

II Original Manuscripts

4 Study 1

4.1 Manuscript A: What Skills and Abilities Are Essential for Counseling on Learning Difficulties and Learning Strategies? Modeling Teachers' Counseling Competence in Parent-Teacher Talks Measured by Means of a Scenario Test ¹

Abstract

Counseling parents in supporting their children's learning processes is increasingly emphasized in research on parental involvement and teacher professionalization as a central task of teachers. However, to date there have been few approaches of developing theoretical or psychometric models that describe the internal structure of teachers' counseling competence in terms of specific skills and abilities as well as of explaining inter-individual differences. The purpose of the current study was to establish a model of teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies. In all, 357 teachers participated in the study, which was conducted by means of a scenario test. Structural equation modeling revealed the appropriate-

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ness of a second-order, four-dimensional model. Results provide numerous implications for teacher education and future research on teacher professionalization.

4.1.1 Introduction

According to research on students' academic development, parental support plays an increasingly important role in students' learning processes as well as in their social, emotional, and behavioral adjustment (Cox, 2005; Pomerantz, Moorman, & Litwack, 2007). Especially home-based involvement practices, such as providing assistance with homework, enhancing motivation, and structuring time for homework and leisure, have been shown to improve academic achievement and performance (Fan & Chen, 2001; Henderson & Mapp, 2002). However, parents often feel insecure in supporting their children in homework and learning activities and therefore increasingly request guidance from teachers (Hoover-Dempsey, Walker, Jones, & Reed, 2002). Thus, whether parental participation can be used effectively as an educational resource depends to a great extent on teachers' efforts to involve and support parents in facilitating their children's educational improvements (Kohl, Lengua, & McMahon, 2000). In this context, different sources specifically identify counseling parents with respect to students' learning difficulties and learning strategies as an important opportunity for teachers (Guli, 2005; Whiston, Tai, Rahardja, & Eder, 2011). Within the context of counseling talks as an interactive process of co-construction (Idol, Nevin, & Paolucci-Whitcomb, 1994), teachers and parents can come together to jointly identify possible learning difficulties that need to be addressed and determine specific intervention strategies in the school and home context (Keys, Bemak, Carpenter, & King-Sears, 1998).

According to its relevance, particularly for the improvement of students' educational achievement by involving parents in their children's learning processes, counseling competence has been implemented in concepts of teachers' professional competences (e.g., Baumert & Kunter, 2011). Furthermore, the counseling of students and their parents is specified as a central pedagogical task in government recommendations and standards for teacher education all over the world (e.g., National Commission on Teaching and America's Future, 1997; Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany, 2004).

It is clear that teachers must be well educated in counseling with respect to students' learning difficulties and learning strategies in order to meet the high demands concerning the participation of parents in their children's academic development. This is becoming particularly important in light of the challenges

associated with the increasing diversity of the parent and student population in terms of family circumstances, socioeconomic status, cultural backgrounds, academic abilities, and learning conditions (Lee, 2001).

Modeling Teachers' Counseling Competence

In the current state of research, there appears to be a consensus that teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies plays a prominent role in the development of high-quality educational processes. Nevertheless, to date there have been few attempts so far at developing theoretical and psychometric models that describe the internal structure of this complex construct in terms of specific skills and abilities as well as explain inter-individual differences.

The scholarly literature includes numerous descriptions of general counseling competence. McLeod (2003), for example, defines seven central components of counseling competence: (1) interpersonal skills such as appropriate listening and communicating; (2) personal beliefs and attitudes such as believing in the potential for change; (3) conceptual ability, which includes the ability to understand and assess the client's problems and problem-solving skills; (4) personal "soundness", which includes self-confidence and secure personal boundaries as well as the absence of irrational beliefs or social prejudice; (5) mastery of technique concerning the constructive application and evaluation of specific interventions; (6) ability to understand and work within social systems; and (7) openness to learning and inquiry, which includes being curious about clients' backgrounds and problems. Another general description, which summarizes these aspects to four central components of counseling competence, is specified by Hackney and Cormier (1998): (1) counselors' personal characteristics; (2) interpersonal characteristics; (3) differential or conceptual abilities; and (4) intervention techniques. Further approaches can be found in Crouch (1992), Egan (2002), Strasser and Gruber (2003), and West and Cannon (1988). Evidently, these descriptions of counseling competence include several components that may even play an important role in the counseling competence of teachers in parent-teacher talks concerning students' learning difficulties and learning strategies. However, the aforementioned relatively general competence aspects do not provide a sufficient definition of this specific and complex construct, as they do not consider the particular problems and contextual conditions with which teachers are confronted in this specific setting. Consequently, a precise, domain-specific definition including the identification of concrete skills and abilities that compose teachers' counseling competence in parent-teacher talks on students' learning difficulties and learning strategies is still needed.

Potential starting points can be found in the literature on counseling in schools, parent counseling, and counseling on learning strategies. Honal and Schlegel (2002), for example, define the following specific competence areas of counselors in the school context: (1) conversation skills, (2) diagnostics, (3) cooperative interventions for individuals or groups, (4) professional knowledge, (5) work with adults, (6) collaboration, (7) evaluation, and (8) basic conditions of good counseling in the school context. There are also several definitions of parent counseling and the counseling on learning strategies in the literature. However, they typically refer to counseling by school psychologists. For example, Sheridan, Kratochwill, and Bergan (1996) define parent counseling as a structured, indirect, collaborative, problem-solving relationship between the psychologist and one or more parent consultees. More precisely, Guli (2005) emphasizes counseling regarding school-related behavioral concerns, including problems with social skills and homework completion. Working on problems with homework completion is an example of counseling on learning difficulties and learning strategies, which is generally specified to focus on problems and developments in the field of student skills that are necessary for successfully completing learning tasks.

One of the first approaches to developing a specific definition of teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies was proposed by Bruder (2011). On the basis of the exemplarily illustrated descriptions and definitions provided in the literature as well as a predecessor model established by Hertel (2009), Bruder theoretically developed and empirically validated a four-dimensional model on a sample of German teachers working in higher track secondary education (*Gymnasium*). The four dimensions of this model comprise the most important skills and abilities that a teacher should possess in the context of counseling parents in supporting their children's educational progress. The first dimension, *counseling skills*, includes the elementary counseling procedures of 'active listening', 'paraphrasing', and 'structuring' the talk. The second dimension, *diagnostic and pedagogical knowledge*, contains aspects that are necessary to find appropriate and customized solutions for student learning difficulties such as 'problem definition', 'search for possible causes', 'strategy application' (concerning learning strategies), and 'goal orientation'. The third dimension, *collaboration and perspective taking*, includes 'cooperative actions', 'perspective taking', and 'resource and solution orientation'. The contents of this dimension turn the counseling talk into a co-construction process and encourage collaboration between teachers and parents. Finally, the fourth dimension, *coping*, includes strategies for 'coping with criticism' and 'dealing with difficult situations', which constitute the most important capabilities needed for professionally address difficulties that may arise in the course of the counseling talk.

Bruder's (2011) results cannot necessarily be generalized to the broader population of teachers working in primary and secondary education, as the results are based solely on a sample of teachers working in higher track secondary education. As comparative studies show differences between the various school types concerning teacher education programs (e.g., Döbrich, Klemm, Knauss, & Lange, 2003) as well as students' and their parents' needs (Hertel, Bruder, Jude, & Steinert, 2013), these factors may have an influence on the formation of teachers' counseling competence. Thus, the aim of the current study was to establish a model of teachers' counseling competence concerning students' learning difficulties and learning strategies in parent-teacher talks (in the following we use the abbreviated term 'counseling competence') for the broader population of teachers working in primary and secondary education (*Grundschule, Hauptschule, Realschule, Gymnasium*). In this context, we firstly tested the generalizability of the factorial structure of Bruder's (2011) model to this broader population.

Secondly, as counseling is frequently conceptualized as a process in the literature (e.g., McLeod, 2003; Strasser & Gruber, 2003; Waehler & Lenox, 2011), we additionally sought to test an alternative model structure that gives more consideration to the process character of a counseling talk. Numerous sources perceive the counseling talk as a progression through various stages, although they define the number and content of those stages differently. However, most of these approaches have two specific phases in common: a diagnostic phase, including the analysis of the existing problem; and a problem-solving phase, comprising the development of appropriate solution strategies (e.g., Hepner, 1978; Thiel, 2003). In order to enable the subsequent development of appropriate solutions, it is crucial to first explore and specify the existing problem and identify possible explanatory factors that may be amenable to change (Hohenshil, 1996; McLeod, 2003). In the parent-teacher talk, teachers must be familiar with the various problems that can occur in the context of students' learning processes and their possible causes as well as possess a certain ability to take on the parent's perspective. A unique feature of the diagnostic phase in a parent-teacher talk, in contrast to most other counseling contexts, is that counseling teachers do not only gather information from parents, but also contribute relevant information gained from their classroom experiences. The results of the diagnostic phase subsequently form the basis for the development of specific tailor-made interventions in the problem-solving phase. In this phase, teachers support the collaborative problem-solving by setting a specific intervention goal, applying their knowledge of learning strategies and the conditions of their effective application, as well as maintaining a collaborative and caring attitude (McLeod, 2003). While selecting specific interventions, teachers should give special con-

sideration to all relevant resources available to the student, including those present in the student's social environment and the school (Nestmann, 2007). On this theoretical basis, we reassigned the manifest variables related to Bruder's (2011) dimensions diagnostic and pedagogical knowledge and collaboration and perspective taking to the two new dimensions *diagnostic skills* and *problem-solving skills*. Consequently, in the re-specified model the variables problem definition, search for possible causes, and perspective taking comprised the dimension *diagnostic skills*, whereas the variables strategy application, goal orientation, solution and resource orientation, and cooperative actions formed the dimension *problem-solving skills*. For purposes of clarity, we renamed the dimension counseling skills as *communication skills* and the dimension coping as *coping skills*.

Thirdly, because Bruder (2011) only tested a first-order factorial model, we additionally aimed to develop a second-order factorial model that includes counseling competence as a superior factor of the identified dimensions.

In summary, the present study addressed the following research questions:

1. Does Bruder's (2011) model of teachers' counseling competence, validated on a sample of teachers working in higher track secondary education, fit empirical data surveyed from the broader population of teachers working in primary and secondary education?
2. Does the re-specified, process-oriented model fit the data better than the factorial structure by Bruder (2011)?
3. Can the resulting first-order dimensions be subordinated to a second-order factor representing counseling competence?

4.1.2 Method

Procedure and Participants

To investigate our research questions, we contacted school administrations of primary and secondary schools in the German federal states of Hesse and Baden-Wuerttemberg via e-mail, informing them about the study and asking them to encourage participation among the teaching staff. For those schools interested in participating in the study, we inquired about the number of teachers who volunteered to participate and then sent the corresponding number of paper-pencil surveys to the schools. Each survey included a cover letter informing participants about the aim of the study, a guarantee of their anonymity, and instructions for

completing the survey. Furthermore, participants were advised of the importance of completing the entire survey without skipping over individual questions or sections. The school administration then returned all completed surveys to the research institution. After excluding 11 (3.0 %) teachers due to missing values, we obtained a final sample of 357 teachers – 132 primary school teachers (*Grundschule*), 129 lower track secondary school teachers (*Hauptschule, Realschule*; most of the schools contacted integrate both lower secondary school tracks into a single school), and 96 higher track secondary school teachers (*Gymnasium*) – from approximately 70 schools. The sex, age, job tenure, and subject distribution of the entire sample are displayed in Table 4.1. In terms of

Table 4.1

Demographic statistics of the sample

		<i>N</i> = 357
Sex	Female	271 (75.9 %)
	Male	82 (23.0 %)
	Missing values	4 (1.1 %)
Age (years)	20-29	49 (13.7 %)
	30-39	94 (26.3 %)
	40-49	77 (21.6 %)
	50-59	115 (32.2 %)
	> 59	20 (5.6 %)
	Missing values	2 (0.6 %)
Job tenure (years)	1-5	94 (26.3 %)
	6-10	60 (16.8 %)
	11-15	61 (17.1 %)
	16-20	36 (10.1 %)
	21-25	23 (6.4 %)
	26-30	27 (7.6 %)
	> 30	54 (15.1 %)
	Missing values	2 (0.6 %)
Subjects taught	Mathematics	215 (60.2 %)
	Natural sciences	162 (45.4 %)
	Languages	216 (60.5 %)
	Social sciences	168 (47.1 %)
	Art / music / physical education	232 (65.0 %)

these variables, the sample approximately resembles the national distribution of teachers in German primary and secondary education (Baumann, Schneider, Vollmar, & Wolters, 2012). Furthermore, 24 (6.8 %) participants (6 [4.5 %] primary school teachers, 14 [10.9 %] lower track secondary school teachers, and 4 [4.2 %] higher track secondary school teachers) also acted as school counselors (*Beratungslehrer*).

Measures

In order to measure teachers' counseling competence and its components, a revised version of a scenario test developed and validated by Bruder (2011) was applied. Scenario tests are considered to be an appropriate and effective method for measuring competences in a standardized manner that is context specific and closely related to behavior. Such tests have frequently been applied to assess competences, even in the field of teacher education (e.g., Hedlund, Witt, Nebel, Ashford, & Sternberg, 2006). The scenario test contains a case study of a student with learning difficulties whose mother is seeking advice and, therefore, requests a counseling talk (the case study was slightly adapted to the specific characteristics of each subgroup of participating teachers, for example, the student's age and the teachers' subjects). Participants are asked to respond to 12 open-ended questions relating to the information provided in the case study. These questions represent the 12 content variables of Bruder's (2011) four-dimensional model of teachers' counseling competence. The case study (version for higher track secondary school teachers) and the 12 open-ended questions are illustrated in Table 4.2.

