The influence of induction programs on beginning teachers'well-being and professional development
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CHAPTER 3

The importance of induction programs to the well-being of beginning teachers[*]

An important aim of induction programs is to increase beginning teachers' state of well-being and thereby prevent attrition. This chapter reports on a survey study in which we investigated how beginning teachers are supported with induction programs and how various characteristics of induction programs (facilities, format, intensity, content, and mentor characteristics) relate to their well-being. The results showed that virtually all beginning teachers who participated in the study had been supported by some form of induction program. Correlation analysis indicated that in order to sustain the well-being of beginning teachers with a formal induction program it is most important that the mentor is supportive. However, even more important for the well-being of beginning teachers than any characteristic of the formal induction program is the school culture: the collegiality and informal support experienced by beginning teachers.

3.1   Introduction

A few decades ago, it might have been considered normal to introduce new teachers into a school with merely a word of welcome and perhaps some advice or tips, but those days are gone. Whereas Lortie (1975) described how beginning teachers were typically left to their own devices in solving their problems and overcoming the typical difficulties a first-year teacher encounters, in many countries we now believe that beginning teachers ought to be taken care of when entering a new school (Britton, Paine, Pimm, & Raizen, 2003). New teachers need the support of an induction program: a more or less formalized program that is aimed at support- ing beginning teachers in their first years of teaching after their pre-service education (Beijaard, Buitink, & Kessels, 2010). This generally shared belief does not mean, however, that all new teachers nowadays receive well-organized support from an induction program. Often new teachers receive only limited support and sometimes even none at all (Darling-Hammond, Berry, Haselkorn, & Fideler, 1999), but there is nevertheless a significant difference compared to a few decades ago. There has been a considerable increase in the use of induction programs (Smith & Ingersoll, 2004), and many schools are still working to improve their induction practice.

Schools have several reasons to do so. First, though teachers may be well prepared by their pre-service education, they still have to learn a lot once they actually start to teach (Feiman- Nemser, 2001). To sustain this learning and thereby the quality of education, it is important to support the professional development of beginning teachers with an induction program. Second, investing in induction programs may reduce the high attrition rate amongst beginning teachers. Teacher shortages are a serious problem in many countries (Advies van de Commissie Leraren, 2007; Harris & Farrell, 2007; Ingersoll, 2001; Smithers & Robinson, 2003); they are partly caused by increased numbers of teachers reaching retirement age, but even more so by the large number of beginning teachers leaving the profession (Ingersoll, 2001). Schools at- tempt to increase the well-being of beginning teachers, and thereby prevent attrition, mainly by focusing their induction programs on the emotional support and socialization process with- in the school (Feiman-Nemser, Schwille, Carver, & Yusko, 1998; Wang & Odell, 2002). In the study on which we report here, we concentrated on this latter focus of induction programs. The central research question of this study was: 'What is the importance of induction programs to the well-being of beginning teachers?' It was our aim to contribute to the current insights re- garding the importance of induction programs for beginning teachers' state of well-being and to establish what characteristics of an induction program are truly essential to promote this.

3.2   Theoretical framework

3.2.1   The well-being of beginning teachers

Unlike people in most other professions, teachers hardly get the opportunity to grow into the profession gradually. Beginning teachers usually have the same responsibilities and duties as senior teachers. They get a full schedule of teaching hours and the sole responsibility for teaching their lessons. Unlike senior teachers, however, they lack the routine that comes with experience. Many beginning teachers struggle with teaching issues, such as classroom management and student assessment, as well as students' personal problems, and meeting with their parents (Bullough, 1989; Odell, 1986; Veenman, 1984). Apart from these teaching issues, beginning teachers also have to socialize within the school. They have to become members of an organization, find their own place in the school, and gain the appreciation of their new colleagues. This is not always an easy process as beginning teachers often face resistance and sometimes skepticism from their senior colleagues (Kelchtermans & Ballet, 2002; Zeichner & Gore, 1990). The first years of teaching have a tremendous impact on the beginning teacher and often lead to feelings of low self-esteem, stress, and sometimes even burnout, with attrition as a possible consequence. To meet the psychological needs of beginning teachers, Gold (1996) stresses the importance of supporting them with an induction program that includes the necessary personal and emotional support.

Well-being generally refers to '*A state of being comfortable, healthy or happy*' (The New Oxford Dictionary of English, 1998). In research, well-being has been construed as a multi-dimensional concept including affective, cognitive, behavioral, psychosomatic, and professional dimensions (Van Horn, Taris, Schaufeli, & Schreurs, 2004; Ryff & Keyes, 1995; Warr, 1994). Usually, however, well-being is interpreted as a primarily affective state (Diener, et al., 1999), as it was in this study, too.
Engels, Aelterman, Van Petegem, and Schepens (2004) defined well-being as '*a positive emotional state that is the result of a harmony between the sum of specific context factors on the one hand and the personal needs and expectations towards the school on the other hand*' (p.128). (See also Van Petegem, Creemers, Rosseel, & Aelterman, 2006). In the current study we did not aim to include the whole spectrum of specific environmental factors. Though many variables may be of importance to beginning teachers' well-being, we aimed to determine specifically whether an induction program can contribute to it and, if so, what characteristics of an induction program are particularly relevant in accomplishing that. Based on a previous interview study, we distinguished three important aspects of beginning teachers' well-being on which an induction program might have a significant influence. These aspects are: (1) the beginning teachers' feelings of isolation, (2) the beginning teachers' feelings of appreciation by colleagues, and (3) the beginning teachers' feelings of self-confidence.

