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Teacher Logbooks and Professional Development: A Tool for Assessing Transformative Learning Processes

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Abstract

The “voice” of the teacher is only seldom heard in research on teaching and learning. This article proposes and evaluates the use of logbooks as a methodological tool in qualitative research on learning processes. This article describes the way solicited logbooks were used in a research project on arts education in elementary schools. Schoolteachers who were trained by arts educators kept a log during their training program. This article describes how the teachers handled the format of the logbook and evaluates the limits and opportunities the logbooks offers for research. The analysis of the data shows that the half open format may pose limits on its use when informants are inclined to “do it right” and stick to the questions in the format. The research also suggest that the way the teachers relate to the subject of their learning process, the arts, influences the way they handle the format of the logbook. The form of the logbook allows for a thorough analysis of the perspectives, roles, and contexts of subjects’ experiences. Over all, it is concluded that logbooks are a good way to capture the personal experiences of teachers, but only when taking into account the different ways in which respondents use the logbook. It is recommended to supplement the data from the logs with other sources such as interviews.

Keywords

logbooks, elementary schools, arts education, teacher development, transformative learning

What Is Already Known?

Research on teachers has focused on the impact of teaching activity on student learning on one hand, or the influence of teacher beliefs on classroom practice on the other. Only relatively recently, more attention has been given to the personal perspective of the teacher. Methods used in teacher research are interviews, observations, auto-ethnography, and analysis of materials produced by the teacher, such as lesson plans and personal diaries.

What This Paper Adds?

This paper proposes a methodology that has only seldom been used in teacher research: the research solicited log book. The log as a research tool has been used in medical research. An analysis of the way participants, in this case teachers, respond to the format of the log book has not been published before. This article offers a new method for future research on teaching and education. Moreover, by analysing the way the teachers responded to the log book’s format, the article helps research in other disciplines as well.

Introduction

Despite a relatively long tradition in research on the professional development of teachers (Burden, 1980; Cochran-Smith & Lytle, 1990; Fang, 1996; Vonck & Schras, 1987), there still exists no consensus on the methodologies that help to gain insight in the individual perspective of the teacher on teaching and learning. The focus lies rather on the impact of teaching activity on student learning on one hand (e.g., Nye, Konstantopoulos, & Hedges, 2004) and the influence of teacher beliefs on classroom practice on the other (e.g. Buehl & Beck, 2015). The fact that the “voice” of the teacher is only seldom heard in research on teaching and learning is a serious lacuna in a time where schools are increasingly pushed to contribute to the

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innovation and creativity of future citizens, as well as to help them find their way in a globalized and multicultural society. These (political) demands require the teachers to find a new role in their teaching and give them new responsibilities. In order to understand these processes, it is important to look for more than the outcome of the teaching but also to include the input from the teacher. For that, new methodological approaches are needed.

Recently, more attention has been drawn to the role that “teacher identity plays in the development of competences and the professional practice of teachers” (Akkerman & Meijer, 2011). Over the years, researchers have tried to develop methodologies for taking the teacher’s individual perspective into account, including questionnaires (Beijaard, Verloop, & Vermunt, 2000), storytelling (Gomez, Walker, & Page, 2000), portfolios (Antonek, McCormak, & Donato, 1997), or by analyzing personal, subjective experience as a teacher and researcher (Dallmer, 2004). The latter approach is also pursued in autoethnographic research (Duncan, 2004; Hamdan, 2012), which is practical only in single case studies, and therefore would not have been suited for the present project. What these methodologies have in common is that they try to come to a hermeneutical understanding of the teaching professional and his or her professional development (Kim, 2013). In doing so, each approach tries to find a balance between the subjective experience of the teacher, often expressed in a nonlinear narrative, and the objective analysis of the researcher (Pope, 2012).

An approach used in medical ethnography that has only very rarely been used in education studies is the research-solicited diary. A solicited diary differs from the more often used pre-existing logbooks in that its purpose lies in the research, rather than in the learning process and personal reflection of the teacher, although of course the latter can also be used as a source in research (Warner, 1971). In this article, I will use the terms “log” and “logbook” rather than diary because the focus of the research was on the training of teachers that only took place at longer intervals, ranging from a biweekly basis to a series of five workshops spread over one school year. In their review article, Ohly, Sonnentag, Niessen, and Zapf (2010) state that this research method “allow[s] work and organizational psychologists to study thoughts, feelings, and behaviors within the natural work context as well as characteristics of the work situation.” Bolger, Davis, and Rafaeli (2003) stress “the dramatic reduction in the likelihood of retrospection, achieved by minimizing the amount of time elapsed between an experience and the account of this experience” by the use of research-solicited logbooks, as opposed to interviews or other retrospective sources. Articles describing the use of solicited logs do not, however, evaluate the way participants write their entries or how they respond to the format drawn by the researcher. This article aims to fill that lacuna.