In order to transform qualitative statements into quantitative data, a detailed rating system was used to convert the answers into scores from 0 to 2 for each item. To test the objectivity of the rating system for the modified versions of the original scenario test, a random selection of 35 teacher responses was scored by three independent raters. Inter-rater reliabilities for each question resulted in satisfactory intra-class correlations (ICC; McGraw & Wong, 1996) between ICC = .72 and ICC = 1.00.

Table 4.2

Case study and open-ended questions of the scenario test

Case study

Imagine that you teach fifth grade German and Biology classes at a higher track secondary school and it is currently autumn break.

Following the first exams, Mrs. Schneider, the mother of one of your students named Kristina, would like to have a counseling talk with you. Kristina received a B in German and a C in Biology. You talked on the phone with Mrs. Schneider and she told you the following:

“Kristina goes to the higher track secondary school because I wanted her to. I know that she didn’t actually have a recommendation to go there, but Kristina really enjoyed learning in primary school and she always had good grades. But now I have noticed that Kristina’s study habits have completely changed. She doesn’t enjoy doing her homework at all anymore and I always have to fight with her in the afternoons to get her to do her homework and study. I find that really stressful and I don’t really know what to do. Also, Kristina was really disappointed about getting her first bad grades in History and Geography (a D and an F, respectively). She never had grades like that in primary school. That was really hard for me, too. After that, it was even harder to get her to do her homework. But she feels really comfortable with the people in her class. Her best friend from primary school sits next to her, which really helps. You see, my husband comes home in the evenings and doesn’t bother much with school things. I’m home all afternoon, but I can’t really help her much with the stuff she is learning. And that’s not going to get better in the years to come. I’m really not sure how I can help Kristina and I’m not sure whether it was the right decision to have her go to the higher track secondary school. If that doesn’t get better, I think I might really have her switched to the lower track school for the next semester. But, on the other hand, Kristina really likes her classmates. I have already talked to her teachers for History and Geography, but they didn’t really take me seriously and just said that a lot of kids have problems at first. I didn’t think they were very helpful and I was kind of irritated with them, since I think education is really important and I just want what is best for my child. But I really don’t want my child to have to get tutoring. I had to go and I really hated it and felt like an outsider because of it. I honestly hope that you can help me if we sit down and talk, because I really don’t know what to do!”

As Kristina’s teacher, you have already noticed that she has integrated herself well and gets along well with her classmates, even though she seems a little reserved. During class, Kristina speaks up a lot and answers questions. Based on her answers in class, you have the impression that she understands most of what you are teaching in your classes. On the other hand, the results of her tests, especially in Biology, were mixed. Some answers were very good and others mediocre.

Your goal as a teacher is now to have a talk with Kristina’s mother and, together with her, figure out what is best for Kristina.

Table 4.2 (Continuation)

Case study and open-ended questions of the scenario test

Open-ended questions	
Perspective taking	What do you think Mrs. Schneider is feeling?
Problem definition	What problems might Kristina have?
Search for possible causes	What information would you get prior to and during the talk with her mother in order to find possible solutions after the talk?
Structuring	How do you structure the counseling talk?
Cooperative actions	How do you show Mrs. Schneider that you are interested in working with her to find a solution?
Solution & resources orientation	After you have found possible causes for Kristina's behavior: Which aspects do you talk about in order to find a good solution to Kristina's problem?
Paraphrasing; Active listening	Which talk strategies do you use in your counseling talks? Please provide examples of the strategies.
Strategy application	What learning aids or changes can you think of that you would recommend to Kristina's mother?
	Imagine that you and Kristina's mother decided on "better structuring of the homework situation" as a possible solution. Define concrete steps to implement the solution (write down each individual step).
Goal orientation	How do you end the talk with Mrs. Schneider? What do you tell her to do as the next step after the talk?
Coping with criticism	Assume that Mrs. Schneider said the following during the talk: „I have the impression that you are just defending your colleagues the whole time. But what they told me just wasn't very helpful.” – How would you react to that statement?
Dealing with difficult situations	Imagine that during the talk Mrs. Schneider begins to tell you in detail about problems that she is having with her husband. – What would you do?

To answer our research questions, we used structural equation modeling performed with the software package MPlus Version 6.1 (Muthén & Muthén, 2012). Since chi-square has been criticized severely as a measure of model fit due to its sensitivity to sample size and correlation magnitudes, we additionally report the chi-square/degrees of freedom ratio (Jöreskog & Sörbom, 1993) as an alternative index of model fit that minimizes the impact of sample size on model results. A ratio smaller than 2 is considered indicative of good model fit (Schermmelleh-Engel, Moosbrugger, & Müller, 2003). In line with the current state of research on fit indices for structural equation modeling (e.g., Hu & Bentler, 1999), we also report the comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean squared residual (SRMR) as measures of model fit. According to the guidelines provided by the simulation studies of Hu and Bentler (1999), the CFI and TLI should be greater than .95, the RMSEA less than .06, and the SRMR less than .08.

To test the factorial validity of Bruder's (2011) model and the re-specified, process-oriented model for the sample investigated in the current study, we first conducted confirmatory factor analyses (CFA) based on the 12 items of the scenario test. In addition to this examination of the proposed factor structure on a first-order level, we also tested for the existence of a second-order factor representing overall counseling competence.

4.1.3 Results

To examine the validity of the factor structure proposed by Bruder (2011) for the current sample (research question 1), we conducted a first-order CFA. With a significant chi-square ratio ($\chi^2(48) = 109.354, p < .001$), a chi-square/degrees of freedom ratio greater than 2 ($\chi^2/df = 2.278$), and a CFI and TLI less than .95 (CFI = .801, TLI = .727), the results for the proposed model showed an unsatisfactory fit with the observed data. The RMSEA and the SRMR fell within a satisfactory range (RMSEA = .060, SRMR = .049). Even when associations between error terms of the manifest variables were freely estimated, a TLI value of .948 still did not indicate satisfactory model fit. These findings indicate that the factorial structure observed by Bruder (2011) for teachers working in higher track secondary education fails to represent teachers' counseling competence for the broader sample of teachers working in primary and secondary education.

To investigate our research question 2 we conducted another first-order CFA on the basis of the re-specified, process-oriented model structure. At first, the CFA revealed an unsatisfactory fit with the data ($\chi^2(48) = 97.314, p < .001$,

$\chi^2/df = 2.027$, CFI = .840, TLI = .780, RMSEA = .054, SRMR = .047). Due to theoretical considerations (see Discussion) as well as the model modification indices we repeated the CFA on the basis of the process-oriented model structure, however, allowing correlations of the error terms associated with the manifest variables goal orientation and structuring as well as goal orientation and perspective taking. Analyses revealed a very good fit to the empirical data. The chi-square ratio was nonsignificant ($\chi^2(44) = 48.417$, $p = .299$); the chi-square/degrees of freedom ratio was less than 2 ($\chi^2/df = 1.100$). The CFI and TLI were greater than .95 (CFI = .986, TLI = .979), and the SRMR value was less than .08 (SRMR = .033). The RMSEA (RMSEA = .071) fell not within a good, but acceptable range (Hu & Bentler, 1999). All factor loadings were significant (all p values < .01). Consequently, these findings indicate the factorial validity of the re-specified, process-oriented model structure for primary and secondary school teachers' counseling competence. Descriptive statistics as well as the inter-correlations for the final four dimensions of counseling competence (first-order factors) are displayed in Table 4.3.

Because the inter-correlations between the first-order dimensions were rather large, we conducted an additional CFA to examine the appropriateness of a first-order, single-factor model. The indicators of fit clearly demonstrated that a first-order, single-factor model was not compatible with the data ($\chi^2(54) = 126.252$, $p < .001$, $\chi^2/df = 2.338$, CFI = .766, TLI = .714, RMSEA = .061, SRMR = .053).

Table 4.3

Descriptive statistics and correlations for the four dimensions and overall score of counseling competence

	Range	Min	Max	<i>M</i>	<i>SD</i>	1	2	3	4
Counseling competence	0-2	0.17	1.58	1.00	.27				
1 Communication skills	0-2	0.00	1.67	0.52	.32	-	.24***	.37***	.17**
2 Diagnostic skills	0-2	0.00	2.00	1.44	.32		-	.26***	.17**
3 Problem-solving skills	0-2	0.00	2.00	1.19	.36			-	.21***
4 Coping skills	0-2	0.00	2.00	0.83	.63				-

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

In order to examine whether the newly specified first-order dimensions could be subordinated to a second-order factor representing counseling competence (research question 3), we conducted a second-order CFA, which revealed that the proposed second-order factorial model fit the data very well ($\chi^2(47) = 53.572$, $p = .237$, $\chi^2/df = 1.140$, CFI = .978, TLI = .969, RMSEA = .020, SRMR = .036). Figure 4.1 depicts the final model of teachers' counseling competence.

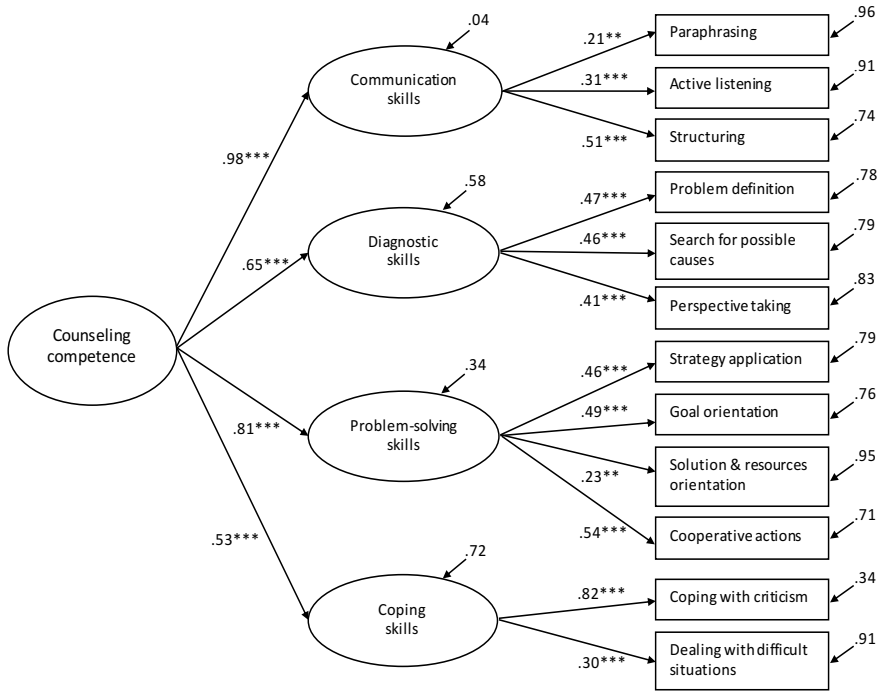


Figure 4.1. Model of teachers' counseling competence.

4.1.4 Discussion

The central purpose of the current study was to establish a model of primary and secondary school teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies. In this regard, analyses revealed that the factorial structure observed by Bruder (2011) for teachers working in higher track secondary education is not generalizable to the

broader sample of primary and secondary school teachers (research question 1). Possible explanations for this result may be found in comparative studies on the examined school types. Here, studies on teacher education show differences in terms of the share of educational and psychological curriculum content – containing student and parent counseling – for the three surveyed subgroups. In particular, these sources indicate a greater proportion of preparation programs for primary and lower track secondary school teachers than for higher track secondary school teachers (e.g., Döbrich et al., 2003). Furthermore, studies on teachers' professional routine reveal that teachers are confronted with different needs of students and their parents as a function of the respective school type (Hertel et al., 2013). Consequently, it seems conceivable that these differences have an influence on the general understanding of parent counseling, which also manifests itself in teachers' actual counseling competence. This different understanding of counseling might especially apply to the process character of a counseling talk (e.g., McLeod, 2003; Strasser & Gruber, 2003; Waehler & Lenox, 2011), as the re-specified, process-oriented factorial structure proved to be suitable for the current sample (research question 2). The refutation of the appropriateness of a first-order, single-factor model compared with the new four-dimensional model confirmed that teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies is not a single, global sphere of competence. Rather, it is composed of several competence areas that can be present to differing degrees. However, we were able to demonstrate that these competence areas could be subordinated to a second-order factor representing counseling competence (research question 3).

In our final model, we allowed the error terms associated with the manifest variables goal orientation and structuring as well as goal orientation and perspective taking to correlate. We did so despite the fact that these variables were related to divergent factors due to their related content. That is, when replying to the item in the scenario test for measuring goal orientation, the responding teacher is asked how to end the counseling talk and what to tell the parent to do as the next step after the talk. Here, the teacher is expected to briefly summarize the collaboratively determined intervention strategies, define initial steps of their realization, and pleasantly say goodbye to the parent, which all refers to the later process phases and, thus, the structuring of a counseling talk. In order to identify a suitable moment to end the counseling talk and pleasantly say goodbye, the responding teacher, in turn, requires a certain ability to take the perspective of the parent.

Closer inspection of the factor loadings revealed that most of the 12 observed variables of the final four counseling competence dimensions (first-order factors) had rather low factor loadings. This weakness of the model has to be considered in the interpretation of the results and, especially, be focused in the

context of subsequent research efforts, preferably on the basis of even larger sample sizes. Nevertheless, the model already provides important contributions for the differentiated description of primary and secondary school teachers' counseling competence in parent-teacher talks concerning students' learning difficulties and learning strategies in terms of specific skills and abilities.