3.2.2 The influence of induction programs on the well-being of beginning teachers

A number of studies have shown that induction programs can contribute to (aspects of) the well-being of beginning teachers. For example, a study by Chubbuck, Clift, Allard, and Quinlan (2001) showed a positive influence of induction programs on reducing beginning teachers' feelings of isolation and on their willingness to explore different teaching styles. In an evaluation study, Molner Kelley (2004) reported on high retention rates and great satisfaction of beginning teachers regarding the support they received and their professional growth. Reiman, Alan, Bostick, and Dee (1995) also reported on satisfaction amongst beginning teachers concerning their induction program; most teachers agreed that they experienced the support from this program as encouraging, professionally rewarding, and valuable in their lives. Helsel, DeWert, Babinski, and Jones (2003) showed that an online support community can also contribute to the well-being of beginning teachers during their induction period. They reported on a positive effect on a number of variables related to well-being, such as confidence in teaching, reduced feelings of isolation, and enthusiasm for work.
It has thus been shown that induction programs are, generally speaking, relevant for beginning teachers' well-being. In addition, a number of studies have also shown positive effects of induction programs on the retention rate amongst beginning teachers (e.g., Odell & Ferraro, 1992; Scott, 1999; Smith & Ingersoll, 2004; Strong & St. John, 2001; Wilson, Darling-Hammond, & Berry, 2001), which is often the main reason for schools to want to contribute to the well-being of beginning teachers.
However, as Smith and Ingersoll (2004) remarked, most of the studies showing a positive influence of induction programs on the beginning teachers' state of well-being or retention rates are case studies based on the experiences of only a few teachers or evaluation studies focusing on one specific induction program. Comparisons between the effects of different kinds of induction programs (including situations in which no induction program is available) are limited, which makes it hard to define what characteristics of an induction program are particularly relevant for the results reported in the various studies, and whether it is indeed the induction program that is responsible for those results. This is especially the case because research has shown that other factors, such as the support from administrators, collegiality among teachers, and support in their professional development are also of importance to the well-being of beginning teachers (e.g., Rosenholtz, 1989; Van Petegem et al., 2006; Zabel & Zabel, 1982). Such factors may come into existence because of an induction program, but they may also be present without the use of a formal induction program. In research focusing on the influence of induction programs it is thus particularly relevant to take into account these workplace conditions that may also exist independently of an induction program.

3.2.3 Research aim

In the present study we aimed to contribute to the existing literature by providing further insight into the importance of specific characteristics of induction programs concerning the well-being of beginning teachers. For this purpose we conducted a survey study amongst beginning teachers, which provides the opportunity to compare the effects of induction programs with different characteristics. Also, items about the ways in which beginning teachers experienced their school culture and several personal variables were included, which enabled us to gain further insight into the relative importance of an induction program.

We aimed to answer the following research questions:
1   What is the degree of the state of well-being of beginning teachers?
2   How are beginning teachers in the Netherlands supported with an induction program?
3   How do characteristics of the induction program relate to the well-being of beginning teachers?

3.3   Method

3.3.1 Sample

The aim was to conduct a large-scale questionnaire study amongst beginning teachers in secondary education who had recently completed their induction period. In order to reach a large group of respondents, we used a multi-stage method to approach beginning teachers. Several teacher education institutes in different parts of the Netherlands were asked to send their former students an email in which they were invited to participate in our study. Five teacher education institutes cooperated, and in spring of 2007 approximately 1200 persons who had graduated at one of these institutes in 2004, 2005, or 2006, received an email asking them to participate in our study by filling out a questionnaire on the internet. Two weeks later these persons received a second email reminding them of the questionnaire.

In total, 316 persons completed the questionnaire, which is a 26% response rate. Because of the multi-stage method of approaching the respondents, we have little insight into the reasons for non-response. We do not know exactly how many persons actually received the email nor how many of them had actually started to work as teachers after their pre-service education. Of the respondents, 59% were female. All respondents had worked at least one year as a teacher in secondary education, and some of the participants had already taught for more than four

years. [3] Dutch secondary education is for students from 12 to 18 years of age. Table 3.1 presents an overview of the respondents' ages, their years of experience, and the subject-matter they were teaching.

Table 3.1 Descriptions of the respondents (N = 316)

Mean Age	32,4 years (SD = 8.5)	
Gender	Female	59%
	Male	41%
Teaching experience	1 year	31%
	2 to 4 years	55%
	More than 4 years	14%
Subject matter	Language and Arts	35%
	Science and Mathematics	31%
	Social Studies	34%

Important to note is that the use of induction programs is not mandatory in the Netherlands. Schools decide themselves whether and how to use an induction program to support beginning teachers.

3.3.2 The questionnaire

The questionnaire consisted of several scales, measuring a number of variables. This study was part of a survey-study in which it was also investigated how induction programs influence the professional development of beginning teachers. Table 3.2 provides an overview of the variables which were relevant in this study.

3   This is possible because the respondents could have earned a teaching qualification previously (usually a second-degree qualification, necessary for teaching in lower levels of secondary education), after which they continued to study for a higher degree (a first-degree qualification, necessary for teaching in higher levels of secondary education), or for a teaching degree in another subject. Also, schools occasionally hire teachers who have not yet completed their studies.

Table 3.2 Measured variables

Independent Variables		Dependent Variables
Induction Program		**Well-being of the Beginning Teacher**
Facilities		Experienced Isolation
Format		Experienced Appreciation
Intensity		Confidence in own Teaching Skills
Content	Emotional Support	
	Practical Information	
	Prof. Development, Pedagogy	
	Prof. Development, Classroom Management	
	Prof. Development, Psychological and Moral Development of Students	
Characteristics of the Mentor		
	Challenging	
	Supportive	
	Trustworthy	
School Culture		
Personal and Contextual Factors		

Based on our prior interview study (see Chapter 2), we distinguished five main elements in which induction programs differed. These five elements consisted of *Facilities, Format, Intensity, Content,* and *Characteristics of the Mentor.* Respondents were asked about their experiences of an induction program. Questions about the various elements of an induction program were answered retrospectively, based upon the teacher's experiences in his or her first year of teaching. The first element about which teachers were asked was *Facilities.* This refers to the resources available to the teachers and mentors involved in the induction program, for example, the time allocated for induction activities for beginning teachers and mentors, training for mentors, dispensation from particular duties such as monitoring students for the beginning teachers, and the availability of a place where induction activities take place. In the questionnaire we only included questions referring to facilities for the beginning teachers since we did not expect the participants to know anything about the facilities available to the mentors. The scale we used to measure facilities consisted of statements about possible facilities; the respondents could indicate whether these facilities were indeed present or not.

