synthesis, and (c) reconfirmation. Replacement most evidently occurred in two participants:

Matt and Aitani. Replacement had the largest impact of the three processes identified. Synthesis seemed to be experienced by three of the participants: Matt, Aitani, and Sam. Reconfirmation was observed in Sam and Takahashi. In the case of Takahashi, she felt that the EP project had no effect on her perceptions. However, it appears she at least reconfirmed her perceptions as a result of participating in the project.

Japan has long relied on, and will continue to depend on, team teaching by JTEs and ALTs hired through the JET program for EFL teaching and internationalization. Despite this, the perceptions of stakeholders in the actual team-taught classes have not yet been scrutinized sufficiently nor have the stakeholders or researchers moved beyond the prevailing rhetoric and come up with practical ways in which to improve team-teaching practices (Hiratsuka, 2013). Based on this study, it seems advisable that team teachers embark upon teacher research (such as EP) as part of their regular teaching practice, in addition to, or perhaps even in place of, the current professional development opportunities, which normally come in the form of 1-day or 2-day workshops, often including a lecture by a third party, typically a university professor. Through an EP project, team teachers can engage in issues interesting to them and relevant to their working contexts over a full term or school year. The three cognitive development processes discussed in this paper could perhaps provide a useful framework to guide such research. That is, teachers could use the processes to reflect on and make sense of their research outcomes or the processes could be used to focus discussions with collaborating partners. Locally situated professional development opportunities, like the EP in this study, should, ideally, be funded and made available so that, in the future, teacher and student learning will be enriched in team-taught classes.

Acknowledgements

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References

Allwright, D. (2003). Exploratory practice: Rethinking practitioner research in language teaching. *Language Teaching Research*, *7*, 113-141. http://dx.doi.org/10.1191/1362168803lr118oa

Allwright, D. (2005). Developing principles for practitioner research: The case of exploratory practice. *The Modern Language Journal*, *89*, 353-366. http://dx.doi.org/10.1111/j.1540-4781.2005.00310.x

Allwright, D., & Bailey, K. (1991). *Focus on the language classroom.* Cambridge: Cambridge University Press.

Allwright, D., & Hanks, J. (2009). *The developing language learner: An introduction to exploratory practice.* Basingstoke, UK: Palgrave Macmillan.

Barkhuizen, G. (2009). Topics, aims, and constraints in English teacher research: A Chinese case study. *TESOL Quarterly*, *43*, 113-125.

Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theory and methods* (5th ed.). Boston, MA: Allyn & Bacon.

Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.

Borg, S. (2013). *Teacher research in language teaching: A critical analysis.* Cambridge: Cambridge University Press.

Burns, A. (2005). Action research: An evolving paradigm? *Language Teaching*, *38*, 57-74. http://dx.doi.org/10.1017/S0261444805002661

Burns, A. (2012). Qualitative teacher research. In C. A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics*. Retrieved from http://dx.doi.org/10.1002/9781405198431.wbeal0986/pdf

Chase, S. (2005). Narrative inquiry: Multiple lenses, approaches, voices. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed., pp. 651-679). Thousand Oaks, CA: Sage.

Council of Local Authorities for International Relations [CLAIR]. (2013). *The JET (Japan exchange and teaching) programme*. Retrieved from http://www.jetprogramme.org/

Daniels, H., Cole, M., & Wertsch, J. V. (2007). *The Cambridge companion to Vygotsky*. New York: Cambridge University Press.

Edge, J. (2002). *Continuing cooperative development*. Ann Arbor, MI: University of Michigan Press.

Egan, G. (2000). *The skilled helper: A problem management approach to helping.* Pacific Grove, CA: Brooks/Cole.

Fanselow, J. F. (1992). *Contrasting conversations.* White Plains, NY: Longman.

Freeman, D. (1993). Renaming experience/reconstructing practice: Developing new understandings of teaching. *Teaching and Teacher Education*, *9*, 485-497.

Freeman, D. (2002). The hidden side of the work: Teacher knowledge and learning to teach. *Language Teaching*, *35*, 1-13. http://dx.doi.org/10.1017/S0261444801001720

Freeman, D. (2009). The scope of second language teacher education. In A. Burns & J. C. Richards (Eds.), *The Cambridge guide to second language education* (pp. 11-19). New York: Cambridge University Press.