In view of the well-known demand for a better integration of counseling in teacher education (e.g., Hertel et al., 2013), the model, moreover, provides a profound and detailed empirical basis for a purposive design of appropriate teacher education programs. At this juncture, the proved four-dimensionality of teachers' counseling competence indicates that teacher training programs are not limited to a focus on the development of counseling competence in general, but may also be used for the advancement of specific competence areas. In this context, the outlined assessment approach allows for the differentiated ascertainment of individual and group general counseling competence as well as detailed measurements of participants' counseling competence itemized by the four specific competence dimensions. This in turn allows for the conception and systematic evaluation of precisely tailored training programs for prospective or in-service teachers and the comprehensive monitoring of teachers' individual learning processes during coursework, as well as providing detailed individual feedback for learners (Koeppen, Hartig, Klieme, & Leutner, 2008). In addition, measures can be used for ongoing program improvement (Darling-Hammond, 2006).

Limitations and Outlook

An important limitation of the current study concerns the representativeness of the surveyed sample for the entire population of teachers working in German primary and secondary education. Because participation in the study was voluntary, we must consider the possibility that the participants who took part in the survey were more motivated than those who did not and, as a result, also superior in terms of counseling competence. Thus, subsequent research should test whether the outlined results can be reproduced in a study with obligatory participation. Moreover, using multigroup comparisons based on larger sample sizes, future research efforts should investigate whether the model structure varies as a function of specific subgroups, for example, teachers' sex, age, job tenure, or – in an international context – nationality.

The scenario test used in the current study proved to be an objective and efficient strategy for the itemized measurement of teachers' practical counseling competences with simultaneous consideration of the preconditioned economy. Certainly, scenario tests are not able to measure actual behavior; however, for studies with large sample sizes, they are the method of choice (Hedlund et al., 2006). Nevertheless, future research should focus on the further improvement of

the scenario test. To do so, data obtained from the outlined scenario test should first be compared with data obtained from other case scenarios measuring teachers' counseling competence. Then, with special regard to validation in the field, data may be compared with video recordings of teachers' counseling talks in their actual professional routine. Because the application of video recordings allows for the simultaneous measurement of multifaceted behaviors in specific situations, video recordings have been shown to be a suitable and valid method for assessing professional pedagogical skills and, especially, counseling competences (e.g., Admiraal, Hoeksma, Van de Kamp, & Van Duin, 2011). It is particularly important to note that the scenario test measures how teachers would act in a counseling talk when guided to some extent by questions, whereas teachers have no such guidance in real counseling talks. Therefore, comparisons of the scenario test and video assessment approaches should specifically focus on the replication of the findings from the scenario test in real-life situations.

Lastly, future research should also examine the development of teachers' counseling competence and its dimensions specified in the model in the course of a teacher's professional career. It appears particularly important to identify essential conditions that support the development of prospective teachers' counseling competence, for example, the application of specific instructional practices, a focus on the development of practical competences, and the assurance of the transfer of theoretically acquired knowledge to future professional routines. This, for instance, could be realized in the context of teacher training programs developed on the basis of the specified model and evaluated by means of the outlined scenario test.

4.2 Additional Analyses

4.2.1 Purpose

In addition to the examination of the factorial structure of primary and secondary school teachers' counseling competence, Study 1 focused on two further research aims, whose pursuit was not outlined in Manuscript A: (1) the identification of specific variables that can be used to predict teachers' counseling competence, and (2) the examination of potential differences concerning teachers' counseling competence and the related predictor variables between the diverse school types in primary and secondary education. This section mainly intends to present the methodical procedure as well as the results of the conducted analyses in detail. The fundamental theoretical background as well as the discussion of the results can be found in the synopsis of this doctoral thesis (sections 1 and 3).

The examination of potential predictor variables of counseling competence was based on the predictor variables identified by Klug et al. (2012), which are valid for the population of higher track secondary school teachers: knowledge of counseling and learning strategies, professional self-concept as a counselor, and reflected experience. Moreover, the existence of an additional variable predicting the degree of teachers' counseling competence was tested. According to research on teacher education and teachers' professional competences, not only reflected experience as a special facet of experience (Galvez-Martin, 2003; Gruber & Strasser, 2006; Neufeldt, Karno, & Nelson, 1996; Rønnestad & Skovholt, 2001) is relevant to the development of counseling competence but also counseling experience in general (Jennings, Goh, Skovholt, Hanson, & Banerjee-Stevens, 2003). In addition to experiences that are subsequently reflected, counseling experience also includes, for example, the amount of counseling practice (e.g., Dotger, Dotger, & Maher, 2010) and regular professional exchange with colleagues (e.g., Macha, Lödermann, & Bauhofer, 2010; Zorga, 2002). Therefore, the relation of counseling *experience* (as a superior construct of Klug et al.'s (2012) reflected experience) to the level of counseling competence was also tested.

With regard to the examination of potential differences concerning the examined school types, it was hypothesized that primary (*Grundschule*) and lower track secondary school (*Haupt-/Realschule*) teachers possess superior counseling competence and demonstrate greater values regarding the related predictor variables than higher track secondary school (*Gymnasium*) teachers. In Germany, for example, research on parent counseling and parental involvement (cf., data collected in the context of the Programme for International Student Assessment [PISA], 2009) indicates that teachers' supply and parents' demand for counseling talks vary as a function of the respective school type (Hertel, et al., 2013; Oswald, Baker, & Stevenson, 1988). Furthermore, studies on teacher education show differences regarding the share of educational and psychological curriculum content — including student and parent counseling. Consequently, these sources indicate a greater proportion of preparation programmes for primary and lower track secondary school teachers than for higher track secondary school teachers (Döbrich et al., 2003).

In summary, the following additional research questions were addressed:

1. a. Do knowledge of counseling and learning strategies, professional self-concept as a counselor, and reflected experience predict primary and secondary school teachers' counseling competence?
- b. Does counseling experience (a superior construct of reflected experience) additionally predict teachers' counseling competence?

2. Do primary and lower track secondary school teachers achieve higher scores in counseling competence and the related predictor variables than higher track secondary school teachers?

4.2.2 Method

Participants

The examination of the research questions was based on the identical sample as the investigation of the factorial structure of teachers' counseling competence outlined in Manuscript A.

Measures

In order to measure the hypothesized predictor variables, a multiple-choice test for the assessment of knowledge of counseling and learning strategies and a self-assessment questionnaire for the measurement of professional self-concept, reflected experience, and experience were applied.

The multiple-choice test for measuring teachers' professional knowledge of counseling and learning strategies consists of nine closed-ended questions, with four possible answers each (e.g., "Which advantages are associated with the technique of active listening? a) The listener can make sure that he or she has accurately understood how the speaker is feeling. b) It makes it easier for the listener to identify with the speaker. c) The speaker feels understood. d) It makes it easy to structure the conversation."). Participants were requested to choose the best answer or answers (the latter in the case that multiple answers were allowed, which was noted next to the respective item). Participant responses to all items were coded as either correct or incorrect. Item difficulties for the knowledge test ranged between .35 and .89 and therefore fell within an acceptable range for inter-correlated items (Ramsey & Reynolds, 2000). Tests of scale reliability indicated an acceptable Cronbach's alpha of $\alpha = .63$.

The self-assessment questionnaire includes additional scales for measuring professional self-concept as a counselor (e.g., "I believe that, as a teacher, part of my job is to counsel parents.") and reflected experience (e.g., "After finishing a counseling talk, I think about whether I am satisfied with my performance as a counselor."). In addition to reflected experience as a special facet of experience, the questionnaire includes a superior scale for the measurement of experience as a superior construct. In addition to the items on the reflection of experiences, the scale comprises additional items on the amount of counseling practice (e.g., "The topic of counseling was an important part of my education as

a teacher.”) as well as support and exchange with colleagues in the context of counseling activities in teachers’ professional routine (e.g., “I regularly have the opportunity to talk to experienced colleagues about counseling talks.”). Participants are asked to respond to items on a six-point rating scale ranging from 1 (*I completely disagree*) to 6 (*I completely agree*). Tests of scale reliability for the current sample indicated satisfactory Cronbach’s alphas of $\alpha = .87$ for professional self-concept as a counselor (17 items), $\alpha = .75$ for reflected experience (8 items), and $\alpha = .81$ for experience (16 items).

Analyses

The examination of the proposed predictor variables on counseling competence was conducted by means of structural equation modeling. At this, knowledge, professional self-concept, reflected experience, and experience were integrated as manifest variables predicting counseling competence into the second-order, four-dimensional model established in Manuscript A. In order to investigate potential group differences between the examined school types regarding counseling competence as well as the related dimensions and predictor variables, we conducted a MANOVA on the basis of the scenario test, knowledge test, and self-assessment data.

4.2.3 Results

After integrating the proposed predictor variables into the second-order, four-dimensional model, the model showed a satisfactory fit to the data ($\chi^2(90) = 101.462, p = .192, \chi^2/df = 1.127, CFI = .965, TLI = .955, RMSEA = .019, SRMR = .038$). However, analyses did not reveal a relation between reflected experience and counseling competence ($\beta = -.167, p = .177$), whereas knowledge, professional self-concept, and experience were positively related to counseling competence. Therefore, the model was retested after eliminating reflected experience. The final model fit the observed data well ($\chi^2(79) = 89.223, p = .202, \chi^2/df = 1.129, CFI = .968, TLI = .959, RMSEA = .019, SRMR = .039$). Consequently, the results indicate that primary and secondary school teachers’ counseling competence is related to knowledge of counseling and learning strategies, professional self-concept as a counselor, and counseling experience. In contrast to Klug et al.’s (2012) findings for the smaller population of higher track secondary school teachers, reflected experience as a subordinated construct of counseling experience did not turn out to be valid for the entire population of primary and secondary school teachers. In summary, the final three predictor variables explained 15 % of the variance in counseling competence, while knowledge had

the strongest predictive value ($\beta = .237$). Descriptive statistics as well as the inter-correlations of the predictor variables are displayed in Table 4.4. Figure 4.2 depicts the final model of teachers' counseling competence with the related dimensions and predictor variables.

Table 4.4
Descriptive statistics for the predictor variables specified in the model

	Range	Min	Max	<i>M</i>	<i>SD</i>
a Knowledge	0-9	0.00	9.00	5.84	1.46
b Professional self-concept	1-6	3.21	5.95	4.95	.55
c Reflected experience	1-6	1.43	6.00	3.85	.81
d Experience	1-6	1.63	5.25	3.34	.66

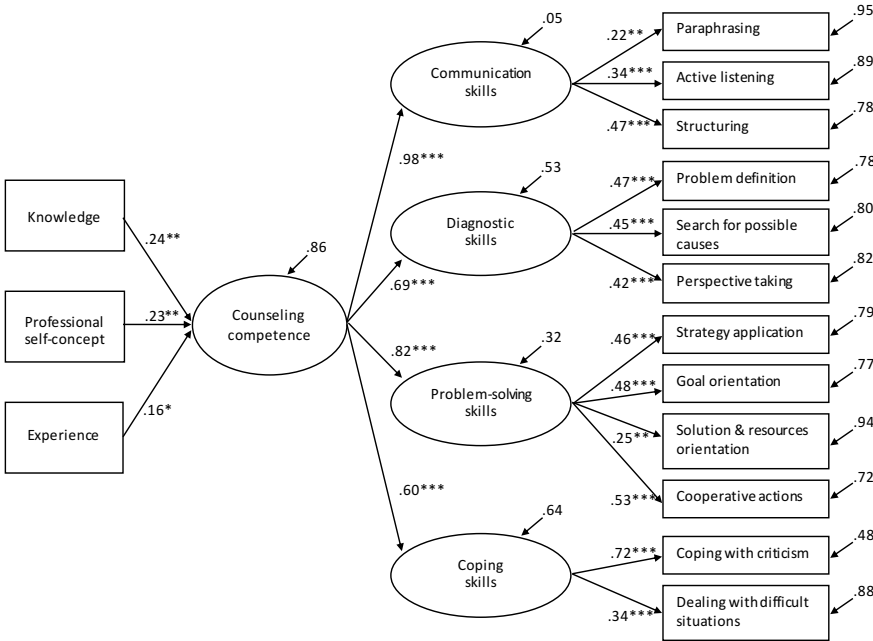


Figure 4.2. Model of teachers' counseling competence with the related dimensions and predictor variables.

The MANOVA for the examination of potential group differences between teachers working in primary schools, lower track secondary schools, and higher track secondary schools resulted in significant multivariate main effects (*Wilks' lambda* $\Lambda = .81$, $F(14/ 696) = 5.64$, $p < .001$, $\eta^2 = .10$). Results for the dependent variables as well as descriptive statistics are displayed in Table 4.5.

Contrary to the expectations, post-hoc analyses did not reveal significantly greater values for primary and lower track secondary school teachers than higher track secondary school teachers concerning overall counseling competence, the dimensions diagnostic skills, problem-solving skills, and coping skills, as well as the predictor variables knowledge and experience. However, concerning the dimension communication skills ($F(2, 354) = 12.858$, $p < .001$) and the predictor variable professional self-concept ($F(2, 354) = 13.269$, $p < .001$), post-hoc analyses revealed significantly lower values for higher track secondary school teachers compared with the other two subgroups with moderately large effect sizes (Cohen, 1988). In addition, results generally indicated a rather low overall level of counseling competence for all three subgroups.