Format refers to the forms of support used in induction programs, such as an introduction meeting, class visits by a mentor, or group meetings with beginning teachers.

Intensity refers to the amount of time spent on the various forms of support. In the questionnaire we combined questions about format and intensity by asking the respondents to indicate how much time was spent on a particular form of support, or how often they participated in a particular form of support. The scale also included one item to provide participants with the

opportunity to indicate whether they had received 'other forms of support'. The intensity of the various forms of support could be indicated on multiple choice scales. For example, the respondents were asked, *'How often did you participate in group meetings with beginning teachers?'*, to which they could answer: (*a) never; (b) 1-2 times; (c) 3-6 times; (d) more than 6 times.*
In the analysis, we were able to use these data in various ways. We were able to consider the presence of a certain format, independent of the intensity. We were able to consider the general intensity of the induction program, and where it was deemed useful we distinguished between the intensity of individual support (including mentoring and class observations by the beginning teacher) and the intensity of group support (including introduction meetings and meetings for beginning teachers).
With regard to *Content*, we identified three main topics that we knew from our interview study receive attention in induction programs, namely:

1   *Emotional Support*, such as helping the beginning teacher feel at ease, attention for stress-relief, and stimulating self-confidence.
2   *Practical Information*, such as explaining school rules, showing how to operate the equipment, and notifying beginning teachers of meetings.
3   *Professional Development*, the purpose of which is to increase knowledge and skills that are important for good teaching. We considered three important topics, namely: (a) attention for *Classroom Management*, referring to the teacher's ability to lead students and to create a quiet and organized learning environment, (b) attention for *Pedagogy*, referring to the ability to create a powerful learning environment in which students can develop skills and obtain the required knowledge, and (c) attention for the *Psychological and Moral Development of Students*, referring to the teacher's ability to create a safe learning environment, sustain the social-emotional and moral development of students, and help students become responsible persons.

The respondents were asked to indicate the degree of attention paid to emotional support and practical information on a four-point Likert scale, and to the various subjects related to professional development on a five-point Likert scale. With regard to the various subjects related to professional development, respondents had the possibility to answer *'irrelevant'* because we noted in our prior interview study that respondents sometimes hesitated in their answers when a particular topic was certainly touched upon in the induction program but received less attention because the respondent had already mastered it.
The fifth element, *Mentor,* was subdivided into the following mentor characteristics:

1   The *Trustworthiness* of the mentor, referring to his or her ability to create a base of trust with which the teacher feels safe and comfortable.
2   The *Supportiveness* of the mentor, referring to the degree to which he or she stimulates and motivates the teacher in a positive way.
3   The *Degree of Challenge*, referring to the degree to which the mentor is able to challenge the beginning teacher in his or her professional development.

Since teachers sometimes had two mentors, or even more, the respondents were asked to base their answers on their experiences with the mentor they valued the most. The scale used to measure the characteristics of the mentor consisted of statements to which the respondents could indicate their degree of agreement on a five-point Likert scale. If the respondent had not been supported by a mentor, he or she could answer '*irrelevant*'.

In addition to the scales developed to investigate how the respondents had been supported formally with an induction program, we also included a scale for School Culture and items about various Personal and Contextual characteristics. Using the School Culture scale, we measured the degree of collegiality and informal support experienced by the respondents. This scale consisted of statements to which the respondents could indicate their degree of agreement on a five-point Likert scale.

Questions about Personal and Contextual characteristics related to previous experience in teaching as a student teacher and as a certified teacher, the subject department and level of education in which the respondent taught, the number of colleagues in the same subject department, the number of hours the respondent taught in the first year of teaching, the respondent's age and gender, and the degree of preparedness the respondent experienced when starting to teach. Items about Personal and Contextual characteristics did not belong to a scale and were treated independently.

Well-being of beginning teachers

The dependent variable in this study was the well-being of beginning teachers. Because we were specifically interested in the well-being of beginning teachers in relation to induction programs, the scale measuring well-being was strongly based on the results of the previous interview study. Based on this study we distinguished three aspects of well-being on which induction programs (may) have an influence. These aspects are: experienced lack of isolation within the school, experienced appreciation by colleagues, and confidence in own teaching skills. The scale for well-being consisted of 12 items referring to these aspects of well-being. We did not include items about matters that may be relevant to the well-being of beginning teachers but are by definition independent of the presence of an induction program, such as satisfaction with their salary. The scale consisted of statements about a positive or negative well-being to which the respondents could indicate their degree of agreement on a five-point Likert scale ranging from -2 to 2.

Table 3.3 contains examples of items of the measured characteristics of an induction program, the School Culture, and the well-being of beginning teachers. See Appendix 3 for the complete questionnaire.

Table 3.3 Examples of items of the questionnaire

Measured Variable	Example Item
Well-being, Isolation	(In my first year of teaching) 'I felt alone'
Well-being, Appreciation	(In my first year of teaching) 'I felt taken seriously by my senior colleagues'
Well-being, Confidence	(In my first year of teaching) 'I was satisfied with my teaching practice'
Facilities	'Beginning teachers receive extra time for induction activities'
Format, Intensity*	'How often did you participate in meetings for beginning teachers?'
Content Professional Development, Pedagogy	'Assessing what students understand during a lesson'
Content Professional Development, Classroom Management	'Dealing with a bold student '
Content Professional Development, Psychological and Moral Development of Students	'Dealing with students' insecurities'
Content Emotional Support	'There was attention for personal issues' (In the induction program)
Content Practical Information	'Explanation was provided about school rules' (In the induction program)
Mentor, Challenging	'My mentor challenged me to improve myself'
Mentor, Supportive	'My mentor often told me what I did well'
Mentor, Trustworthy	'I felt at ease with my mentor'
School Culture	'I could always ask my colleagues about everything'

* Though Intensity and Format are two separate variables, they were measured using one scale by continually combining the variables in one statement.