The cases studied in this article follow the training of 10 teachers in nine Dutch elementary schools during one school year. Their training was part of a national program that set as its objective to strengthen art classes in schools. The program

consisted of four pillars: (1) furthering collaboration between elementary schools, arts teachers, and cultural institutions; (2) the joint development of lesson series by schools and cultural institutions; (3) the joint development of evaluation and testing tools for arts classes; and (4) on-the-job training of regular, generalist teachers in the arts by arts teachers. The purpose of the 4-year program was to start a process of change that would result in the durable embedding of art and culture in the primary school curriculum. The research purpose was to understand the development of the teachers in the project, as well as to evaluate the chosen approach, which consisted of alternated exemplary lessons by professional arts teachers, and lessons executed by the elementary teachers.

The program aimed at the development of new skills and a new attitude toward art teaching in the elementary teachers. With little or no background in teaching the arts, and the subject generally being regarded as different from the rest of the curriculum (Bamford, 2006; Eisner, 2005), this required more from the teachers than merely learning new facts, or adopting new didactic tools. This type of learning could be described as transformative or transformational learning (Illeris, 2014; Mezirow, 2000; Mezirow & Taylor, 2009; Taylor & Cranton, 2012). The overall goal of the research was to gain insight in this learning process, academically as well as for schools, institutions, and policy makers. Galloway (2009) lists the objections that have been made against evaluation research. The weaknesses she brings forward concern “environmental and structural constraints, evaluation capacity and quality, causal attribution and complexity” (Galloway, 2009, p. 127). To overcome these objections, Galloway (2009, pp. 131–132) proposes the use of theory-based evaluation (TBE). TBE starts with defining a theory that describes how an intervention is supposed to work, while recognizing participants as active agents, whose knowledge, skills, and attitudes codetermine the outcome of the process (Galloway, 2009, p. 132). This approach, which has only very recently been applied in research in the field of arts education, is to provide a better founded starting point for evaluating impact. In this research transformation theory (Illeris, 2014; Mezirow, 2000), described in more detail below, is the theory on which the evaluation research is based.

In contrast to historical, literary, or otherwise preexisting logs, solicited logbooks are meant to “make public” what would have remained private, while remaining relatively unobtrusive in its data collection (Bell, 1998). Solicited logs, also designated as “research-driven,” have been used as an alternative to the in-depth interview, especially in health-care research. This approach allows the researcher to gather observations from situations where he or she cannot be present (Sheble & Wildemuth, 2009; Zimmerman & Wieder, 1977). When asked to keep a record of (certain aspects of) their lives, participants tend to be more inclined to mention “routine or everyday processes,” while in interviews “biographical narratives or general opinions” tend to be foregrounded (Elliot, 1997).

Logbooks provide the researcher with “snapshots of particular social spaces, embodied and emotional practices in the

making” (Morrison, 2012, p. 74). In her article on service learning for refugee students, McBrien (2008) indeed found that the logbooks kept by tutors of refugee students provided a good entry point into their personal experiences. Moreover, the logs stimulated reflection and thus allowed her to study the transformative process of learning from up close (McBrien, 2008, p. 283). This article contributes to the understanding of research-solicited logbook as a methodological tool for gaining insight in the individual experiences of teachers.

There are potential pitfalls as well. Asking teachers to reflect on their learning process potentially influences the learning process the researcher seeks to describe (Elliott, 1988). This potential bias is often countered by adding other information sources, such as interviews with colleagues or family members. Solicited logbooks offer insight in specific aspects of the subject studied, as Meth (2003) underlines, and have to be complemented by other methods, especially interviews and focus groups, that counter the problem of “decontextualization” caused by the subjectivity of the logbook. In the present research project, the logs were supplemented by interviews with the teachers, as well as with arts teachers, colleagues, students, and members of the school management team. Both before and after the period in which the teachers kept their logs, they were interviewed. The other interviews took place at the end of the year. In this sense, the logbooks are proposed as an addition to, rather than as a supplement of, the other methods mentioned above. As a result, several methodological questions mentioned could be answered in this article, in relation to these other sources of information: what kind of research questions may or may not be answered by using this methodology, and how the research results either build upon or provide a basis for research using other qualitative or quantitative methods.