Table 4.5

Results of the MANOVA for the evaluation of group differences

		Group			<i>df</i>	<i>F</i>	η^2
		PST	LSST	HSST			
		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>			
Counseling competence	Overall score	1.03 (0.26)	0.99 (0.29)	0.95 (0.25)	2/354	2.44	.01
	Communication skills	0.59 (0.33)	0.56 (0.32)	0.39 (0.27)	2/354	12.86***	.07
	Diagnostic skills	1.44 (0.32)	1.41 (0.36)	1.48 (0.25)	2/354	1.16	.01
	Problem-solving skills	1.20 (0.35)	1.20 (0.36)	1.18 (0.37)	2/354	0.09	.00
	Coping skills	0.91 (0.63)	0.79 (0.63)	0.77 (0.62)	2/354	1.65	.01
Predictor variables	Knowledge	6.05 (1.28)	5.60 (1.44)	5.87 (1.60)	2/354	3.24*	.02
	Professional self-concept	5.09 (0.46)	4.97 (0.55)	4.73 (0.58)	2/354	13.27***	.07
	Experience	3.35 (0.60)	3.34 (0.65)	3.34 (0.76)	2/354	0.03	.00

Note. PST = Primary school teachers; LSST = Lower track secondary school teachers; HSST = Higher track secondary school teachers. * $p < .05$. ** $p < .01$. *** $p < .001$.

5 Study 2

5.1 Manuscript B: Improving Prospective Teachers' Counseling Competence in Parent-Teacher Talks. Effects of Training and Feedback²

Abstract

Counseling parents concerning students' learning difficulties and learning strategies is considered to be an increasingly important competence area of teachers. However, there exist few educational programs, which specifically focus on the improvement of this essential teacher competence, particularly in early teacher education. The current study, which took place at a German university, describes the evaluation of a corresponding training program for prospective teachers as well as a process-oriented feedback intervention. We conducted a quasi-experimental study with three treatment groups (training group, training + feedback group, control group) combining pre-, post-, and follow-up test measures with time-series data. By means of multivariate repeated measures MANOVAs and time-series analyses we were able to demonstrate that prospective teachers' counseling competence can be successfully fostered by training and individual process-oriented feedback. Our results provide several practical implications concerning the improvement of teachers' counseling competence within the context of teacher education.

5.1.1 Introduction

Counseling is considered to be an increasingly important activity in teachers' professional routines and has been specified as a key task in recent concepts of

² Gerich, M., Trittel., M., & Schmitz, B. (in press). Improving Prospective Teachers' Counseling Competence in Parent-Teacher Talks. Effects of Training and Feedback. *Journal of Educational and Psychological Consultation*.

teachers' professional competences in Germany and worldwide (e.g., Baumert & Kunter, 2006; Guli, 2005; Hertel, Bruder, Jude, & Steinert, 2013). Among others, parent counseling has become one of the most relevant counseling fields for teachers, as it has been shown to be an effective method of treatment delivery for a variety of school-related issues (for a review, see Guli, 2005). In particular, parent counseling concerning the support of their children's home-based learning activities (e.g., by providing assistance with homework, enhancing motivation, and structuring time for homework and leisure) has become one of the primary objectives, as parental involvement in children's education has a profound influence on students' academic success as well as social, emotional, and behavioral development (Christenson & Sheridan, 2001; Cox, 2005; Hill & Taylor, 2004; Hill & Tyson, 2009; Miller, Colebrook, & Ellis, 2014; Pomerantz, Moorman, & Litwack, 2007; Reschly & Christenson, 2012). Specifically, counseling parents with respect to students' learning difficulties and learning strategies has been identified as an important means for teachers to support students in their academic development (Guli, 2005; Whiston, Tai, Rihardja, & Eder, 2011).

Parent counseling is often used in the broader psychology literature to refer to any communication between a professional and a parent (Guli, 2005). Within school psychology, parent counseling is defined as a structured, collaborative, problem solving relationship between the counselor (in this case the teacher) and one or more parent consultees (Sheridan, Kratochwill, & Bergan, 1996). This definition particularly emphasizes, that parent counseling is to be understood as an interactive process of co-construction between multiple experts (Idol, Nevin, & Paolucci-Whitcomb, 1994), characterized by collaboration and joint ownership of responsibilities and accountability for outcomes (Reschly & Christenson, 2012). Thus, within the context of parent-teacher talks on students' learning difficulties and learning strategies, teachers and parents can come together to jointly identify possible learning difficulties that need to be addressed and determine specific intervention strategies in the school and home context (Keys, Bemak, Carpenter, & King-Sears, 1998).

Particularly in recent years, parents increasingly request guidance from teachers concerning the support of their children in homework and learning activities (Hoover-Dempsey, Walker, Jones, & Reed, 2002; Hertel et al., 2013). Thus, in order to meet these high demands and capitalize on the full potential of involving parents in their children's learning processes, teachers must be well educated in counseling and collaborating with parents. However, international research on early teacher education shows that teacher education institutions often fail to facilitate prospective teachers to acquire the interpersonal competences they will need to counsel parents effectively (Lawrence-Lightfoot, 2003; Walker & Dotger, 2012). As a consequence, novice teachers often feel overburdened by demands concerning the collaboration with parents with which they are

confronted when they enter the profession (Epstein, 2005; Mandel, 2006). This so-called “reality-shock” frequently leads to a reluctance to offer counseling talks (Wild, 2003), decreased job satisfaction, extended occupational stress, and an increased risk of burnout (Darling-Hammond, 2000; Pas, Bradshaw, & Hershfeldt, 2012).

Against this background, numerous studies on teacher education as well as political recommendations and standards for teacher education highlight the importance of integrating parent counseling in teacher education worldwide (e.g., NCTAF, 1997; Valli & Rennert-Ariev, 2000). Particularly, there is a growing demand for specific programs and curricular modules to foster prospective teachers’ counseling competence in early preparation (Dotger, 2010). Whereas there already exist several training programs for prospective teachers on creating effective and collaborative partnerships with parents and general parent counseling (e.g., Brown, Harris, Jacobson, & Trotti, 2014; Ferrara, 2009; Hedges & Gibbs, 2005; Murray, Mereoiu, & Handyside, 2013), there have been few approaches of developing and evaluating training programs or other interventions with a specific focus on counseling parents with respect to students’ learning difficulties and learning strategies. In Germany, too, there have been few corresponding programs to foster prospective teachers’ counseling competence in early preparation, although the training in student and parent counseling is prescribed in German standards and recommendations for teacher education (German Society for Psychology, 2008; Standing Conference, 2004). Thus, in the course of the current study, we developed and evaluated a training program on counseling competence for German prospective teachers with a specific focus on counseling parents in how to support their children’s home-based learning activities. As studies on different interventions in the education of counselors highlight the beneficial effects of providing continuous and systematic feedback on competence development (Caspar, Berger, & Hautle, 2004; Lambert et al., 2002; McLeod, 2003; Strasser & Gruber, 2003), we additionally developed and evaluated a corresponding feedback intervention.

Model of Teachers’ Counseling Competence in Parent-Teacher Talks on the Support of Students’ Learning Processes

The selection and arrangement of the specific content of the training program as well as the development of the feedback intervention were based on the model of teachers’ counseling competence in parent-teacher talks concerning students’ learning difficulties and learning strategies (in the following, we use the abbreviated term ‘counseling competence’) by Gerich et al. (2015). The four-dimensional model was developed on the basis of literature on general counsel-

ing competence, counseling in schools, parent counseling, and counseling on learning strategies (e.g., Guli, 2005; Honal & Schlegel, 2002; McLeod, 2003) as well as preliminary approaches of modeling teachers' counseling competence for the subsample of higher track secondary school teachers (Bruder, 2011; Hertel, 2009). The proposed model structure was empirically validated conducting structural equation modeling on the basis of 357 primary and secondary school teachers' data acquired by means of a scenario test (see section 2.3.1). The resulting second-order four-dimensional model comprises the most important skills and abilities a teacher should possess in the context of counseling parents in how to support their children's educational progress. The first dimension, *communication-skills*, includes general counseling practices such as 'active listening', 'paraphrasing', and 'structuring' the talk. The second dimension, *diagnostic-skills*, contains aspects necessary to analyze the existing problem and identify possible causes such as 'problem definition', 'search for possible causes', and 'perspective taking'. The third dimension, *problem-solving skills*, includes aspects necessary to develop and implement solutions such as 'strategy application', 'goal orientation', 'solution & resources orientation', and 'cooperative actions'. The fourth dimension, *coping skills*, includes aspects necessary to deal with difficult situations such as 'coping with criticism' and 'dealing with difficult situations'.

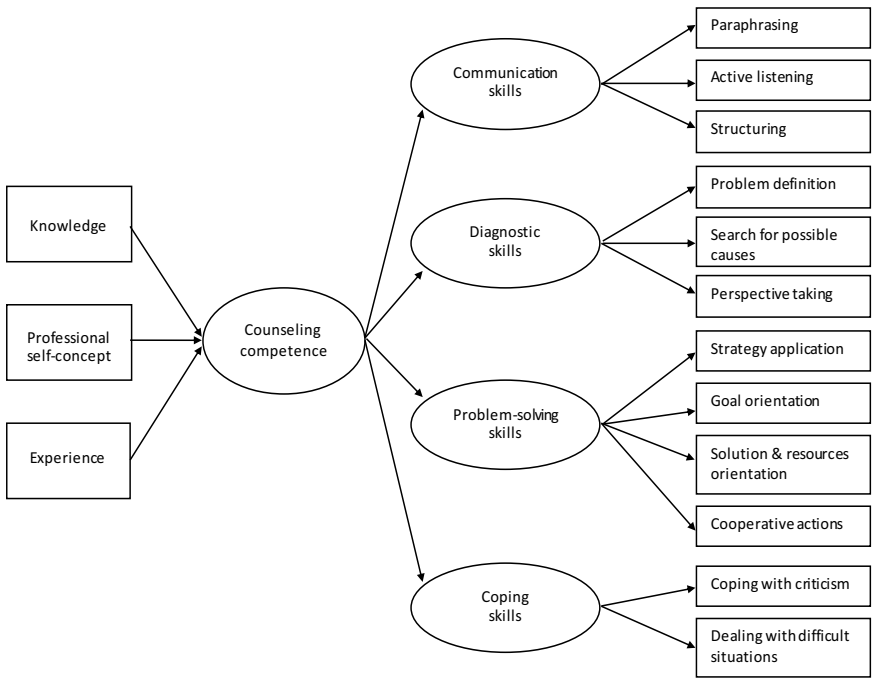


Figure 5.1. Model of teachers' counseling competence (Gerich et al., 2015).

tive taking'. The third dimension, *problem-solving-skills*, comprises aspects necessary to find and initiate appropriate and customized solutions for learning difficulties such as 'application of learning strategies', 'goal orientation', 'solution and resource orientation', and 'cooperative actions'. Finally, the fourth dimension, *coping-skills*, includes strategies for 'coping with criticism' and 'dealing with difficult situations', which constitute the most important skills to professionally address difficulties that may arise in the course of the counseling talk.

In addition to these four dimensions of counseling competence, the authors identified several specific variables that are positively related to the level of teachers' counseling competence: *Knowledge of counseling and learning strategies*, *professional self-concept as a counselor*, and *counseling experience* (in the following, the terms are used interchangeably with the abbreviations 'knowledge', 'professional self-concept', and 'experience'). Figure 5.1 displays the model of teachers' counseling competence by Gerich et al. (2015). The selection of the training and feedback contents was based on the four dimensions of the model. However, knowledge, professional self-concept, and experience were considered only as outcome variables during the evaluation of the training program and the feedback intervention.

Training Program for Prospective Teachers on the Development of Professional Counseling Competence

The training program, which was developed on the basis of the four dimensions of the model of teachers' counseling competence by Gerich et al. (2015), is characterized by its focus on the acquisition of practical counseling competences that are substantially relevant to prospective teachers' future professional work. For this, the training program comprises large sequences of active learning and reflection. In order to encourage participants to reflect on their continual competence development, the training program additionally includes working on weekly standardized diaries, as writing in diaries has been shown to support self-reflection in educational processes (Galvez-Martin, 2003;), particularly in teacher education (e.g., Arsal, 2010).

Active learning and reflection are considered to be key elements in the context of integrating theoretical knowledge and practical skills (e.g., Sullivan & Rosin, 2008). Particularly in research on teacher education, the importance of active learning and reflection for the long-term development of practical competences is consistently highlighted (Ball & Forzani, 2009; Caspersen, 2013; Herschfeldt, Pell, Sechrest, Pas, & Bradshaw, 2012; Postholm, 2008; Watts & Lawson, 2009). In addition, numerous studies document the positive impact of active and reflective learning on both the transfer of the learning content to later professional routines (Kolodner, Gray, & Fasse, 2003; Schwartz, Bransford, &

Sears, 2004) and the formation of teachers' professional identity (Beijaard, Meijer, & Verloop, 2004; Schultz & Ravitch, 2013; Sutherland, Howard, & Markauskaite, 2010). Particularly in research on counseling, active learning and subsequent reflection are specified as key aspects of professional development of counselors (Furr & Carroll, 2003; Jennings, Goh, Skovholt, Hanson, & Banerjee-Stevens, 2003; Skovholt & Jennings, 2004; Strasser & Gruber, 2005).

A well established intervention approach for enhancing prospective teachers' conversational skills in parent-teacher talks (a construct closely related to teachers' counseling competence) with a special focus on active learning and reflection was introduced by Dotger et al. (2008, 2010). In the so-called Simulated Interaction Model (SIM), prospective teachers participate in a series of one-on-one interactions with standardized parents within the framework of which they are provided the opportunity to practice their communication skills. The simulated parent-teacher talks are videotaped in order to enable participants to subsequently conduct detailed self-evaluations within the framework of individual and group debriefing sessions. Initial evidence for the effectiveness of active learning on the improvement of prospective teachers' counseling competence in parent-teacher talks on the support of students' learning processes was adduced by Hertel (2009). In her intervention study prospective teachers' participated in a training program including repeated active role-play exercises resulting in significant competence improvements, both measured objectively and subjectively.