Finally, the questionnaire also included a number of evaluation items in which respondents were asked about their opinions on the induction program they had been supported by and their opinions on the importance of an induction program.

3.3.3 Piloting the questionnaire

Originally, the questionnaire consisted of 220 items. These items were tested in a think-out-loud session to investigate how they were interpreted by people in our target group. Four beginning teachers participated in this pilot study. Based on this first pilot study we rewrote several items to enable a better understanding by the respondents. The second version of the questionnaire still consisted of 220 items and was filled out by 51 student teachers. Based on this pilot study we were able to create reliable and smaller scales. The third version of the questionnaire was completed by eight student teachers to investigate the amount of time that was necessary to complete the questionnaire and to make some final improvements in the ordering of the items. The final version of the questionnaire consisted of 99 items and took about 15 minutes to complete.

3.3.4 Analysis

We analyzed the data in a quantitative manner, using SPSS, version 14.0.
The first step in the analysis included: (a) inverting negative items, (b) investigating missing data, and (c) imputing missing data if permitted by the type of data and if relevant for further analysis.
The second step of the analysis consisted of a reliability and factor analysis to investigate the underlying structure in the questionnaire. We checked whether our scales were indeed reliable, but also whether the scales we created could be improved by deleting items.
The third step of the analysis was aimed at answering the various research questions. This step consisted of: (a) descriptive and frequency analysis in order to describe the data, and (b) factor, correlation, and stepwise regression analyses in order to provide insight into relations between the measured variables.

3.4 Results

We first present the results of the reliability analysis and the correlation coefficients between the scales, which form an indication of the quality of the questionnaire. This is followed by the descriptive results concerning the well-being of the respondents and the support they received from an induction program. Finally, we present the results regarding the relationship between the various elements of induction programs and the well-being of beginning teachers.

3.4.1 Quality of the questionnaire

An important indicator for the quality of a questionnaire consists of the inter-item reliability scores of the scales in the questionnaire. Based on factor and reliability analysis, we deleted several items in a number of scales. Table 3.4 shows the number of items we finally used for each scale, along with the Cronbach's Alpha of the scales. We did not calculate the Cronbach's Alpha for the scale measuring Format and Intensity and for the Personal Characteristics scale because these scales consist of items that are independent of each other and were not expected to correlate with each other.

Table 3.4 Reliability coefficients of the scales of the questionnaire

Variables		**Number of items**	**Cronbach's Alpha**
Induction Program			
Facilities		7	.80
Format and Intensity		8	–
Content	PD Pedagogy	4	.83
	PD Classroom Management	4	.86
	PD Psych./Moral Development	4	.83
	Emotional Support	4	.81
	Practical Information	4	.80
Mentor	Challenging	4	.84
	Supportive	4	.89
	Trustworthy	4	.67
School Culture		7	.75
Personal Characteristics		10	–
Well-being of the Beginning Teacher		12	.92

Table 3.4 shows that all scales have a Cronbach's Alpha of at least .67. Most scales even have a Cronbach's Alpha higher than .80. This means that for our kind of analyses (at the group level), the inter-item reliability of all scales is sufficient.

Table 3.5 shows the correlation coefficients between the scales measuring the elements of induction programs and the scale measuring School Culture.

The high inter-item correlations, shown in Table 3.4, are an indicator of the questionnaire's good quality. Table 3.5, however, shows that the correlations between the scales are also high, which is especially the case for three of the subscales of Content, namely: Pedagogy, Classroom Management and Psychological and Moral Development of Students (all belonging to the

category Professional Development). High correlations between the scales is generally less desirable since it indicates that the scales overlap with one other and do not simply measure the intended variable. In this study, however, it is not strange that the variables relate to each other, sometimes even strongly. The scales measure different elements of induction programs and one can imagine that, for example, the more time that is spent on activities within an induction program, the more attention there is for issues concerning Classroom Management or Pedagogy, resulting in a relatively high correlation between the scales. In spite of some of the high correlations between the scales, we decided to keep them separated in subsequent analyses because they still made sufficient individual contributions. The correlations between scales, in fact, do not exceed the Cronbach's Alpha values of the particular scales, as can be seen when the correlations between the scales are compared with the Cronbach's Alpha scores, presented in Table 3.4.