Research on education from the perspective of making use of solicited logbooks is scarce, and when similar instruments are used, this is done without methodological reflection (e.g., Bakkenes, Vermunt, & Wubbels, 2010). This is rather surprising, given the important role of emotions in teacher identity development and educational change (Hargreaves, 1998).

In log-based research, time is an important factor and originally was the most important topic of logbook research (Szalai, 1975). Because logbooks are kept close to the time of the events described, they allow for “fewer retrospection, recall and reframing errors” (Bell, 1998; Sheble & Wildemuth, 2009). This means that participants must always write their entries immediately after the event of interest. The setup of the research must take into account how the temporal relationship between the recording and the events and experiences will be structured. Wheeler and Reis (1991) distinguish three types of “self-recording” methods:

- (a) interval-contingent, in which respondents report on their experiences at regular intervals, (b) signal-contingent, in which respondents report when signalled, and (c) event-contingent, in which respondents report whenever a defined event occurs. (Wheeler & Reis, 1991, p. 339)

As the logbook is relatively underused as a research tool, it is important to understand how the teachers responded to the question of keeping a log, as well as to analyze their log entries. The central questions, therefore, are as follows

- how do teachers handle the format of the logbook; in other words, in which way do the logs limit their use by their form?
- what does that mean for the interpretation of what they wrote, and which possibilities do the logbooks offer the researcher?

Methodology

Research Design

The teachers were involved in the national program “Quality Cultural Education,” which aimed to strengthen the arts curriculum in elementary schools. The program was initiated and funded by the Ministry for Education, Culture, and Science, with matching financial contributions by cities and provinces, and was executed by the national fund for cultural participation. Each school participated in a different subproject and followed its own trajectory. Some teachers received on-the-job training by art teachers, others were engaged in workshop sessions taking place in school or elsewhere, and others worked with their team and professional art teachers at developing their own lesson series. In order to do justice to this variation in practices, each teacher was asked to keep a log before and after every event connected to the program. This meant that the logs were event contingent and variably scheduled (Sheble & Wildemuth, 2009; Wheeler & Reis, 1991).

A potential pitfall of logbook research is the amount of time and effort required from the participants (Meth, 2003; Sheble & Wildemuth, 2009). In order to ensure a lasting commitment, participants were offered a reimbursement for the time they spent in writing their logs. Time and commitment indeed were an important factor in the data collection. Of the 10 teachers who joined the research project at the beginning of the year, one fell ill due to stress within the first weeks and another had to quit writing her logs for fear of work overload due to this additional task. In their logbook contributions, the teachers frequently mentioned the time-related stress they were undergoing.

Data Collection

The teachers participating in the project had an average of 25 years of experience as a teacher, ranging from 6 to 32 years (median: 13; standard deviation: 9.6). Three of the initial volunteers were male and seven were female. All schools were located in small- to mid-sized towns (19,000–45,000 inhabitants). The schools varied in size from less than 100 pupils to almost 250 (the national average is 224; *source*: www.onderwijsincijfers.nl). The initiative to participate in the Quality Cultural Education program was taken by the local school

board, except for one school, where the board of the local elementary school corporation had entered the program collectively with all eight member schools in that town and its surroundings.

Before the start of the school year, each participant was asked to fill in a form (Table 1 in the online appendix) with the details on their role in the school and in the larger project, the extent to which their colleagues were part of the project, their experience as a teacher, and previous and/or ongoing involvement in artistic practice. For the logs, a protocol was drafted (Table 2 in the online appendix), based on an analysis of all program and (sub-) project plans, as well as a literature survey on teacher training, arts education, and transformational learning (Anagnou & Fragoulis, 2014; Holdhus & Espeland, 2013; Konings & Van Heusden, 2014; Stuckey, Taylor, & Cranton, 2013), as well as the examples given by Meth (2003). For the benefit of the teachers, the protocol was kept as simple as possible, a decision based on a series of orienting interviews with school managers and project leaders before the start of the research. Participants were encouraged to write additional contributions whenever they felt the urge. Some of the teachers used the afforded option to deviate from the protocol in writing their logs, following their own writing preferences and their experiences in the program, though none of them submitted any additional logs in between the scheduled moments.