Individual Feedback as a Means of Facilitating the Development of Counseling Competence

Within the framework of the current study, we also developed and evaluated a feedback intervention specifically tailored to the outlined training program, which was expected to support participants' competence acquisition. In both educational research and practice, feedback is known to have a positive impact on learning processes (e.g., Hattie & Timperley, 2007), particularly skills, motivation, and self-efficacy beliefs (Duijnhouwer, Prins, & Stokking, 2012; Vollmeyer & Rheinberg, 2005). Particularly in research on teacher education, feedback has been shown to be an effective instructional practice (Copland, 2010). The beneficial influence of feedback on prospective teachers' competence improvement is also used in the aforementioned SIM by Dotger et al. (2008; 2010). In addition to the self-reflections on the basis of the videotaped simulated parent-teacher talks, participants are provided with extensive feedback regarding their performance during the simulations by course instructors and the learning group.

By analogy with the outlined training program, the development of the feedback intervention was based on the four dimensions of the model of teach-

ers' counseling competence by Gerich et al. (2015). Its most important characteristic is its process-orientation. As one of the most influential feedback theories (Hattie & Timperley, 2007) emphasizes in agreement with other reviews and meta-analyses (e.g., Narciss, 2008), the main purpose of feedback is to highlight the discrepancy between current understanding and performance, on the one hand, and a specific learning goal, on the other, as well as encourage and enable learners to reduce the discrepancy. This kind of process-oriented, formative feedback (Shute, 2008) has been shown to support further competence development (Hattie & Timperley, 2007; Narciss, 2008), positively affect students' motivational beliefs and interests (Narciss & Huth, 2006), and help students take control of their own learning (Nicol & Macfarlane-Dick, 2006). For a detailed description of the training program and the feedback intervention, see section 2.2.1 and 2.2.2).

Research Hypotheses

The objective of the current study was to evaluate the effectiveness of the outlined training program and feedback intervention in terms of enhancing prospective teachers' counseling competence, its dimensions, and related variables specified in the model of teachers' counseling competence by Gerich et al. (2015). Moreover, as several studies have observed a relationship between an insufficient preparation of prospective teachers regarding the collaboration with parents and a reduced confidence regarding forthcoming counseling tasks in future professional routines (Epstein, 2005; Mandel, 2006), we additionally investigated the effects of both interventions on measures of participants' confidence. Beyond the examination of the immediate effects of the interventions we also aimed at testing their stability even beyond the end of the training period. In addition to the outcome-oriented examination of the intervention effects, we finally targeted their process-related exploration by means of the acquisition and analysis of time-series data.

Accordingly, we formulated the following hypotheses:

1. We expected a group of prospective teachers who participated in the training program (training group) to show greater increases in counseling competence and its dimensions as well as knowledge, professional self-concept, experience, and measures of confidence over the training period than a group of prospective teachers who did not participate in the training program (control group).

2. We furthermore expected prospective teachers who additionally received the feedback intervention (training + feedback group) to show greater improvements in counseling competence and its dimensions as well as knowledge, professional self-concept, experience, and measures of confidence than prospective teachers who participated only in the training program (training group).
3. With regard to the long-term effectiveness of the interventions, we expected the postulated effects to remain stable beyond the end of the training period.
4. We finally expected the findings of the outcome-oriented investigation to also manifest themselves in the time-series data acquired throughout the intervention period.

5.1.2 Method

Participants

The study took place at a university in the federal state of Hesse, Germany, within the scope of an optional training module on educational psychology for prospective higher track secondary school teachers, which was accessible for students at all stages of study. 79 prospective teachers participated in the study. 8 participants of the training group and training + feedback group were excluded from analyses because they did not take part in all measurements carried out in the process of the study due to illness or unavoidable overlapping dates. Except for their subjects of study those participants did not differ from the participants included in the analyses regarding their demographic data. Thus, the final sample included 71 participants (56.3% women), ranging in age from 20 to 31 years ($M = 22.97$, $SD = 2.14$), who were in their second to eleventh semester ($M = 5.56$; $SD = 1.86$; standard period of study: 9 semesters). 35 (49.3%) participants studied mathematics, 30 (42.3%) natural sciences, 12 (16.9%) languages, 35 (49.3%) social sciences, and 14 (19.7%) art, music, or physical education. Five students (7.0%) had previously participated in courses on counseling. The demographic statistics of the individual treatment groups as well as the excluded participants are displayed in Table 5.1.

Procedure

In order to study the effects of the training program and feedback intervention, we implemented a quasi-experimental design combining pre-, post-, and follow-

up test measures with time-series data. The design was quasi-experimental, because the participants could not be randomly assigned to the intervention groups. Instead, the groups established themselves by the students' optional enrollment in either one of two groups that received the training program on counseling competence (experimental groups) or a third group receiving an alternative course on educational psychology (control group). At this, prospective teachers who decided to enroll in one of the two experimental groups did not know about the different experimental conditions (training; training + feedback). The three groups were trained by the same course instructor and the two experimental groups were taught in exactly the same manner, except for the provision of the individual feedback. For the participation in the course on counseling as well as the alternative course, students received course credit. Finally, 26 students were in the training condition (experimental group 1, EG1), 23 participants were in the training + feedback condition (experimental group 2, EG2), and 22 participants were in the control condition (control group, CG).

Table 5.1

Demographic statistics of the sample

		Training group (EG1)	Training + feedback group (EG2)	Control group (CG)	Participants excluded from analyses
		<i>n</i> = 26	<i>n</i> = 23	<i>n</i> = 22	<i>n</i> = 8
Sex	Female	15 (57.7 %)	15 (65.2 %)	10 (45.5 %)	4 (50.0 %)
	Male	11 (42.3 %)	8 (34.8 %)	12 (54.5 %)	4 (50.0 %)
Age	<i>M (SD)</i>	22.6 (1.32)	23.5 (2.69)	22.86 (2.27)	22.63 (1.92)
Semester	<i>M (SD)</i>	5.96 (1.78)	5.87 (1.79)	4.77 (1.85)	5.13 (2.36)
Subjects studied	Mathematics	13 (50.0 %)	14 (60.9 %)	8 (36.4 %)	4 (50.0 %)
	Natural sciences	8 (30.8 %)	11 (47.8 %)	11 (50.0 %)	7 (87.5 %)
	Languages	3 (11.5 %)	6 (26.1 %)	3 (13.6 %)	1 (12.5 %)
	Social sciences	15 (57.7 %)	9 (39.1 %)	11 (50.0 %)	0 (0.0 %)
	Art / music / physical educ.	7 (26.9 %)	2 (8.7 %)	5 (22.7 %)	1 (12.5 %)
Courses on counseling	Yes	3 (11.5 %)	0 (0.0 %)	2 (9.1 %)	1 (12.5 %)
	No	23 (88.5 %)	23 (100 %)	20 (90.9 %)	7 (87.5 %)

After completing a pretest, experimental groups 1 and 2 participated in the training program on counseling as separate groups. The control group participated in the alternative compulsory course on educational psychology, which did not include content concerning educational counseling. At the end of the training period, participants in the control group and the experimental groups completed a posttest. In addition to participating in the training program, participants of experimental group 2 received an individual written feedback on their test results right after the pretest as well as the posttest. All written feedback was prepared and delivered by the course instructor. Participants in the two experimental groups completed a follow-up test eight weeks after the posttest, in order to allow the subsequent examination of the stability of the intervention effects even beyond the end of the training period. As participants in the control group did not take part in the training program or receive the feedback intervention, it was not necessary to also include the control group in the follow-up measurement.

In addition to the pre-, post-, and follow-up test measures, we collected time-series data from the experimental groups during the entire training period, beginning one week before the first training session and finishing one week after the last training session.

Training Program

The training program consisted of nine weekly sessions of 100 minutes each which were carried out by a course instructor with comprehensive content knowledge and practical experience in parent counseling, teaching of learning strategies, and teacher education. The training program was characterized by its focus on the development of practical competences that are substantially relevant to prospective teachers' future professional work. For this, the training program comprised large sequences of active learning and reflection.

A central instructional feature of the training program consisted in regular extensive role-play exercises. The role-plays were based on specific case studies on hypothetical students with certain difficulties in learning, leading to a decline in their achievement. Participants worked together in groups of three people, in which one participant slipped into the role of the counseling teacher, another one portrayed the hypothetical parent, and the third one observed the role-play. In the process of the training program roles were continually switched. By means of this approach, participants who took on the role of the counseling teacher had the opportunity to apply their theoretical knowledge in practical, realistic situations in order to acquire practical counseling competences, gain

Table 5.2

Training contents and their assignment to the components and dimensions of the model of teachers' counseling competence (Gerich et al., 2015)

	Training contents	Model components
Session 1	Introduction to counseling; Relevance of counseling parents in schools; Basic attitudes of a good counselor (e.g., empathy, willingness to cooperate).	Perspective taking (DS); Cooperative actions (PSS)
Session 2	Elementary counseling procedures; Structure of a counseling talk	Paraphrasing (ComS); Active listening (ComS); Structuring (ComS)
Session 3	Common problems of students in the school context and assignment to specific problem areas (learning strategies, motivation and self-confidence, school anxiety, personal problems); Information search and information sources	Problem definition (DS); Search for possible causes (DS)
Session 4	Attaining from the problem to its solution by the use of resource oriented questions	Problem definition (DS); Search for possible causes (DS); Solution and resources orientation (PSS)
Session 5	Strategies for enhancing motivation and self-confidence; Strategies for reducing anxiety	Strategy application (PSS); Solution and resources orientation (PSS); Goal orientation (PSS)
Session 6	Strategies for enhancing self-regulated learning	Strategy application (PSS); Solution and resources orientation (PSS); Goal orientation (PSS)
Session 7	Strategies for enhancing self-regulated learning	Strategy application (PSS); Solution and resources orientation (PSS); Goal orientation (PSS)
Session 8	Potential difficult situations in a counseling talk with parents and professional opportunities for action; Express and receive criticism	Coping with criticism (CopS); Dealing with difficult situations (CopS); Perspective taking (DS); Cooperative actions (PSS)
Session 9	Recapitulation of the training program; Clarification of outstanding questions	

Note. ComS = dimension communication skills; DS = dimension diagnostic skills; PSS = dimension problem-solving skills; CopS = dimension coping skills.

initial experience, and facilitate the transfer of the training content to future professional routines. Participants who portrayed the hypothetical parent were supported in developing their ability to take parents' perspectives within the context of parent-teacher talks. The participants who observed the role-plays were instructed to document the teachers' professional performance during the talk on the basis of a predefined set of questions (e.g., 'Does the teacher cooperate with the mother, inquire about her perspectives, and integrate that information into the counseling process?'; 'Does the teacher try to find out the strengths and talents of the student and how these can be utilized?'). The predefined questions served to support the observers to focus on all relevant aspects of the teachers' performance and to provide comprehensive feedback following the role-play, which in turn built the basis for subsequent reflective exchange within the group.

In addition to reflecting on their experiences during the single training sessions, participants were also encouraged to reflect on their continual competence development throughout the entire training period by completing weekly standardized diaries. By means of several open- and closed-ended questions, participants were guided to reflect on the content of the latest training sessions, the characteristics of their professional counseling behavior, their individual weaknesses and rooms for improvement, current competence advancement, perceived preparedness for future professional practice, and motivation for further competence improvement. Furthermore, the diaries included questions that specifically addressed the training issues of each session, in order to facilitate the revision and consolidation of the newly gained content knowledge. Table 5.2 provides an overview of the training contents as well as their assignment to the particular components of the four dimensions of teachers' counseling competence (Gerich et al., 2015).

Feedback Intervention

The first feedback was given right after the pretest and was generated on the basis of participants' respective results in a competence-related scenario test included in the pretest (for the description of the scenario test, its validation, and standardized evaluation, see section 2.3.1). Participants received a standardized written document, which included detailed information on their current level of counseling competence before participating in the training program displayed both as a bar chart (one bar for each competence dimension; each bar representing the achieved points as percentage of achievable points) and as a detailed text (itemized by the specific content variables of each competence dimension). In order to encourage and guide participants' learning efforts in the development of

Table 5.3

Excerpt of the feedback instrument for the dimension problem-solving skills

In the area of ‘problem-solving skills’, you are already highly competent in one of the sub-aspects; in terms of the other relevant sub-aspects, you have potential for improvement.

You are highly competent in the following aspect:

Cooperative actions:

In order to provide students with the best possible support, you cooperate with parents, inquire about their perspectives, and integrate that information into the counseling process. You are prepared to help parents implement the solutions that you have come up with together. Parents are offered to contact you in case they have additional comments or questions in the future.

You have potential areas of improvement regarding your competences in the following aspects:

Strategy application:

Consider more carefully in your talks which strategies or means of support you should suggest to parents of children with learning difficulties. When doing so, think about all important aspects (e.g., development of learning strategies, improving motivation and self-confidence, getting help with homework). Also discuss with the parents concrete possibilities for implementing those suggestions in their everyday life (e.g., keeping track of homework assignments, setting up a homework friendly environment, creating weekly plans, etc.).

Goal orientation:

In your counseling talks with parents, make sure you formulate goals and strategies that you will pursue together. In a written agreement, write down goals, strategies, and dates for future meetings to ensure that all involved parties will fulfill their commitments.

Solution and resource orientation:

In talks with parents, try to find out which strengths and weaknesses their child has as well as how you can utilize those strengths. To do so, ask solution- and resource-oriented questions (e.g., “What special strengths and talents does your child have?”). Also help parents recognize and use their own possibilities for supporting their child (e.g., “What possibilities do you have in your family or circle of friends to help your child learn?”).