3.4.2 The well-being of beginning teachers

Figure 3.1 shows the distribution of the reported well-being experienced by the respondents in their first year of teaching.
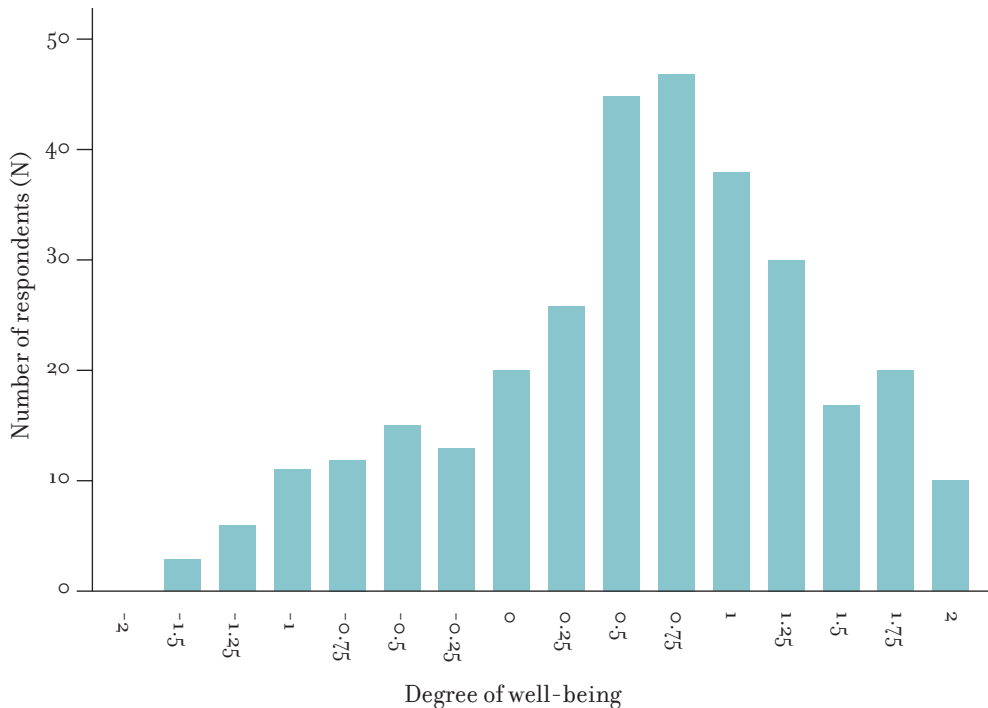
Figure 3.1 Degree of well-being of respondents in their first year of teaching

Table 3.5 Correlations between elements of induction programs and School Culture

	Facilities	Intensity Individual	Intensity Group	Profess. Development Pedagogy
Facilities		.46*	.50*	.42*
Intensity Individual	.46*		.45*	.46*
Intensity Group	.50*	.45*		.28*
PD Pedagogy	.42*	.46*	.28*	
PD Classroom management	.46*	.46*	.36*	.67*
PD Psych./ Moral development stud.	.45*	.36*	.30*	.57*
Emotional Support	.54*	.40*	.44*	.35*
Practical Information	.46*	.37*	.25*	.33*
Mentor Challenging	.41*	.44*	.35*	.41*
Mentor Supportive	.47*	.38*	.31*	.34*
Mentor Trustworthy	.22*	.11	.14*	.19*
School Culture	.29*	.15*	.24*	.19*

* p < .01

	Content				Mentor			
	Profess. Development Classroom management	Profess. Development Psych./Moral development students	Emotional Support	Practical Information	Mentor Challenging	Mentor Supportive	Mentor Trust-worthy	School Culture
	.46*	.45*	.54*	.46*	.41*	.47*	.22*	.29*
	.46*	.36*	.40*	.37*	.44*	.38*	.11	.15*
	.36*	.30*	.44*	.25*	.35*	.31*	.14*	.24*
	.67*	.57*	.35*	.33*	.41*	.34*	.19*	.19*
		.60*	.43*	.35*	.44*	.33*	.17*	.14
	.60*		.40*	.37*	.30*	.32*	.19*	.23*
	.43*	.40*		.53*	.51*	.65*	.33*	.38*
	.35*	.37*	.53*		.34*	.48*	.25*	.33*
	.44*	.30*	.51*	.34*		.52*	.28*	.23*
	.33*	.32*	.65*	.48*	.52*		.50*	.45*
	.17*	.19*	.33*	.25*	.28*	.50*		.30*
	.14	.23*	.38*	.33*	.23*	.45*	.30*	

In Figure 3.1, the first thing to be noted is that a large majority has an average score higher than zero, namely 79% of the respondents. A score higher than zero indicates a positive well-being. The average score of well-being is 0.6, with men scoring slightly higher than women: men had an average score of 0.7 and women had an average score of 0.5. The difference between these scores is small, but still significant *(T (309) = 2.60, p = .01)*.

As is explained in the section describing the study's method, the scale measuring Well-being consists of items referring to: (a) Experienced Lack of Isolation, (b) Experienced Appreciation, and (c) Confidence in own Teaching Skills. When a difference is drawn between these sub-scales, it appears that the respondents scored most positively on the items concerning the experienced Lack of Isolation and the Experienced Appreciation. Both subscales have an average score of 0.9, which indicates that the respondents felt comfortable in their workplace. They did not feel isolated or lost, and felt appreciated by the school and their colleagues. The average score on the subscale Confidence in own Teaching Skills was 0.1, which is clearly a lower score, but still not a negative score.

The results show a rather positive picture of the well-being of beginning teachers, but it is important to realize that 21% of the respondents still reported a negative sense of well-being.

3.4.3 The extent to which beginning teachers are supported by an induction program

One of the five elements of an induction program is the Format, referring to the forms of support that are used in an induction program. Table 3.6 presents the percentages of respondents to whom various forms of support used in induction programs were made available.

Table 3.6 Percentage of respondents receiving the various forms of support

Introduction meeting	79%
Group meeting with beginning teachers	64%
Individual conversation with mentor from the same subject department	74%
Individual conversation with mentor from a different subject department	62%
Class visit by a mentor, including evaluation	90%
Class visit by a mentor, including videotaping of the lesson and evaluation	52%
The beginning teacher observing lessons of colleagues	65%
Other forms (e.g. training)	16%

Table 3.6 shows that many respondents were provided with a variety of forms of support. A format used particularly often is that of individual support from a mentor, through individual conversations with or without class visits from him or her. Introduction meetings were also

attended by almost 80% of the respondents. Important to note, however, is that these percentages only indicate *that* the respondent received the indicated form of support. The amount of time spent on the indicated form of support may vary considerably.