At the end of the school year, the respondents, colleagues, members of the school management team, and arts teachers were interviewed on their impressions of the teacher's development (Table 3 in the online appendix). The children from the participating teachers' classes were interviewed in groups (Table 4 in the online appendix), and a focus group interview was held with a team of arts teachers that had been involved in the training of several participating schools (Table 5 in the online appendix). The interview protocols were designed in order to gather as much information on the teachers' development over the year, as well as about the way others (students, colleagues, art teachers, and parents) responded to the (changing) attitude and development of the teachers.

Data Analysis

The logbooks comprised a total of 16,618 words, with an average of 291 words per log. The interviews lasted 16 min on average in the case of the children, and 32 min on average in the case of the teachers, arts teachers, and school management. The interviews were transcribed verbatim, though "uhms" and coughs were omitted. The analysis of the focus group was kept limited, as it was meant to complement the logs, rather than function as the principal data source, in which case a more elaborate analysis (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009) would have been more appropriate. The transcripts were coded using Atlas.ti software. A codebook, using a priori coding, was drafted based on literature study on teacher development, arts integration, and collaboration between schools and cultural institutions. The coding of the transcript resulted in a

coding tree that was compared to the logs and the interviews in the different cases, as well as to the literature (Table 6 in the online appendix). Reliability was established by an independent coder (20% agreement, .35 for Cohen's κ). The agreement was relatively low (cf. Stemler, 2001), which can be explained by the varying focus of the way the logs were handled, even within single logs, which in fact is one of the subjects for discussion in this article. The results of this part of the research have been published as a policy report (Van Meerkerk, 2016).

Findings

Typology of Authorship

This article explores the type of research questions that may be answered by using solicited logs, with respect to the way teachers handle the format as well as regarding the possibilities the logs offer the researcher. The teachers contributing to the research project had different ways of responding to the log's format. The role in which the teachers were to write their logs was not made explicit beforehand. It was assumed that they would write as a professional teacher. Some contributions, however, show signs of a more individual perspective. Others reveal that the teacher was thinking as a team member while writing the entry, rather than as an independent professional. There was no single participant who continuously stuck to one of these perspectives. As the differences may be important in the interpretation of the logs, each perspective is described in brief below.

Individual perspective. In their logs, teachers consciously or unconsciously chose an individual perspective mainly when it came to artistic judgments, such as the choice of (musical) repertoire or the conceptual level of the subjects discussed. Words like "I," "me," and "myself" are found next to normative words, like "enthusiastic," "disappointment," or "difficult." One teacher noticed this in his own log, and wrote "As I am typing the above, I realize how biased this will sound." When this is not the case, the teachers are always describing their role ("I have started preparations for this excursions a while back") or expectations ("I did not know what to expect").

Professional perspective. Most of the time, the teachers take an individual, professional perspective in their logs. They discuss issues of classroom management, student involvement, curriculum, didactics, and pedagogy. When reporting on an example lesson or workshop, the main subjects are the didactical tools and their applicability in class. In these issues, they obviously feel confident and competent. This even goes so far as passing judgment on the arts teachers as teachers, even though all of the arts teachers involved in the project are trained as teachers as well as artists. In the eyes of the regular teachers, however, they themselves are the authority when it comes to pedagogy and didactics.

The professional perspective is also visible in the teachers' assessment of their new skills and competencies. When

addressing a newly learned form of instruction, for instance, this is always related to their usual style and content of teaching and is valued by its outcomes, by which the teacher often means the extent to which it fits the normal schedule, without interrupting the familiar course of events. Things that are called “nice,” “useful,” “good,” or “great” in the logbooks are in most cases of a practical nature, referring to the applicability in class and the interaction or collaboration with the arts teacher: “Nice to have all songs on one sheet, great.” Evaluating remarks in the logs are nearly always connected to mentions of time pressure. In other words, as an extra, the supporting program was evaluated mainly for its efficiency, rather than as an added value to the development of the children—however much the teachers said they endorsed the goals of the program.

