Supporting the writing up of teacher research: peer and mentor roles

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This study focuses specifically on the writing up process of relatively inexperienced teacher researchers. The data consist of interviews with 11 teacher researchers at a private university in Turkey. There was evidence that mentor-supported collaboration created a socio-constructivist learning environment, leading to the development of academic writing skills. This was achieved by research partners sharing responsibility and negotiating the writing process and content. The data suggest that this process led to the teacher researchers experiencing longer term learning and greater autonomy as writers, although not all benefitted from collaboration, possibly because of conflict due to perceived differences in commitment. The study's implications highlight the importance of participant commitment, and, in particular, a supportive institutional environment. In the current study, the mentor played a key role in supporting the intrinsic motivation of the teacher researchers, but also in providing the essential instrumental motivations of conference presentation and publication opportunities.

Introduction

The relatively small but increasing worldwide Teacher Research (TR) movement has brought a need to support the process of teachers' public writing. This is due to the key role of writing up TR in transferring the experience gained into knowledge (Berthoff 1987). Given the current lack of published TR, especially publications that are accessible to practising teachers, and the need to encourage dissemination (Burns 2014), this study sets out to identify the factors involved in supporting language teachers' writing up processes and to understand how such support results in teacher writing development. Focusing on relatively inexperienced researchers, it investigates an emerging context: voluntary TR undertaken in addition to normal teaching duties rather than for a qualification (Smith, Rebolledo, Shamim, and Wyatt 2015). This study of the writing up process explores the contribution of two sources of support for the teacher researchers: collaboration with peers working in the same institution, and with an experienced mentor with a doctoral degree and a TR background.

As well as analysing these two sources of support in the writing process, this research examines how these contribute to the longer term development of teachers as autonomous writers and critical thinkers.

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The study highlights the importance of teacher writing for professional development.

Literature review

Writing up TR

In this study, TR is considered an umbrella term for any research both by and for language teachers. TR has been defined as contextualized, personalized, and professionalized activities to promote new teaching practices and innovation. Since Stenhouse (1975), there has been continuous argument in favour of teacher publication. Crookes (1993), for example, argues that published studies can be sources of learning for critical peers, providing 'progressive opportunities' for reporting research. In addition, publishing offers teachers three general benefits: the encouragement to undertake research, the potential relevance of findings to other contexts, and, of particular interest in the current study, the development of professional writing skills. Another benefit is the formalization of the process of writing development, because the writing up and dissemination of TR may play a critical role in career progression (Burns op.cit.).

Role of writing up TR in teacher development

Engagement in writing up TR potentially fulfils all five criteria of Desimone's (2009) core conceptual framework for teacher development:

- a content focus (i.e. increased knowledge through reading and writing);
- active learning (teachers are at the centre of the writing process);
- coherence (learning is supported by beliefs, which can be crystallized through writing);
- duration (writing skills evolve throughout teachers' professional lives); and
- collaborative participation (teachers cooperate on projects).

It can be argued that, because TR is closely associated with collaboration (Burns 1999), the writing up process is especially relevant to Desimone's (ibid.) final criterion, which is the focus of the current research.

Collaborative TR writing

Following a social constructivist approach, Tynjälä, Mason, and Lonka (2001: 7) argue that collaborative and interactive writing is a tool for learning, leading to knowledge construction. While collaborative writing has been considered a development tool for private writing, it could be argued that such an approach is particularly suitable in reaching the more rigorous standards which public writing demands.

Role of mentors in TR writing

The role of mentoring in TR has been underlined by Smith *et al.* (op.cit.), who, while noting the current lack of academic focus on voluntary, informal research by teachers, highlight the importance of mentor support as key to developing autonomy in teacher researchers. In the current study, this need for teacher autonomy is extended towards the issue of teacher writing. Although there is no universally agreed definition of 'mentoring', in line with Smith and Lewis (2015), the mentor in this study can be considered to have a dual role: organizational, i.e. providing actual opportunities for (writing) development, and supportive, i.e. encouraging longer term (writing) development. The mentor's involvement was collaborative and facilitative, which is more likely to lead to longer term

teacher autonomy than a directive approach (Smith and Lewis ibid.). In the current study, this dual role of the mentor, and his facilitative involvement, emerged as key issues in the support of TR writing development.