A second element of induction programs is the program's Intensity. The scale measuring Intensity consisted of eight items concerning the various forms of support. The respondents indicated the experienced intensity for each form of support on a multiple-choice ranking scale, consisting of four possible answers. Per item the respondents thus indicated a score ranging from 1 to 4. Adding the scores of all items resulted in a total score ranging from 8 to 32. In order to describe the intensity, we divided the total scores of Intensity into five categories. The first category refers to '*no support at all*' (a total score of 8); the remaining total scores were divided equally over categories two to five. The categories thus ought to be read as ordered scores with the first category referring to no support at all and the last category referring to a very high intensity of about 80 hours of support or even more. Figure 3.2 shows the frequency scores of the five categories of Intensity.
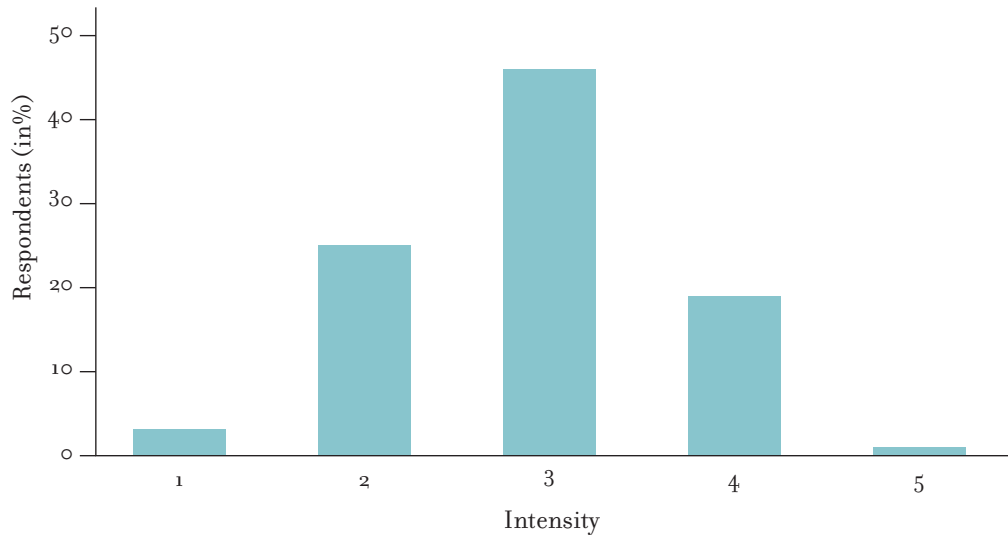
Figure 3. 2 Frequency distribution of the intensity of induction programs (N = 316)

As can be seen in Figure 3.2, virtually all of the respondents (97%) participated in at least some form of an induction program, but there is quite some variation in the intensity of the induction programs. Most of the respondents indicated a category-three intensity. This category refers to a total score ranging between 15 and 20. Even within this category the intensity of the induction programs varies, but for example a program in this category can consist of:

- an introduction meeting of half a day;
- five meetings with beginning teachers in which they can share their experiences;
- five class visits by a mentor, including evaluation afterward;
- four class observations of a colleague by the beginning teacher;
- a training course consisting of three hours.

Table 3.7 shows the descriptive information of the Facilities provided, the Content of the induction program, and characteristics of the Mentor. (In this Table, the raw scores indicating the degree of attention for Emotional Support and Practical Information, measured on a four-point Likert scale, were transformed to a five-point Likert scale.)

Table 3.7 Descriptives of Facilities, Content, and Mentor Characteristics

		Mean	**SD**	**Min**	**Max**
Facilities (1-4)		2.5	.68	1	4
Content	PD Pedagogy (1-5)	2.5	.94	1	5
	PD Classroom Management (1-5)	2.9	.99	1	5
	PD Psych./Moral Development (1-5)	2.1	.84	1	5
	Emotional Support (1-5)	3,1	1,2	1	5
	Practical Information (1-5)	2,6	1,2	1	5
Mentor	Challenging (1-5)	3.4	.94	1	5
	Supportive (1-5)	3.7	.99	1	5
	Trustworthy (1-5)	3.8	.79	1	5

Table 3.7 shows that, on average, respondents indicated a score of 2.5 for Facilities provided, such as extra time and dispensation from several duties. An average score of 2.5 means that teachers generally receive some facilities, but that this is certainly an area of possible improvement. For example, about half of the respondents reported that they did not receive extra time for activities related to the induction program. Also, about half of the respondents did not receive any dispensation from extra tasks such as monitoring students.
Concerning the induction programs' Content, all of the subjects included in the questionnaire receive attention. Most attention is given to Emotional Support and Classroom Management. On average, these topics receive attention 'rather often'. The Psychological and Moral Development of Students receives the least attention, only 'sometimes'.
The scores on the characteristics distinguished in the Mentor are high, especially when it comes to the mentor's Supportiveness and the degree to which he or she is able is Trustworthy. On average, the teachers thus felt greatly at ease with their formal mentor and felt supported by him or her, but, again, the standard deviation values are relatively high, which indicates a great variety in the experiences of beginning teachers.

Table 3.5 already showed that the various elements of induction programs correlated relatively strongly. To further investigate whether these correlations represent a certain structure, we conducted a factor analysis including the various elements of induction programs and School Culture. The results of this analysis are presented in Table 3.8.

Table 3.8 Factor analysis on elements of induction programs

	Factor 1	Factor 2
Facilities	.61	.41
Intensity Individual Support	.68	.18
Intensity Group Support	.54	.27
PD Pedagogy	.79	.09
PD Classroom Management	.84	.11
PD Psychological and Moral Development of Students	.73	.09
Emotional Support	.43	.68
Practical Information	.38	.54
Mentor Challenging	.50	.44
Mentor Supporting	.28	.81
Mentor Trustworthy	.01	.69
School Culture	.09	.70

* Loadings having a value of at least .65 are underlined.