Freeman, D., & Johnson, K. E. (1998). In this Issue. *TESOL Quarterly*, *32*, 393-396.

Gieve, S., & Miller, I. K. (2006). *Understanding the language classroom*. Hampshire, UK: Palgrave Macmillan.

Golombek, P. R. (2011). Dynamic assessment in teacher education: Using dialogic video protocols to intervene in teacher thinking and activity. In K. E. Johnson & P. R. Golombek (Eds.), *Research on second language teacher education: A sociocultural perspective on professional development* (pp. 121-135). New York: Routledge.

Gunn, C. L. (2010). Exploring MATESOL student 'resistance' to reflection. *Language Teaching Research*, *14,* 208-223. http://dx.doi.org/10.1177/1362168810363940

Hiramatsu, S. (2005). Contexts and policy reform: A case study of EFL teaching in a high school in Japan. In D. J. Tedick (Ed.), *Second language education: International perspectives* (pp. 113-134). Mahwah, NJ: Erlbaum.

Hiratsuka, T. (2013). Beyond the rhetoric: Teachers' and students' perceptions of student learning in team-teaching classes*. The Language Teacher*, *37*(6), 9-15.

Japan Liberal Democratic Party [LDP]. (2013). *Chuukan teigen* [Midterm report]. Retrieved from http://www.jimin.jp/policy/policy_topics/pdf/pdf100_1.pdf

Johnson, K. E. (2009). *Second language teacher education: A sociocultural perspective*. New York: Routledge.

Miyazato, K. (2009). Power-sharing between NS and NNS teachers: Linguistically powerful AETs vs culturally powerful JTEs. *JALT Journal*, *31*, 35-62.

Poehner, P. (2011). Teacher learning through critical friends groups: Recontextualizing professional development in a K-5 school. In K. E. Johnson & P. R. Golombek (Eds.), *Research on second language teacher education: A sociocultural perspective on professional development* (pp. 189-203). New York: Routledge.

Rose, J. (2007). Understanding relevance in the language classroom. *Language Teaching Research*, *11*, 483-502. http://dx.doi.org/10.1177/1362168807080965

Tasker, T. (2011). Teacher learning through lesson study: An activity theoretical approach toward professional development in the Czech Republic. In K. E. Johnson & P. R. Golombek (Eds.), *Research on second language teacher education: A sociocultural perspective on professional development* (pp. 204-221). New York: Routledge.

Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context.* New York: Cambridge University Press.

Vygotsky, L. S. (1963). *Thought and language.* Cambridge, MA: MIT Press. (Original work published 1930s.)

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: Harvard University Press. (Original work published 1930s.)

Wertsch, J. V. (2007). Mediation. In H. Daniels, M. Cole, & J. V. Wertsch (Eds.), *The Cambridge companion to Vygotsky* (pp. 178-192). New York: Cambridge University Press.

Yoshida, T., Imai, H., Nakata, Y., Tajino, A., Takeuchi, O., & Tamai, K. (Eds.). (2009). *Researching language teaching and learning: An integration of practice and theory.* Bern, Switzerland: Peter Lang.

Appendix

Rubrics for Interviews and Discussions

Phase 1: Narrative interview 1 (All teachers individually)

"I would like you to tell me any stories regarding team teaching. I might ask you questions for further discussion later. You might think I have answers to some questions I ask, but I would like to know *your* answers. So please answer my questions freely."

Phase 2: Pair discussion (Each pair of team teachers and the first author)
- Choose a 5-minute video clip from the video-taped class.
- Describe, analyse, and interpret the chosen clip while stopping and replaying it.
- Take the time to discuss your *theme*.
- Answer the following questions:
- In what way do you want to change your teaching for the following classes?
- How will you attempt to achieve that?

Phase 2: Group discussion (All teachers and the first author)
- Watch the two chosen 5-minute video clips and consider the description, analysis, and interpretation from each pair.
- Describe your experience of the cycle.
- Please share and discuss the *themes*.
- What would you like to achieve in the next cycle?

Phase 3: Narrative interview 2 (All teachers individually)

"I would like you to tell me any stories regarding team teaching based on your EP experience."