Role of peers as research collaborators

The TR project focused on in this study involved both collaborative mentoring and cooperative peer work. Although the mentor took a collaborative approach, in the current study, to avoid confusion, the term 'collaborators' refers to peers, and excludes the mentor. Collaborators are generally prominent in TR, often called Collaborative Teacher Research or Collaborative Action Research. Burns (1999) mentions various forms of collaboration, between professional researchers and practising teachers, between teacher researchers working on separate projects, and between the teacher researcher and a 'critical friend'. In contrast, this article specifically sets out to explore the benefits, as well as the drawbacks, of a truly collaborative enterprise, i.e. a co-authored research paper by colleagues in the same institution working as equals. We argue that such mentor-inspired peer collaboration on manuscript production has the potential to create a truly social constructivist learning environment, in which 'conversation/collaboration tools enable communities of learners to negotiate and co construct meaning' in an environment that acts as a 'social/contextual support system' (Jonassen 1999: 218).

Research question

Smith and Lewis (op.cit.: 142) note that a case study in a single context is appropriate for teacher development research, acknowledging this approach focuses on particular individuals and institutions, rather than the general situation. The research question for this study is thus as follows: What are the specific contributions of the mentor and collaborators to the development of TR writing skills?

Background context

Background to the research project

The specific research focus is the development of professional writing skills among teacher researchers, but it is first important to describe the wider TR context. The project was conducted within a university foundation programme in western Turkey. The mentor, the first author, was committed to innovative, process-based, teacher development strategies, and used the autonomy granted to him to initiate the TR programme, reflecting the institution's policy of supporting innovative approaches. Between 2010 and 2015, TR was the main development activity (examples of individual projects include a study of native and non-native speaker teacher approaches to grammar instruction, vocabulary teaching through inference in extensive reading, and developing motivation through learner discussion). Although initially compulsory, the programme was adjusted to allow for voluntary engagement; it was never associated with formal qualifications or courses. There was also an international dimension, via occasional tutorials with well-known external practitioners arranged by the mentor.

Background to the development of writing skills

From the beginning of the programme, the aim of producing articles for publication was emphasized. Two key aspects were involved, firstly, short-term factors: mentoring and peer collaboration, and secondly, longer term factors: the provision of publication opportunities. The short-term

factors consisted of the support enabled by the socio-constructivist nature of the environment, which evolved as the project moved towards a more collaborative mode, mainly due to the need to share workload. Research projects conducted over the academic year culminated in manuscript production, negotiated by research partners under mentor guidance in weekly meetings. Although initially allowing individual projects, at the time of the study, the programme was in its fifth year, when collaboration had emerged as the dominant theme.

Mentor support in the writing phase involved participant-sensitive mentoring (Smith *et al.* op.cit.) as well as the encouragement of peer collaboration. The latter involved workshops on peer collaboration for the group, and more customized support for collaborating pairs in weekly tutorials which focused on different sections as needed: the literature review, context, methodology, results, and reflection. Individualized support, i.e. coaching, included appropriate language, data presentation, and finding a suitable research focus. In addition to providing input, these sessions encouraged mutual support between collaborators.

The mentor also had a key role in organizing outputs, including an annual conference and an annual volume of studies, both in collaboration with international organizations. The most recent volume (Dikilitaş, Smith, and Trotman 2015) was published by an internationally recognized ELT organization, which also provided support and speakers for the conferences. Written and spoken outputs were part of an overall strategy, recognized as important instrumental motivations, without which projects may not reach completion regardless of the level of intrinsic motivation (Smith *et al.* op.cit.).

Methods

Participants

From a pool of 17 teacher researchers who were writing up research, 11 volunteered to be interviewed for this study. These were considered to be appropriate participants due to their previous experience in the programme, then in its fifth year. This experience involved collaborative research under mentor supervision, and previous publication in at least one of several annual research volumes published by the university in whose preparatory school they taught. Ages ranged from 25 to 30, and teaching experience from 2 to 12 years. All except two were female. Table 1 gives full details of their teaching and research experience.