The factor analysis revealed two underlying components. The scales measuring the attention for Professional Development and the Intensity of Individual Support, in particular, load strongly on the first factor, while the scales measuring Emotional Support, the mentor's Supportiveness and Trustworthiness, and School Culture, in particular, load strongly on the second factor. As regards the content of the scales loading on the two components, it can be interpreted that the first component refers to a dimension in the support related to Professional Development and the second component to a dimension related to Emotional Care. It is remarkable that the Intensity of the induction program, especially the intensity of Individual Support, loads only lightly on the second factor (related to Emotional Care). Also noteworthy is the strong loading of School Culture on this factor. This result indicates a relationship between School Culture, which refers to the informal support and collegiality experienced by the respondents, and the specific elements in the formal support of an induction program. This relationship is also recognizable in Table 3.5, in which can be seen that School Culture correlates significantly with several elements of induction programs.

3.4.4 Relationship between elements of induction programs and the well-being of beginning teachers

In order to answer the third research question (How do characteristics of the induction program relate to the well-being of beginning teachers?), we used correlation and regression analysis. Table 3.9 shows the results of the correlation coefficients between the elements of an induction program and the well-being of beginning teachers. The correlation coefficient between School Culture and well-being is also included in this Table.

Table 3.9. Correlations between well-being and elements of an induction program, and School Culture

		Well-being
Induction Program		
Facilities		.34*
Intensity Individual Support		.10
Intensity Group Support		.24*
Content	PD Pedagogy	.18*
	PD Classroom Management	.09
	PD Psych./Moral Development	.29*
	Emotional Support	.34*
	Practical Information	.26*
Mentor	Challenging	.18*
	Supportive	.42*
	Trustworthy	.33*
School Culture		.60*

* p < .01

The results presented in Table 3.9 show that most elements of an induction program correlate positively with the well-being of beginning teachers. This is especially the case for the Mentor's Supportiveness and Trustworthiness, attention for Emotional Support, and Facilities. As can be seen in Table 3.8, three of the four elements that relate strongly to well-being also load strongly on the second factor, referring to a dimension in the support of beginning teachers related to Emotional Care. One can also see that the elements correlating only moderately with well-being load mainly on the first factor, which refers to a dimension of support relating to the Professional Development of beginning teachers. Though many of the elements of an induction program distinguished correlate positively with well-being, the correlation between School Culture and well-being is stronger than any of the other correlations with well-being. This indicates that a supportive school culture is more important for the well-being of beginning

teachers than any of the characteristics of an induction program. The average score on the five-point Likert scale measuring School Culture is 3.9, indicating that the respondents generally experience a supportive school culture amongst colleagues.

Table 3.10 shows the model that best predicts well-being, based on a regression analysis in which the elements of an induction program were included, as well as School Culture and the various Personal and Contextual Characteristics.

Table 3.10 Regression analysis on Well-being

	R	Beta	Sig
School Culture	.58	.43	.00
Mentor, Supportive	.62	.19	.00
Personal Characteristic Preparedness	.64	.16	.00

Again, the importance of School Culture is demonstrated. The model, explaining 41% of the variance in beginning teachers' well-being, includes the variables School Culture, Supportiveness of the Mentor, and Preparedness (referring to the degree to which the beginning teacher felt prepared when starting to teach). School Culture is by far the most important predictor, explaining much more variance than the other predictors. Of the elements of induction programs only the Supportiveness of the mentor is included in the model. Though several other elements of the induction program also correlate strongly with the well-being of beginning teachers, they do not have a sufficient independent predictive value to be included in the model. Other personal characteristics besides 'The degree to which the respondents felt prepared when starting to teach' (such as age, gender, and the number of hours worked) also did not have sufficient independent predictive value to be included in the model.

3.5 Conclusion and discussion

With the aim of answering our research questions pertaining to the well-being of beginning teachers and the support they receive from induction programs, we conducted a survey study amongst teachers who recently graduated from pre-service teacher education. Because respondents had different experiences with induction programs, we were able to gain insight into the relative importance of various characteristics of induction programs regarding beginning teachers' well-being.

3.5.1 The degree of well-being of beginning teachers

The first research question referred to the well-being of beginning teachers. We investigated the degree of well-being amongst beginning teachers based upon the respondents' reports on their well-being in their first year of teaching. The scores on the scale measuring well-being indicated that, on average, the respondents experienced positive well-being. Considering the difficulty of the first year of teaching and the reported struggles of many beginning teachers (e.g., Gold, 1996; Odell, 1986; Veenman, 1984), we regard this as a positive result. Nevertheless, we have to be cautious with this conclusion for a number of reasons. Twenty-one percent of the respondents still indicated negative well-being. Also, there is a risk that the respondents, as a consequence of a slightly biased memory, indicated a more positive well-being than they actually experienced. However, based upon the current results we conclude that well-being amongst beginning teachers is, in general, moderately positive.

3.5.2 How teachers in the Netherlands are being supported with an induction program

The second research question pertained to the way beginning teachers are supported with an induction program. Virtually all teachers who participated in this study (97%) had been supported with an induction program. On average the induction programs had a moderate intensity. Often, the induction programs included an introduction meeting, contact with a mentor, and class visits from a mentor. Meetings in which beginning teachers could share their experiences and consult each other were often included in the induction program as well, but markedly less often than individual meetings with mentors or an introduction meeting. Most teachers reported that they were provided with limited facilities, most of them did not receive extra time for activities related to the induction program, and most had no dispensation from teaching duties. Most respondents reported positively about their mentors. All subjects included in the questionnaire received attention, though the focus was on emotional support and classroom management. Since the use of induction programs in the Netherlands is not mandatory, we can conclude that many schools apparently see good reasons to invest in the support of beginning teachers. The widespread use of induction programs in the Netherlands corresponds with the general picture that the use of induction programs is gaining popularity in many countries and is still increasing (Britton et al., 2003).

3.5.3 The relationship between elements of an induction program and the well-being of beginning teachers

The third research question referred to the relationship between the support from an induction program and the state of well-being of beginning teachers. To investigate this relationship, we used a schema of elements and sub-elements of an induction program based on our prior interview study, described in Chapter 2. The five main elements we distinguished were *Facilities*, *Format*, *Intensity*, *Content*, and *Characteristics of the Mentor.* In the analysis of the data, we investigated the correlations between the distinguishable elements and the well-being of beginning teachers. Except for two sub-elements of the induction program, namely, individual support (sub-element of format) and attention for classroom management (sub-element of content), all of the investigated elements correlated significantly and positively with the well-being of beginning teachers, though some only slightly.