During the training, concentrate on improving your competences in these sub-aspects of the area ‘problem-solving skills’. Pay particular attention to these sub-aspects during the practice sessions in the seminar. In addition, continue to work on the sub-aspect ‘cooperative actions’, so that you can continue to reinforce your competence in this area.

their counseling competence, the feedback instrument additionally comprised comprehensive information on individual rooms for improvement as well as explicit corresponding improvement strategies.

The second feedback was delivered immediately after the posttest on the basis of participants' respective posttest results in the scenario test and, again, included information about their current counseling competence after completing the training program as well as individual instructions for further improvement. Moreover, it contained information on participants' competence development during the training period by individual comparison of participants' pretest and posttest results. Table 5.3 shows an exemplary excerpt of an individual written feedback regarding the dimension problem-solving-skills for a participant with a high competence level concerning the content variable cooperative actions and a low competence level concerning the content variables strategy application, goal orientation, and solution and resource orientation.

Measures

For the pre-post-follow-up comparisons, we applied a multi-method approach for the assessment of teachers' counseling competence and its related variables, which has been validated in several previous studies (Bruder, 2011; Bruder et al., 2011; Gerich et al., 2015). It comprises an extensive paper-pencil survey, which includes several sections for measuring participants' counseling competence, knowledge of counseling and learning strategies, professional self-concept as a counselor, counseling experience, confidence regarding forthcoming counseling tasks in participants' future professional routines, and demographic information. In the follow-up test, we additionally measured participants' self-assessed competence improvement due to their participation in the training program.

Counseling Competence

Participants' counseling competence and its components were assessed by means of a scenario test. As scenario tests have been shown to be appropriate to measure competences in a standardized and economical manner that is context specific and closely related to behavior, such tests have often been applied for assessing competences, even in the field of teacher education (e.g., Klug et al., 2013; Hedlund, Witt, Nebel, Ashford, & Sternberg, 2006; Rivard, Missiuna, Hanna, & Wishart, 2007). The scenario test comprises a case study of a student with learning difficulties whose mother is seeking advice and thus requests a counseling talk. Participants were instructed to respond to 12 open-ended questions relating to the information provided in the case study. These questions

represent the 12 content variables of the four dimensions of teachers' counseling competence. The case study and the 12 open-ended questions of the scenario test are illustrated in Table 5.4.

To provide support for validation of the scenario test with regard to behavior-related data in real application situations, the scenario test data were compared to performance observations in videotaped simulated parent counseling sessions with standardized parents (Gerich et al., 2016). This approach appeared to be suitable, as the level of counseling competence measured in role-play situations has already been shown to largely correspond to the level of counseling competence demonstrated in real counseling sessions in a study with counseling students (Gallagher & Hargie, 1989). Moreover, because video recording has been shown to be an appropriate and valid strategy for the simultaneous assessment of multifaceted pedagogical skills, especially in the field of counseling (e.g., Admiraal, Hoeksma, van de Kamp, & van Duin, 2011; Huhra, Yamokoski-Maynhart, & Prieto, 2008), this method also appeared appropriate for measuring teachers' counseling competence in simulated parent counseling sessions on students' learning difficulties and learning strategies. The simulations yielded the same results as the scenario test, indicating the appropriateness of the scenario test for the cross-sectional measurement of prospective teachers' counseling competence and, most importantly, the longitudinal assessment of changes in counseling competence due to specific interventions.

To transform qualitative statements into quantitative data, participants' answers were converted into scores from 0-2 for each item using a detailed standardized rating system. The rating system includes an extensive set of possible answers to each open-ended question asked in the scenario test as well as detailed specifications on the respective scores to be awarded. An excerpt of the rating system is shown in Table 5.5. The coding was carried out by well-trained raters with sufficient content knowledge on parent counseling and learning strategies. The training of the raters included the comprehensive theoretical introduction to the specific topic of teachers' counseling competence in parent-teacher talks on the support of students' learning processes as well as the repeated joint and individual rating of exemplary qualitative statements with subsequent group reflection.

In order to test the objectivity of the rating system, and thus its robustness against any personal biases or predispositions of the raters, inter-rater reliabilities for each question were calculated in a previous study (Gerich et al., 2015), resulting in satisfactory intra-class-correlations (McGraw & Wong, 1996) between $ICC = .72$ and $ICC = 1.00$. The scenario test data served, on the one hand, for the evaluation of the outlined interventions' effectiveness and, on the other hand, for the preparation of the individual written feedback participants of experimental group 2 received after the pre- and posttest.

Table 5.4

Case study and open-ended questions of the scenario-test

Case study

Imagine that you teach fifth grade German and Biology classes at a higher track secondary school and it is currently autumn break.

Following the first exams, Mrs. Schneider, the mother of one of your students named Kristina, would like to have a counseling talk with you. Kristina received a B in German and a C in Biology. You talked on the phone with Mrs. Schneider and she told you the following:

“Kristina goes to the higher track secondary school because I wanted her to. I know that she didn’t actually have a recommendation to go there, but Kristina really enjoyed learning in primary school and she always had good grades. But now I have noticed that Kristina’s study habits have completely changed. She doesn’t enjoy doing her homework at all anymore and I always have to fight with her in the afternoons to get her to do her homework and study. I find that really stressful and I don’t really know what to do. Also, Kristina was really disappointed about getting her first bad grades in History and Geography (a D and an F, respectively). She never had grades like that in primary school. That was really hard for me, too. After that, it was even harder to get her to do her homework. But she feels really comfortable with the people in her class. Her best friend from primary school sits next to her, which really helps. You see, my husband comes home in the evenings and doesn’t bother much with school things. I’m home all afternoon, but I can’t really help her much with the stuff she is learning. And that’s not going to get better in the years to come. I’m really not sure how I can help Kristina and I’m not sure whether it was the right decision to have her go to the higher track secondary school. If that doesn’t get better, I think I might really have her switched to the lower track school for the next semester. But, on the other hand, Kristina really likes her classmates. I have already talked to her teachers for History and Geography, but they didn’t really take me seriously and just said that a lot of kids have problems at first. I didn’t think they were very helpful and I was kind of irritated with them, since I think education is really important and I just want what is best for my child. But I really don’t want my child to have to get tutoring. I had to go and I really hated it and felt like an outsider because of it. I honestly hope that you can help me if we sit down and talk, because I really don’t know what to do!”

As Kristina’s teacher, you have already noticed that she has integrated herself well and gets along well with her classmates, even though she seems a little reserved. During class, Kristina speaks up a lot and answers questions. Based on her answers in class, you have the impression that she understands most of what you are teaching in your classes. On the other hand, the results of her tests, especially in Biology, were mixed. Some answers were very good and others mediocre.

Your goal as a teacher is now to have a talk with Kristina’s mother and, together with her, figure out what is best for Kristina.

Table 5.4 (Continuation)

Case study and open-ended questions of the scenario-test

Perspective taking	What do you think Mrs. Schneider is feeling?
Problem definition	What problems might Kristina have?
Search for possible causes	What information would you get prior to and during the talk with her mother in order to find possible solutions after the talk?
Structuring	How do you structure the counseling talk?
Cooperative actions	How do you show Mrs. Schneider that you are interested in working with her to find a solution?
Solution & resources orientation	After you have found possible causes for Kristina's behavior: Which aspects do you talk about in order to find a good solution to Kristina's problem?
Paraphrasing; Active listening	Which talk strategies do you use in your counseling talks? Please provide examples of the strategies.
Strategy application	What learning aids or changes can you think of that you would recommend to Kristina's mother?
	Imagine that you and Kristina's mother decided on "better structuring of the homework situation" as a possible solution. Define concrete steps to implement the solution (write down each individual step).
Goal orientation	How do you end the talk with Mrs. Schneider? What do you tell her to do as the next step after the talk?
Coping with criticism	Assume that Mrs. Schneider said the following during the talk: „I have the impression that you are just defending your colleagues the whole time. But what they told me just wasn't very helpful.“ – How would you react to that statement?
Dealing with difficult situations	Imagine that during the talk Mrs. Schneider begins to tell you in detail about problems that she is having with her husband. – What would you do?

Table 5.5

Excerpt of the rating system for the evaluation of the scenario test data

Scale Paraphrasing – Item 7 (“Which talk strategies do you use in your counseling talk? Please provide examples of the strategies.”)

The method of paraphrasing refers to the factual repetition of a message in one’s own words – an important strategy for the competent and effective counseling of parents. The use of paraphrasing by a counselor both makes parents feel understood and utilizes the opportunity to correct misunderstandings. This scale assesses whether the teacher understands what paraphrasing means and remembers to apply it in counseling situations.

This category includes the following and similar answers:

- Repeat comments in one’s own words / summarize
- Paraphrasing
- “So you mean ...“
- “Did I understand you correctly that ...?“

Participants can receive a minimum of 0 and maximum of 2 points on the paraphrasing scale. 1 point is given for naming or offering a description of the concept paraphrasing and 1 point for providing a relevant example.

Scale Searching for explanations – Item 3 (“What information would you get prior to and during the talk with Kristina’s mother in order to find possible solutions after the talk?”)

In order to determine the cause of Kristina’s problems, it is first necessary to collect as much information as possible on the student’s personal situation. Prior to the counseling talk, the teacher should collect information on Kristina’s performance and behavior both in the class as well as in her other classes. In doing so, the teacher can draw on information from his or her own class (e.g., Kristina’s performance on class assignments, class participation, and homework completion), compare Kristina with her classmates, or obtain an overall picture by, for example, talking with her other teachers. During the counseling talk with Kristina’s mother, the teacher can also obtain the most accurate information possible about Kristina’s overall situation by asking questions about, for example, her family situation as well as her learning and free time behavior.

This category includes the following and similar answers:

- Performance on class assignments
- In-class behavior (e.g., inattentiveness, distraction, cooperation)
- Kristina’s learning behavior at home
- Behavior during free time
- Family situation
- Talk with other teachers / school psychologists
- Talk with Kristina

On the searching for explanations scale, participants can earn a minimum of 0 and maximum of 2 points. 1 point is given for providing one or two correct answers. 2 points are only given when participants provide at least 3 different correct answers.

Knowledge of Counseling and Learning Strategies

To measure participants' professional knowledge of counseling and learning strategies, we applied a multiple-choice test consisting of nine closed-ended questions. These nine items include four items assessing professional counseling knowledge (e.g., 'What are the advantages of the active listening technique in a counseling talk?') and five items measuring specific learning strategy knowledge (e.g., 'Which possibilities does a student have to motivate himself/herself while studying?'). Participants were requested to choose the best answer or answers (the latter in the case that multiple answers are allowed, which is noted next to the respective item). Participant responses to all items were coded as either correct or incorrect. Item-difficulties calculated in a previous study were between .35 and .89 and therefore fell within an acceptable range for inter-correlated items (Ramsey & Reynolds, 2000). The testing for scale reliability in a previous study indicated an acceptable Cronbach's alpha of $\alpha = .63$.

Professional Self-Concept as a Counselor and Counseling Experience

Participants' professional self-concept as a counselor and counseling experience were measured by means of a self-assessment questionnaire. Participants were asked to respond to items on a six-point rating scale ranging from 1 ('I completely disagree') to 6 ('I completely agree'). The scale professional self-concept consists of prospective teachers' attitude towards counseling, motivation for counseling, self-efficacy in counseling, and sense of self as a counselor. The scale experience includes items concerning prospective teachers' previous education and experiences in counseling as well as reflection on one's own counseling behavior in previous parent counseling talks. Tests of scale reliability indicated satisfactory Cronbach's alphas of $\alpha = .77$ for professional self-concept as a counselor (15 items) and $\alpha = .86$ for counseling experience (8 items).

Confidence and Self-Assessed Competence Improvement Due to Participation in the Training Program

In addition to the development of teachers' counseling competence and its related variables specified by the model of Gerich et al. (2015), we aimed to examine the effects of the interventions on prospective teachers' confidence regarding forthcoming counseling tasks in their future professional routines. To do so, the self-assessment questionnaire applied in the pre-, post-, and follow-up test additionally included corresponding items: firstly, on participants' perceived prepar-

edness for parent counseling in their future professional routines due to their university education (including the training program for the intervention groups) ('Through my university education, I feel well prepared for parent counseling in my future professional routines.') and, secondly, their emotional distress when contemplating future parent counseling talks ('I feel burdened at the thought of having to counsel parents in my future professional routines.'). Furthermore, the questionnaire in the follow-up test also measured participants' self-assessed individual competence improvement due to their participation in the training program ('I am of the opinion that my counseling abilities have improved by participating in the training program.').

Time-Series Data

The acquisition of time-series data was based on a self-assessment questionnaire included in the standardized diaries that the participants in both experimental groups completed once a week during the training period, beginning one week before the first training session and finishing one week after the last training session. It comprised several closed-ended items that were selected from the self-assessment questionnaire applied in the pre-, post-, and follow-up tests. By means of the questionnaire, we measured the following dependent variables (with one item each): participants' 1) professional self-concept as a counselor, 2) counseling experience, 3) perceived preparedness for parent counseling in future professional routines, 4) emotional distress when contemplating parent counseling talks in future professional routines, and 5) individual competence improvement due to participation in the training program. Participants were asked to respond to the items on a six-point rating scale ranging from 1 ('I completely disagree') to 6 ('I completely agree'). In order to test the reliability of the instrument, split-half reliabilities for each item were calculated, resulting in satisfactory correlation coefficients between .67 ($p < .001$) and .95 ($p < .001$).

Table 5.6 provides an overview of the outcome variables measured by means of the outlined instruments as well as the particular groups that were assessed at the respective times of measurement.