Data collection

A semi-structured interview protocol ensured continuity while gathering insights into the writing up process. The interviews were conducted at prearranged times in the presence of both authors. In the interests of objectivity, the second author, who was unknown to participants, led the interviews, but the first author also contributed by probing and asking for clarification. All participants provided consent for the recording and transcription of interviews. These lasted between 15 and 20 minutes, starting with self-introductions followed by questions (see the Appendix). After each interview, we briefly shared our impressions.

Trustworthiness

Multiple procedures ensured trustworthiness and credibility. Participants reviewed and responded to transcripts (i.e. member checking), ensuring

Participant number	Teaching experience (years)	Number of TR studies completed	Qualifications	Nationality
T1	5	3	BA	Turkish
T2	5	1	MA	Turkish
T3	4	2	BA + CELTA	British
T4	5	2	MA	Turkish
T5	12	2	BA	Turkish
T6	5	3	BA + CELTA + DELTA	Turkish
T7	2	2	BA + CELTA	Turkish
T8	3	3	BA	Turkish
T9	3	2	MA	Turkish
T10	5	3	BA	Turkish
T11	5	2	BA	Turkish

TABLE 1
Details of the participants

data reliability (Stake 1995). We shared our thoughts regarding the data collection process, and cooperated on developing theory and data interpretation, in order to identify emerging issues. Detailed coding and analysis were performed until it was felt that no further useful categories would emerge in the themes and sub-themes within the data. Rather than seeking generalizable issues, we aimed to capture participants' voices through thick descriptions via the data. It is important to acknowledge that the mentor's involvement in the interviews could have inhibited the openness of the discussion, particularly of mentor-related issues.

Analysis

We employed open, axial, and selective coding (Strauss and Corbin 1998) in the analysis. In open coding, each transcript was divided into sentences or groups of sentences that constituted single ideas. Each unit was assigned a code reflecting the identified idea or concept. Eighty-nine items from the open coding analysis were integrated into abstract concepts using axial coding. In selective coding, the concepts were ultimately placed into one of two central categories (the roles of the mentor and collaborators, which were subdivided into two and four sub-themes, respectively), which, combined, constituted the overall theme, i.e. sources of support during the writing up process. Using constant comparative analysis (Merriam 2002: 146), links between individual participant responses were established to strengthen the emerging categories.

Data classification

The research examined mentor and collaborator contributions to the development of teacher writing skills. The analysis reveals that the mentor and the collaborators each contributed moral and practical support. However, for each role, the support was of a different quality. For example, while the mentor provided a wide range of practical (i.e. pedagogic) support, collaborators engaged in a more democratic process of negotiation, particularly over the final content of manuscripts. Interestingly, for some, differences of opinion led to negotiation and compromise, but for others, to disagreement, even conflict.

Results

The results section discusses various aspects of mentor and collaborator roles, with a specific focus on the differences in the nature of support provided by each.

Role of mentor

The mentor's role was especially emphasized in the early stages of the project, and can be classified as both motivational support needed to sustain the writing process, and more practical guidance in the development of reflective writing skills.

Moral support

Mentor support was essential in overcoming lack of confidence. T1 states:

> we thought the first research not professional; we decided not to put it into writing. ... [the mentor] encouraged us by saying 'whatever you do and find is good. It does not have to be professional'.

In this way, the mentor was able to reassure the participants that TR has its own norms and standards that distinguish it from purely academic research. This can be considered as a scaffolding role, as the mentor aims to make the task achievable. The same teacher researcher mentions the confidence gained 'due to regular meetings and discussion sessions [with the mentor]. It is this that makes the writing process easier'. Thus, participants were given reassurance in the face of intellectual and methodological challenges, which may otherwise have led to the work being abandoned. After the challenge of the first study, continued mentor support, especially in identifying research topics, remained important:

> Motivation comes from the topic. If you find an interesting one, that moves you. The previous TR writing experience and help from the mentor makes it easier and simple. (T5)

Pedagogic support

Mentor support was also important for technical issues, for example in providing guidance on research article structure, as highlighted by T10: 'The mentor guided me and gave me templates of teacher research'. In this sense, the mentor took the role of model. T3 describes the mentor's role in her learning process in this regard:

> with the mentor, I changed students' [qualitative] verbal responses into quantified data in tables and graphics. I realized that tables and graphics clearly highlight the results of students' verbal responses.