Team perspective. Although nearly all projects were intended as a team effort, even when only one or two teachers actively participated in the project, the teachers only seldom wrote from the perspective of the team when drafting their logs. Unsurprisingly, the teacher who also functions as the head of his team did this most often. Both in his logs and in the interview, he uses a first person plural in describing many of the activities in the art workshops and in school. Another teacher, who is also active in the school management, also tended to take a team perspective, especially in her logs. All of the other teachers chose a personal, first person singular, perspective in their logs and the interviews.

Typology of Logbooks

This paragraph explores the main questions of this article by designing a typology of logbooks and log entries.

Conformity to the format-based logs. The logbooks were preformatted in a protocol (Table 2 in the online appendix) from which the teachers were allowed to deviate. The majority of the logbooks, however, were submitted in the exact original format or in a similar table that was adapted to the teacher’s taste or needs (19% and 52%, respectively). In fact, for some, the idea of a protocol apparently triggered a wish to do it “right,” despite being told that there was no right or wrong. “I hope this is what was intended,” one teacher wrote when e-mailing her log. The same teacher, when sending her other logs, consequently asked for tips, thus further expressing her desire to do it correctly. Others were less anxious but still stuck meticulously to the format. This was indicated not only by the fact that every entry had the same structure but also by the similarity in the content of the entries. Sentences were repeated more often to the extent that for 29% of the logs the words “repetition,” “repeat,” and “repeated,” indicating the practices described in the logs, were used more often than any other term. Logs in which the teacher stuck to the protocol tended to focus strongly on the content of, for instance, a sample lesson by a music teacher. For instance,

Introduction of the chimes. S. [the music teacher] had brought a whole bag full of them, so every child could play along often wonderful! Did many activities with these instruments and a nice accompanying song. (Log entry, April 23, 2015)¹

Deviation in the event-based logs. In contrast to the entries that stuck to the protocol, other logs, 29%, ignored the format and were written in a more narrative style. These logs followed an intuitive, meandering path, loosely structured around the events described. These types of entries were introduced or concluded with remarks on time pressure and apologies for the fragmentary comments. One of these teachers often failed to send in his logs after one of the workshops he and his team were given. As a result, these not only came in very irregular intervals but also even in a different order than the workshops had taken place.

At first glance, these entries may come across as superficial and less profound than the others. At the same time, however, they give direct access to the lived reality of the teacher, mixing the events of the program with other activities, such as a meeting of coordinators in the school or cultural activities in the school that were organized outside the program. In several cases, pictures, e-mails, and other relevant documents were included in, or attached to, the logs. This more complex story comes close to the everyday classroom practice. Moreover, these logs show a development in the teachers that comes closer to the intended process of transformative learning (although that process is not part of this article). One teacher’s logs are a case in point. Her first log strictly followed the format, but as the year passed, and she entered the phase of frustration and moments of success that come with the process of transformative learning, she started attaching e-mails and other documents to her logs, introduced by explanatory remarks: “Hopefully you can read my and my coteacher’s frustration through the lines,” or “I was glad to hear a lot of positive responses about these workshops!” Perhaps not uncoincidentally, this group of teachers also, and convincingly, stresses their love for the arts, both inside and outside the school.

Conclusions and Discussion

There are two possible explanations for the close connection that was found between the personal perspective and passing (artistic) judgment. The first is that the purpose of the program is to make the teachers more familiar with cooperating with external arts teachers and being able to incorporate some elements of an arts class in their own lessons. This process involves the didactic and pedagogic aspect of the lessons, and not the artistic part: They will not need to make artistic choices in the future and may therefore see this as a personal, rather than a professional issue.

The way one of the teachers described the project from a professional perspective brought to light a potential tension between their explicit endorsement of the goals of the program, and the way they evaluated it for its efficiency is not altogether

surprising. This difference can unproblematically be ascribed to the professional role of the team leader and the member of the management team. Given the goal of the project, however, the lack of a collective perspective in the other logbooks may be cause for concern with policy makers and the school boards.

The observations with regard to the teachers' conformity to the format-based logs are strong indicators of the potentially directive effect of a formatted logbook. While enabling the comparison between the entries of different subjects, it clearly steers their behavior by appealing to a desire to do things right. That is a potential threat to the "embodied and emotional practices" (Morrisson, 2012) that the researcher hopes to unveil by the use of the logbook as a research tool.