Data Analyses

Data analyses were performed using the software package SPSS Version 21. For all inferential statistics, the respective assumptions for the computed analyses were met.

Table 5.6

Measured outcome variables, applied instruments, and respective times of measurement

Variables	Instrument	Pretest	Posttest	Follow-up test	Time-series data
		CG, EG1, EG2	CG, EG1, EG2	EG1, EG2	EG1, EG2
Counseling competence	Scenario test	x	x	x	
Communication skills		x	x	x	
Diagnostic skills		x	x	x	
Problem-solving skills		x	x	x	
Coping skills		x	x	x	
Knowledge	Multiple-choice test	x	x	x	
Professional self-concept	Self-assessment questionnaire	x	x	x	x
Experience		x	x	x	x
Preparedness		x	x	x	x
Emotional distress		x	x	x	x
Individual competence improvement				x	x

Note. CG = control group; EG1 = experimental group 1 (training condition); EG2 = experimental group 2 (training + feedback condition).

In order to investigate the effects of the training program and the feedback intervention on the outlined dependent variables (hypotheses 1 and 2) as well as the stability of the intervention effects even beyond the end of the training period (hypothesis 3), we performed multivariate repeated measures MANOVAs with the between-subjects factor group (CG, EG1, EG2) and the within-subjects factor time (pretest, posttest, follow-up test). Although preliminary analyses revealed significant pretest-differences between the control group and the experimental groups regarding diagnostic-skills and counseling experience, we refrained from using Analyses of Covariance (ANCOVA) with pretest scores as a covariate, as the pretest differences were presumably not random (Jamieson, 2004), since participants assigned themselves to one of the study

groups. For the further testing of hypotheses 1 and 2, we additionally conducted cross-sectional comparisons of the two intervention groups concerning participants' concluding appraisal of their individual competence improvement due to participation in the training program inquired in the follow-up test. Although we conducted multiple analyses, we refrained from controlling type 1 error rate, as a priori hypotheses on single object comparisons, which are theoretically justified, do not require a corresponding procedure (Saville, 1990).

For the participants in the two intervention groups, we furthermore executed time-series analyses based on the self-assessment data obtained in the standardized diaries. To do so, we performed multiple regression analyses separately for the two intervention groups. In order to examine the manifestation of the pre-post-findings in specific development processes of the dependent variables over the intervention period (hypothesis 4), we tested both linear and quadratic regression models.

5.1.3 Results

Pre-Post Comparisons

A repeated measures MANOVA with the between-subjects factor group (CG, EG1, EG2) and the within-subjects factor time (pretest, posttest) revealed a significant overall interaction effect for group * time (*Wilks' lambda* $\Lambda = .114$, $F(16,120) = 14.72$, $p < .001$, $\eta^2 = .66$). Pretest and posttest means, standard deviations, and results of the repeated measures MANOVA for the pre-post comparisons are illustrated in Table 5.7.

According to hypothesis 1, comparisons of the control group and the training group revealed consistently significant interactions with large effect sizes (Cohen, 1988) of group * time for all dependent variables, with the exception of emotional distress. Consequently, prospective teachers who participated in the training program showed significantly greater increases in counseling competence ($F(1,45) = 224.26$, $p < .001$, $\eta^2 = .83$) and its dimensions (communication-skills $F(1,45) = 188.56$, $p < .001$, $\eta^2 = .81$; diagnostic-skills $F(1,45) = 20.38$, $p < .001$, $\eta^2 = .31$; problem-solving-skills $F(1,45) = 75.37$, $p < .001$, $\eta^2 = .63$; coping-skills $F(1,45) = 79.47$, $p < .001$, $\eta^2 = .64$) as well as knowledge ($F(1,45) = 29.74$, $p < .001$, $\eta^2 = .40$), professional self-concept ($F(1,45) = 12.75$, $p = .001$, $\eta^2 = .22$), and experience ($F(1,45) = 32.59$, $p < .001$, $\eta^2 = .42$) than prospective teachers who did not participate in the training. Furthermore, analyses revealed a significantly greater increase for the training group than the control group concerning prospective teachers' perceived preparedness for parent counseling talks in their future professional routines due to their university education ($F(1,45) = 54.11$, $p < .001$, $\eta^2 = .55$). Regarding participants' emotional

distress when contemplating future parent counseling talks, analyses did not reveal a significant difference between the control group and the training group ($F(1,45) = 1.00, p = .322, \eta^2 = .02$).

Table 5.7

Descriptive statistics and results of the repeated measures MANOVAs for the pre-post comparison

Dependent variables	Pretest	Posttest	Interaction group * time					
			Overall		CG vs. EG1		EG1 vs. EG2	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2
Counseling competence ^a			173.02 ***	.84	224.56 ***	.83	4.04 *	.08
CG	.72 (.25)	.68 (.29)						
TG	.83 (.21)	1.79 (.20)						
TFG	.78 (.17)	1.87 (.13)						
Communication skills ^a			151.85 ***	.82	188.56 ***	.81	5.20 *	.10
CG	.27 (.27)	.25 (.26)						
TG	.43 (.22)	1.79 (.33)						
TFG	.32 (.20)	1.92 (.21)						
Diagnostic skills ^a			21.78 ***	.39	20.38 ***	.31	2.56	.05
CG	1.21 (.27)	1.13 (.36)						
TG	1.43 (.27)	1.81 (.21)						
TFG	1.28 (.23)	1.81 (.15)						
Problem-solving skills ^a			49.79 ***	.60	75.37 ***	.63	0.08	.00
CG	.80 (.30)	.77 (.40)						
TG	.91 (.30)	1.83 (.19)						
TFG	.97 (.33)	1.87 (.16)						
Coping skills ^a			53.06 ***	.61	79.47 ***	.64	1.46	.03
CG	.60 (.62)	.57 (.55)						
TG	.56 (.52)	1.71 (.32)						
TFG	.57 (.48)	1.89 (.21)						
Knowledge ^b			18.23 ***	.35	29.74 ***	.40	0.25	.01
CG	5.00 (1.92)	4.95 (1.56)						
TG	5.19 (1.10)	7.62 (1.10)						
TFG	5.91 (1.04)	8.13 (1.25)						

Table 5.7 (Continuation)

Descriptive statistics and results of the repeated measures MANOVAs for the pre-post comparison

Dependent variables	Pretest	Posttest	Interaction group * time					
			Overall		CG vs. EG1		EG1 vs. EG2	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i>	η^2	<i>F</i>	η^2	<i>F</i>	η^2
Professional self-concept ^c			9.46 ***	.22	12.75 **	.22	0.26	.01
CG	4.51 (.57)	4.51 (.48)						
TG	4.40 (.51)	4.97 (.74)						
TFG	4.70 (.33)	5.20 (.29)						
Experience ^c			24.00 ***	.42	32.59 ***	.42	0.70	.02
CG	2.75 (1.16)	2.63 (1.16)						
TG	1.95 (0.61)	3.23 (0.61)						
TFG	2.01 (0.83)	3.47 (0.44)						
Preparedness ^c			30.23 ***	.47	54.11 ***	.55	0.08	.00
CG	2.14 (1.32)	2.38 (1.32)						
TG	1.92 (0.94)	4.85 (1.05)						
TFG	2.00 (1.31)	5.04 (0.71)						
Emotional distress ^c			1.14	.03	1.00	.02	0.01	.00
CG	2.36 (1.26)	2.36 (1.18)						
TG	2.69 (1.01)	2.15 (0.78)						
TFG	2.61 (1.16)	2.04 (0.71)						

Note. CG = control group; EG1 = experimental group 1 (training); EG2 = experimental group 2 (training + feedback). ^a Range 0-2 (0 = min. parameter value; 2 = max. parameter value); ^b Range 0-9 (0 = min. parameter value; 9 = max. parameter value); ^c Range 1-6 (1 = min. parameter value; 6 = max. parameter value). * $p < .05$. ** $p < .01$. *** $p < .001$.

According to hypothesis 2, participants that received individual feedback on their pretest results showed a significantly greater increase, with moderate effect sizes, in the overall score of counseling competence ($F(1,47) = 4.04$, $p = .050$, $\eta^2 = .08$) and communication-skills ($F(1,47) = 5.20$, $p = .027$, $\eta^2 = .10$) than those who only participated in the training program. However, against our hypothesis, the pre-post comparisons for the competence dimensions diagnostic-skills, problem-solving-skills, and coping-skills showed no additional significant effects of the feedback intervention beyond the effects of the training program. Furthermore, we failed to find any significantly greater increases in the training

+ feedback group than the training group in terms of knowledge, professional self-concept, and experience as well as participants' confidence and emotional distress when contemplating parent counseling talks in future professional routines.

Post-Follow-Up Comparisons

In order to examine the stability of the intervention effects even beyond the end of the training period (hypothesis 3), we conducted a repeated measures MANOVA with the between-subjects factor group (EG1, EG2) and the within-subjects factor time (posttest, follow-up test). The control group was not included in this analysis, as only the two experimental groups completed the follow-up test. The repeated measures MANOVA revealed a significant main effect for the within-subjects factor time (*Wilks' lambda* $\Lambda = .555$, $F(9,37) = 3.29$, $p = .005$, $\eta^2 = .45$). However, this main effect turned out to be significant for value decreases from posttest to the follow-up test only for the dimension diagnostic-skills ($F(1,45) = 4.29$, $p = .044$, $\eta^2 = .09$) and knowledge of counseling and learning strategies ($F(1,45) = 4.93$, $p = .031$, $\eta^2 = .10$). All remaining measured variables, particularly the overall score of counseling competence, showed no significant decreases from the posttest to the follow-up test, indicating the stability of the intervention effects. The between-subject factor group did not have an impact on participants' values, as we did not find a significant interaction effect for group * time (*Wilks' lambda* $\Lambda = .830$, $F(9,37) = .843$, $p = .582$, $\eta^2 = .17$). Figure 5.2 displays the results of the repeated measures MANOVAs for the pre-post and the post-follow-up comparisons.

Self-Assessed Individual Benefit from Participation in the Training Program

The additional analyses based on the cross-sectional measurement of participants' final self-assessments of their individual competence improvement due to the participation in the training program (within the framework of the follow-up test) revealed the following results. The follow-up test measures illustrated that participants in both intervention groups retrospectively assessed their individual competence improvement due to the participation in the training program as being high ($M_{EG1} = 5.58$, $SD_{EG1} = .58$; $M_{EG2} = 5.95$, $SD_{EG2} = .21$; Range: 1-6), which provides additional support for hypothesis 1. Moreover, further confirming hypothesis 2, the comparison of the two intervention groups by means of a MANOVA revealed that prospective teachers who received the additional feedback rated their competence improvement higher than those who only participated in the training program ($F(1,44) = 7.92$, $p = .007$, $\eta^2 = .15$).

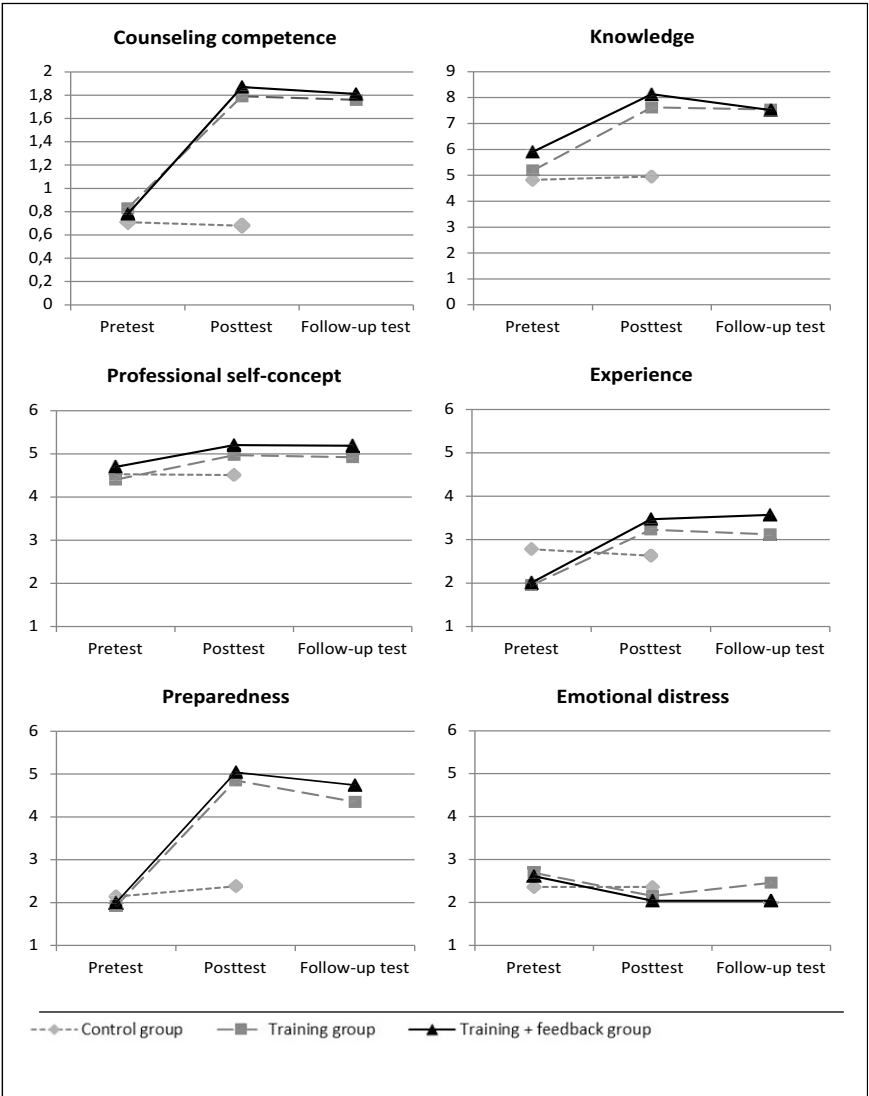


Figure 5.2. Results of the repeated measures MANOVAs for the pre-post and the post-follow-up comparisons.