These skills are key to effective data display, and therefore, to readability. As T1 notes, these skills enable teachers to become autonomous writers: 'I did not know how to create tables and write the data. [The mentor] helped us and I started to create my own ideas'. T11 had a specific problem, the need to avoid causing offence:

> In writing my research last year, I wasn't sensitive enough in writing about native and non-native speaker teachers, but the trainer warned me to be.

Such personalized mentor help represents a coaching role, also seen in the following comment from T5:

> The technique of referencing is a barrier ... I tried to overcome quotation and data writing through reading from internet, and [getting information] from the mentor.

Role of collaborators

The role of the collaborators relates to mutual language support, sharing workload, and idea sharing, i.e. democratic dialogue. A section of the discussion is also devoted to the drawbacks of collaboration, mentioned by several participants.

Language improvement

Two participants mentioned collaborator feedback on language. T5 highlights the mutual nature of this process: 'We correct each other's writing pieces ... We can check [each other] and give feedback'. T7 points out the value of a second reader: 'We can correct each other's work because you may be used to what you have written, so seeing others' mistakes can be easier'.

Democratic dialogue

The participants describe a process of collaboration, which sometimes led to conflict (see next section), but also to compromise and agreement:

> Sometimes we disagree on how to write. We first discuss, and then this discussion forms the basis for what and how we are going to write. (T11)

Below, T1 reveals how negotiation can lead to new insights, while emphasizing the goal of writing as the ultimate motivation for this process, highlighting the interaction between intrinsic motivation and more instrumental goals:

> Having somebody next to you doing all together, this person has the same knowledge; you can go to that person anytime and ask everything. You know that she will understand you. This is the most important thing. Sometimes we have different ideas but we discussed and found out that there is a new perspective. We discussed together because we had to write. [sic]

T7 describes the pivotal role of collaboration in selecting the content: 'We could decide together nicely which part of the data to report, which part is worth mentioning, what can be added'.

Sharing the research workload

Another practical benefit was related to time; collaboration can halve the workload, which is important where research is fitted around teaching. T4 and T8 used identical words: 'We shared the load together', while T7 used a metaphor: 'You have fewer burdens on your shoulders'.

Drawbacks of collaboration

Some participants expressed dissatisfaction with their partners' lack of commitment. Although no direct evidence of a link between dissatisfaction and education level or language ability is provided by the data, interestingly, of five teacher researchers expressing dissatisfaction, three had a higher level of educational background than their collaborators (T6, T4, and T2) and one was a native English speaker (T3). T6 shows that collaboration can have negative aspects:

> I worked with a colleague and we had problems because I wrote more than her ... When working with somebody, you need to check all the

time ... Also I need to wait for her to finish. It is sometimes a waste of time.

T4 echoed this need to take on the dual role of writer and proofreader: '[Collaboration] was challenging. We wrote separate parts, checked separate parts and corrected them'. T11 shows resentment at having to check their collaborator's work, implying differences in levels of writing skill: 'The problem is that I have to check and rewrite what my partner writes, which takes time'. T3 highlights the difficulties in finding mutually convenient times to complete the drafting process:

> Writing it up took a long time. We also could not come together with the peer. More support and checking were needed ... It took 6 months to finish.

Furthermore, different attitudes can bring conflict, especially regarding perceived collaborator inflexibility:

> He is quite sensitive. It is difficult to bring together two types of writing. We need to be open and willing to make changes in writing process for constructive criticism. (T3)

Collaboration is therefore not beneficial to all participants, most strongly shown by T6: 'Writing alone is better because I feel safer'.

Discussion

The data suggest that close collaboration between the mentor and the teacher researchers, and particularly among the collaborators themselves in the process of planning and drafting the research article, led to the co-construction of new knowledge arising from research experiences. To the best of our knowledge, this process has not been described in the existing ELT literature. Table 2, summarizing the data, shows the different roles and contributions of the mentor and the collaborators, underlining the key elements of support and the benefits for the writers in this project. The collaborative nature of the writing process highlighted in this summary corresponds to a social constructivist approach, in which