Despite the absence of the personal and emotional perspective that was predicted on the basis of scholarly literature, the response to the logbook protocol also confirms a typical character trait of the subject group (Davis, 2002; Holmes, 1998; Korthagen, 2016). Using a tool that caters to this urge by providing a fixed format may in some cases be reassuring for the teachers. A problematic consequence of the fact that teachers continued to use the format is that this is contrary to the intended process of transformative learning, in which new ways of working and reflection on professional identity are essential (Illeris, 2014; Mezirow, 2000).

Although the project's duration did not allow investigating this hypothesis further, a personal commitment to the arts—or any other subject that may be subject of the log—does seem to help the teachers to overcome their potential restraint in showing their personal experiences in both the form and the content of their logbook entries. In that sense, the format of the logbook entries must be seen as an important part of the analysis, as the form may also be indicative of the changing attitude toward the process under investigation, in this case, the teacher's learning process in arts education.

The other possible explanation, which more or less takes an opposite point of view, is that the aesthetic aspect of arts education is something they find particularly important, which is why they take it so personal. Arguments for both interpretations may be found in the logbooks and interviews, but interestingly enough, the personal engagement of the teacher is not part of the program. As a result, engagement was never an issue in the training workshops or on-the-job coaching. As the research project started from the goals of the program, this was not part of the research format. The fact that the possibility surfaces nonetheless is a stimulus for future research.

Research participants in a project like this are motivated to participate because of their background as teachers working in a school that participates in an arts education project. They have volunteered (or at least did not refuse) to participate in this project, and they agreed to participate in the research project in addition to that. This implies that these teachers are more likely to have a positive attitude to arts education. Using solicited logbooks within a defined project will always suffer from a similar bias. This has to be taken into account in the interpretation of the findings, mainly through triangulation. The question in this article was how the respondents handle the

format of the logbook, which biases exist in the data, because of the way the teachers respond to the logbook.

Despite these caveats, the logs did give good insight in the development of teachers during their 1-year long training program. The semi-open format of the log allowed for personal differences that were significant for the research project, especially when triangulated with the other logbooks and the interviews. By using research-solicited logbooks, a (inter)subjective perspective into the program could be afforded, that was of great value to the schools and the program leaders, as expressed in off-the-record feedback, as well as for the research in teacher development and cooperation in arts education. The logs allowed the teachers to voice their concerns and to choose their own perspective on the program, without the researcher or the research format visibly disturbing the data. Overall, elementary schoolteachers are observed as preferably sticking to protocols. Change is hard and there is a strong tendency among teachers in a process of learning to revert to old practices, to the extent that experienced teachers consciously try to avoid learning (Bakkenes et al., 2010).

From the perspective of research methodology, the project has shown to what extent the solicited logbooks invited participants to shape their contributions according to their personality, their role in the process, and the context in which the events took place. Thus, the form of the logbooks reveals much more than their literal content. This allows for a thorough analysis of the perspectives, roles, and contexts of subjects' experiences. Given the state of research in arts education and the development of professional teacher identity, the use of solicited logbooks is a promising addition to the more mainstream approaches.

Both the log types and the authorship perspectives distinguished above can be seen as a reflection of the attitude and professional identity of the teachers. Although a far larger data set would be needed to see how the two relate, it seems significant whether a teacher writes a log from a professional perspective and meticulously sticks to the format, or, on the opposite end, whether he or she takes a personal perspective and always bases the log on the events described. From the logbooks analyzed here, such extremes could not be deduced. In any case, for future use of the logbook as a research tool, it is important to take into account the different ways in which subjects respond to the format of the logbook.

The logbooks provided a detailed and personal account of the experiences of elementary schoolteachers in engaging with arts education. How these experiences relate to their ordinary work experience is something that cannot be derived from the data or the interviews used for triangulation. In future projects, the logbooks might be complemented with or even partially replaced by the use of the experience sampling method, developed by Larson and Csikszentmihalyi (1983). This latter method gains a new dimension in the age of smartphones and apps. In the development of such digital tools, the findings from this article on how respondents react to the format provided must be taken into account in such ways that it will exert a minimum of influence on the results.

In sum, this article proposes a research method that has only seldom been used in teacher research. The log as a research tool has been used in medical research. An analysis of the way participants, in this case teachers, respond to the format of the logbook has not been published before. This article offers a new tool for future research on teaching and education. Moreover, by analyzing the way the teachers responded to the logbook's format, this article helps research in other disciplines as well.

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Supplementary Material

Supplementary material for this article is available online.

Note

1. Translation by the author from the original Dutch, preserving as much of the (uncolloquial) writing style as possible.

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