The elements correlating most strongly with well-being were the supportiveness of the mentor, attention for emotional support, facilities, and the degree to which the mentor is trustworthy. Three of these elements were also the elements loading most strongly on the second factor, revealed by a factor analysis including the elements of induction programs and the school culture. This factor was interpreted as related to the emotional care of beginning teachers. The intensity of the induction program, especially the intensity of individual support, the degree of attention for professional development, and the degree to which the mentor is able to challenge beginning teachers in their professional development, had a low correlation with well-being. These elements typically loaded strongly on the first factor, which was interpreted as the support related to the professional development of beginning teachers.

3.5.4 Discussion

The results of our study indicate that induction programs can contribute to the well-being of beginning teachers. In order to contribute to their well-being with an induction program, it is most important that the mentor is supportive: that he or she shows confidence in the beginning teacher and can motivate him or her. Also important are the attention for emotional support and a trusting relationship between mentor and mentee. In other words, it is important that a mentor shows interest in the personal well-being of a beginning teacher, can be confided in, and is able to make the beginning teacher feel at ease. An element that has been shown to be important as well, but in many cases can still be improved, is that of the facilities offered in relation to the induction program, for example, arranging for the schedules of beginning teachers to match with induction program activities, assigning mentors to beginning teachers, and allowing beginning teachers dispensation from several duties.

A number of characteristics of induction programs appeared to be of little importance to beginning teachers' well-being. One of these characteristics pertained to the intensity of the induction program, especially the intensity of the individual support. This result concurs with the results of our previous interview study. Apparently it is of more importance for a beginning teacher to know that there is a person to support him or her, than that a certain length of time be spent with a mentor. Also, the attention for professional development and the degree to which the mentor is able to challenge beginning teachers appeared of little importance to beginning teachers' well-being. Though one might think that support aimed at professional development contributes to teaching skills and, therefore, also to the well-being of beginning teachers, the results of this study indicate otherwise. This might be due to the fact that attention for professional development also confronts teachers with their flaws, though we did not find evidence of a negative impact of attention for professional development on beginning teachers' well-being.

Besides emphasizing the importance of an induction program for beginning teachers' well-being, the findings of this study also reveal the importance of a supportive school culture, a culture in which beginning teachers feel supported by their administrators, can ask their colleagues for help, feel a bond with their colleagues, and are appreciated by them as well. The school culture experienced by beginning teachers correlated even more strongly with well-being than any of the characteristics of an induction program. Though this seems to put the importance of an induction program into perspective, the present findings also show that school culture correlates with several characteristics of an induction program. This makes us wonder about the nature of the relationship between an induction program and the school culture: do schools with a supportive school culture tend to invest more in an induction program than schools with a less supportive school culture? Is it the other way around, and does an induction program contribute to a more supportive school culture? Or do the correlations found between characteristics of an induction program and school culture represent a more dynamic relationship? We do not have an answer yet, but insight into the nature of this relationship could emphasize even more the importance of either a supportive induction program or a supportive school culture.

At this moment, we interpret the current results as a confirmation of the importance of a supportive mentor and a supportive environment. This is in correspondence with the findings of several other studies; for example, Tellez (1992) showed that most beginning teachers sought help from their official mentor only if he or she was friendly and could be confided in; otherwise, the teachers sought help from more experienced teachers who were caring, friendly, and not overly critical. Tickle (2000) and Kelchtermans and Ballet (2002) also emphasized the importance of a positive attitude towards beginning teachers. They stress that, all too often, beginning teachers are considered incapable and receive too little appreciation.

3.5.5 Limitations of the study

We would first like to stress that in our study of induction programs we focused on the well-being of beginning teachers. Our conclusions regarding the importance of several induction program elements thus only apply when the well-being of beginning teachers is considered the aim of using an induction program. Though well-being can be considered an important aim for using an induction program, clearly for the teachers personally but also for the prevention of attrition and as a precondition for professional development (Gold & Roth, 1993; Ward, 1987), we do not wish to claim that well-being is the only important aim in using an induction program.

Second, since the questionnaire was sent to graduates of several teacher education institutes, we can assume that the group of teachers who received the questionnaire is representative of most teachers in the Netherlands who are supported with an induction program. The sample of teachers who received the questionnaire was randomly spread over a large number of different schools. However, we consider it possible that, of the group of teachers who received the questionnaire, the teachers who had not been supported with an induction program were less inclined to complete it. If so, the result that 97% of the respondents received support from an induction program would show a too-positive view of the use of induction programs. Nevertheless, we consider the result that such a large percentage of participants had received some form of an induction program as a confirmation that the use of induction programs is increasingly widespread, also in the Netherlands.

Third, with the results of our study and analyses we can say something about correlations, but, strictly speaking, not about the causality behind these correlations. Yet, we interpret the correlations found between elements of induction programs and the beginning teachers' well-being as causal; that is to say that an induction program contributes to a higher sense of well-being in beginning teachers. We exclude the possibility that a higher sense of well-being contributes to an induction program, since theoretically this seems highly unlikely. However, a risk in our opinion is that the well-being experienced by beginning teachers influences the way teachers remember the support they received. A very positive experience might also create a slightly too-positive memory of the support received in the first year of teaching, and vice versa.

This would create correlations that are not representative of the reality. For now, however, we conclude that the current study confirms a positive influence of induction programs on the well-being of beginning teachers. Especially important for an induction program to contribute to the well-being of beginning teachers is the supportiveness of the mentor, attention for emotional support, facilities provided to enable support from an induction program, and a trusting relationship between mentor and teacher.

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