Area	Mentor role	Collaborator role
Research writing focus	Support in choosing a suitable research focus	Drafting, selecting material for inclusion
Language support	Guidance in creating neutral, formal style	Grammar correction, 'second pair of eyes'
Pedagogic input	Support for overall research article structure, appropriate language, and academic conventions, e.g. referencing	Negotiation, discussion, 'democratic dialogue'
Moral support/motivation	Ongoing encouragement to write, reassurance of value of writing	Shared workload, shared responsibility
Overall role	Key role in the process from finding initial focus to final written product	Key role in all stages, but potential for conflict in writing stage over language quality, timing, and levels of commitment

TABLE 2
Mentor and collaborator roles

collaborators and mentor work towards common goals to solve problems, or reach shared conclusions via consensus building activities, arriving at a 'socially shared construction of knowledge' (Jonassen op.cit.).

Clear evidence of teacher development is provided by the several published research volumes emerging from this programme, for example Dikilitaş *et al.* (op.cit.), and by the participants' quotes. Although the data show evidence of the initial 'considerable uncertainty and unease in the process of writing' (Cremin 2006: 421), the data also imply a process of learning through writing, as the teacher researchers progress from dependence on the mentor to a state of greater autonomy, which is likely to have increased the effectiveness of collaborator support, as collaborators gain writing skills.

An analysis of the data shows that the mentor provided three types of support in line with constructivist learning environments: modelling, coaching, and scaffolding (Jonassen op.cit.). Modelling involved passing on general expertise to the whole group, particularly in models for research papers and data presentation techniques; coaching, involved providing participant-sensitive feedback, such as guidance on the use of appropriate language; scaffolding related to ensuring that tasks were of an appropriate level of difficulty: in this case, it meant reassuring participants that any results were valuable and that, in line with current thinking on TR reporting, the finished product did not need to be of an 'academic' standard.

While it is important not to underestimate the role of the mentor, the data suggest the role of collaborators should be considered at least equally as important. Perhaps more than contributing to language improvement, or sharing the workload, the data highlight the key role of the democratic dialogue that emerged. For some participants, articles were shaped through discussion, disagreement, and negotiation, facilitated by equality among the collaborators, and their availability as colleagues in the same institution. For these participants, reconciling different perspectives resulted in a synthesis of ideas, and potentially, emerging perspectives. Such a dialogue can lead to theorizing, which Berthoff (op.cit.) considers to be the major difference between 'data collection' and more rigorous and analytical 'research'. This process is stimulated by the need to clarify the rationale and procedures of TR, and to justify the interpretations and implications. However, the data suggest that collaboration may not be beneficial where partners have different perspectives on the writing process, and for at least one, working alone was preferable.

Implications

Two major implications emerged for the development of teachers' professional writing skills: the need for committed participants, and the importance of a supportive context. Firstly, it has been noted that benefits from a TR programme can be achieved where there are high levels of intrinsic motivation (Smith *et al.* op.cit.), and this equally applies to the writing stage. Participants need a clear understanding of TR writing compared to academic research writing, and to be committed to longer term learning. This kind of self-expression is a highly personal activity, which naturally involves developing autonomy. Collaborative writing implies a sensitivity to others' ways of working, and a commitment to sharing work in the face of differences in language skills, research

experience, and background. In other words, research writing experience fulfils all five of Desimone's (op.cit.) criteria: commitment to study and reflection, pro-activity in one's learning, openness to emerging perspectives, willingness to engage in process-based development, and, perhaps most importantly, openness to working with others.

The second issue is the institutional context, which is key in providing not only a mentor and opportunities for research, but also in more instrumental motivations, i.e. recognition in the form of conference presentation and publishing opportunities, without which the final written report may not be produced (Smith *et al.* op.cit.). Mentors have a crucial role not only in creating supportive mentoring through socio-constructive interaction, but also in providing a variety of support as facilitators of the collaborative learning process. Ultimately, however, building and sustaining a commitment to writing up research requires opportunities for presentation and publication. Crucially, the institution in the current study was supportive of the mentor's efforts to organize conferences and research volumes, which provided clear long-term goals from the outset. Research implies dissemination and often, publication; therefore, the success of such a programme depends on the opportunity to reach out beyond the immediate context to the wider educational community.

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Appendix
Interview protocol

How did you feel about writing your teacher research?
Can you tell us about your experience of writing your own research?
What critical factors helped you write?