Time-Series Analyses

Corresponding to hypothesis 4, most of the observed dependent variables showed significant regressions on time (see Table 5.8). For both intervention groups, the trajectories of participants' counseling experience, preparedness for future professional routines, and emotional distress when contemplating parent counseling tasks in future professional routines were best represented by a linear regression model. Here, participants' counseling experience and preparedness increased, whereas emotional distress decreased over the training period.

Concerning participants' self-assessed individual competence improvement, the regression analysis revealed differences between the two intervention groups. The trajectory for prospective teachers in experimental group 2 was best represented by a linear regression model. On the contrary, the trajectory for participants in experimental group 1 was best represented by a negative quadratic regression model. Consequently, prospective teachers who received individual feedback in addition to their participation in the training program reported a continually increasing improvement in their counseling competence until the end of the training period. Prospective teachers who only participated in the training program also reported a continually increasing competence improvement over a major portion of the training period. However, this increase leveled off towards the end of the training program.

Regarding participants' professional self-concept, we found no significant regression effects in both groups, as prospective teachers' values were rather high from the beginning (EG1: $M = 4.88$, $SD = .95$; EG2: $M = 5.15$, $SD = .61$) until the end of the training period (EG1: $M = 4.90$, $SD = 1.52$; EG2: $M = 5.33$, $SD = .69$). Figure 5.3 displays the trajectories of the observed dependent variables for both intervention groups.

5.1.4 Discussion

The central purpose of the current study was to investigate the effectiveness of a training program as well as an additional feedback intervention on prospective teachers' counseling competence in parent-teacher talks on the support of students' learning processes.

Table 5.8

Results of the hierarchical regression analyses

	EG1					
	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Professional self-concept						
Intercept	4.99	.18		4.92	.31	
Time linear	.02	.03	.04	.06	.15	.13
Time quadratic				-.01	.02	-.10
ΔR^2		.00			.00	
<i>F</i> -test	<i>F</i> (1, 189) = .24			<i>F</i> (1, 188) = .09		
Experience						
Intercept	2.75	.16		2.63	.27	
Time linear	.17	.03	.39 ***	.24	.13	.55
Time quadratic				-.01	.01	-.16
ΔR^2		.15			.00	
<i>F</i> -test	<i>F</i> (1, 189) = 34.10 ***			<i>F</i> (1, 188) = .28		
Preparedness						
Intercept	3.89	.11		3.61	.19	
Time linear	.18	.02	.54 ***	.33	.09	1.00 ***
Time quadratic				-.02	.01	-.48
ΔR^2		.29			.01	
<i>F</i> -test	<i>F</i> (1, 184) = 74.25 ***			<i>F</i> (1, 183) = 2.96		
Emotional distress						
Intercept	2.80	.12		2.91	.20	
Time linear	-.05	.02	-.17 *	-.12	.10	-.37
Time quadratic				.01	.01	.21
ΔR^2		.03			.00	
<i>F</i> -test	<i>F</i> (1, 188) = 5.36 *			<i>F</i> (1, 187) = .43		
Self-assessed competence improvement						
Intercept	3.58	.12		2.95	.20	
Time linear	.27	.02	.64 ***	.63	.10	1.52 ***
Time quadratic				-.04	.01	-.90 ***
ΔR^2		.42			.04	
<i>F</i> -test	<i>F</i> (1, 189) = 134.11 ***			<i>F</i> (1, 188) = 14.27 ***		

Note. EG1 = experimental group 1 (training condition). * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5.8 (Continuation)

Results of the hierarchical regression analyses

	EG2					
	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Professional self-concept						
Intercept	5.21	.11		5.16	.19	
Time linear	.02	.02	.07	.05	.09	.17
Time quadratic				-.00	.01	-.10
ΔR^2		.01			.00	
<i>F</i> -test	<i>F</i> (1, 229) = 1.21			<i>F</i> (1, 228) = .12		
Experience						
Intercept	3.20	.12		3.10	.22	
Time linear	.18	.02	.46 ***	.24	.10	.61 *
Time quadratic				-.01	.01	-.15
ΔR^2		.22			.00	
<i>F</i> -test	<i>F</i> (1, 227) = 62.16 ***			<i>F</i> (1, 226) = .33		
Preparedness						
Intercept	3.59	.13		3.53	.23	
Time linear	.20	.02	.48 ***	.24	.11	.57 *
Time quadratic				-.00	.01	-.09
ΔR^2		.23			.00	
<i>F</i> -test	<i>F</i> (1, 228) = 67.85 ***			<i>F</i> (1, 227) = .12		
Emotional distress						
Intercept	3.18	.13		2.95	.23	
Time linear	-.09	.02	-.25 ***	.03	.11	.09
Time quadratic				-.01	.01	-.36
ΔR^2		.06			.01	
<i>F</i> -test	<i>F</i> (1, 226) = 15.58 ***			<i>F</i> (1, 225) = 1.55		
Self-assessed competence improvement						
Intercept	3.83	.13		3.68	.22	
Time linear	.22	.02	.54 ***	.31	.10	.75 **
Time quadratic				-.01	.01	-.21
ΔR^2		.29			.00	
<i>F</i> -test	<i>F</i> (1, 225) = 91.61 ***			<i>F</i> (1, 224) = .74		

Note. EG2 = experimental group 2 (training + feedback condition). * $p < .05$. ** $p < .01$. *** $p < .001$.

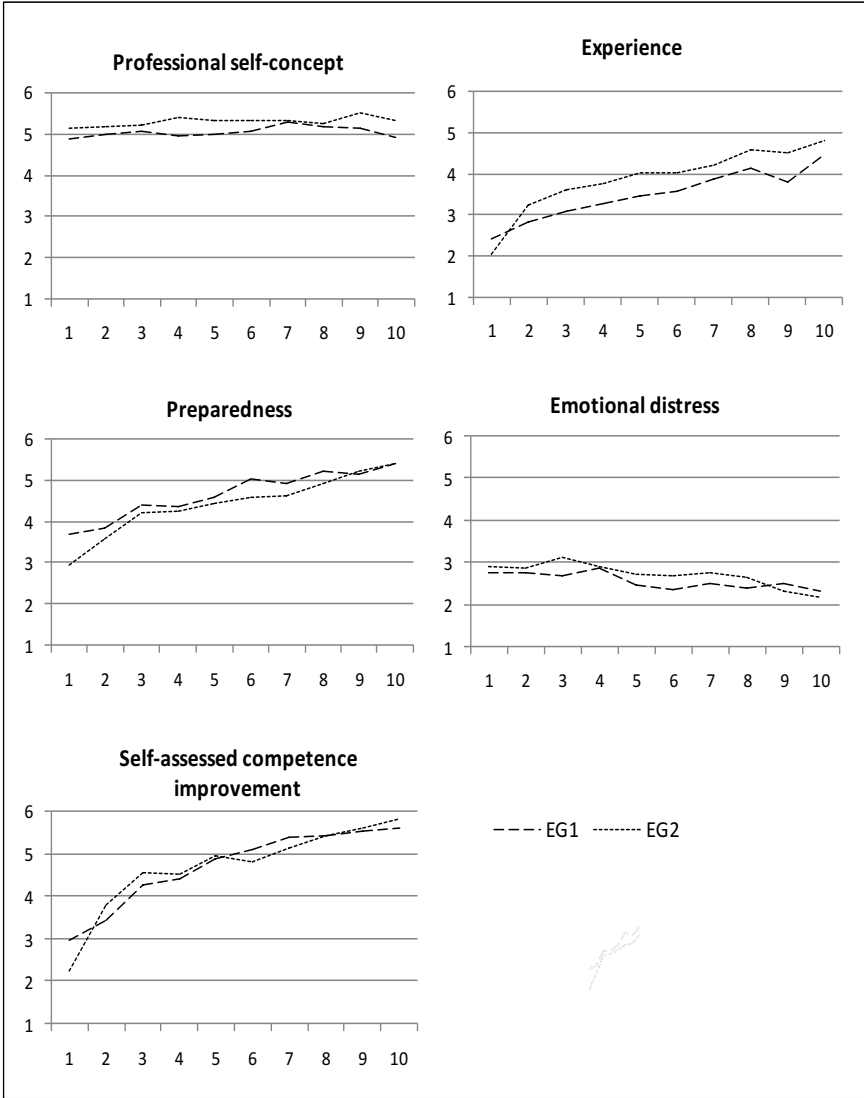


Figure 5.3. Trajectories of the observed dependent variables for both intervention groups.

Pre-Post-Follow-Up Developments

Results of the pre-post-follow-up comparisons showed that the participation in the outlined training program led to considerable improvements in prospective teachers' counseling competence, knowledge of counseling and learning strategies, professional self-concept as a counselor, counseling experience, and confidence in view of forthcoming parent counseling talks in future professional routines. In view of the feedback intervention, analyses revealed additional positive effects on participants' overall counseling competence as well as the dimension communication-skills. These results were predominantly confirmed by the cross-sectional measurements in the follow-up test regarding prospective teachers' retrospective self-assessed benefit from participating in the training program and receiving the individual feedback. Moreover, by means of the follow-up test data, we were able to verify the stability of the observed intervention effects even beyond the end of the training period for most of the assessed outcome variables. Only for diagnostic-skills and knowledge of counseling and learning strategies did we find significant decreases from the posttest to the follow-up test. However, these decreases were apparently not accompanied by a decrease in prospective teachers' overall counseling competence. The decrease in participants' knowledge in contrast to the stability of participants' overall counseling competence might have been caused by the fact, that the multiple-choice test is intended to measure theoretical knowledge, which is less stable over time than practical competences. The decrease in participants' diagnostic-skills cannot be finally explained from the current position, but might be further investigated in subsequent studies.

Time-Series Developments

The results of the time-series analyses also predominantly confirmed the effectiveness of both the training program and the feedback intervention in the form of specific development processes of the assessed outcome variables over the intervention period. However, regarding particular dependent variables, the time-series analyses yielded results different from the pre-post-follow-up comparisons. Although the pre-post comparisons revealed no significant changes in participants' emotional distress when contemplating future parent counseling talks, the process data indicated a significant negative linear regression for this dependent variable. In contrast, although the pre-post comparisons revealed significant increases in participants' professional self-concept over the training period for both intervention groups, we found only non significant linear and quadratic regressions for professional self-concept based on the process data. Upon closer

inspection of the process data, the process results for professional self-concept might be caused by the occurrence of a ceiling effect, as prospective teachers' values were already at a high baseline level at the beginning of the training period. Moreover, in comparison with the pretest data on prospective teachers' professional self-concept, participants' mean values in the first standardized diary were visibly higher than those in the pretest. On the contrary, participants' mean values for emotional distress in the first standardized diary were visibly lower than those in the pretest. These differences between the pretest and diary data might be explained by the fact that the completion of the first diary took place in the week after completing the pretest. Thus, it might be reasonable to assume that the intensive dealing with the topic of teachers' counseling competence during the completion of the pretest already encouraged participants' mental occupation with the subject and, thereby, positively influenced prospective teachers' professional self-concept and emotional distress in view of future parent counseling talks. With regard to participants' self-assessed competence improvement due to participating in the training program, the time-series analyses yielded different trajectories for the two experimental groups. The linear regression for the training + feedback group compared to the negative quadratic regression for the training group indicates that the individual feedback compensated for the flattening of prospective teachers' self-assessed competence improvement towards the end of the training period. This, in turn, prognosticates further positive developments in participants' self-assessed competence improvement even beyond the end of the intervention period and again demonstrates the additional benefit of the feedback intervention on the development of prospective teachers' counseling competence.

Characteristics of the Training Program and the Feedback Intervention

In summary, our findings showed that, with the help of appropriate interventions, prospective teachers can be supported in acquiring the knowledge and interpersonal competences they will need to counsel parents in their future professional routines, develop a professional self-concept as a counselor, and gain initial counseling experience in early teacher education. Accordingly, our findings confirm the growing demand in international educational research and practice for a better integration of specific curricular modules in early teacher preparation (e.g., Dotger, 2010; German Society for Psychology, 2008) in order to reduce the high percentage of novice teachers that do not feel well prepared for parent counseling and collaboration when they enter the profession (Epstein, 2005; Mandel, 2006).

Within the framework of conceptualizing suitable teacher training interventions, both the outlined training program and the feedback instrument, which were developed on the basis of the model of teachers' counseling competence (Gerich et al., 2015), can serve as a valuable blueprint. In the case of the training program, one of the most important instructional features consists of the large sequences of active learning (cf. Caspersen, 2013; Sullivan & Rosin, 2008; Huang, Lubin, & Ge, 2011), particularly within the framework of extensive role-play exercises based on realistic case examples. Because prospective teachers typically do not have the opportunity to hold real parent-teacher talks, these role-play exercises provide participants the opportunity to apply their theoretical knowledge in practical, realistic situations (cf. Kolodner et al., 2003). Another central instructional feature of the training program consists of the continuous stimulation of participants' reflections on their counseling behavior in the role-play exercises (cf. Sullivan & Rosin, 2008) as well as on their continuous competence development throughout the training period by the use of weekly standardized diaries. Thus, these findings of the present study are consistent with the current state of research on the impact of active and reflective learning on the professional development of teachers and counselors (Furr & Carroll, 2003; Hersfeldt et al., 2012; Jennings et al., 2003; Postholm, 2008; Watts & Lawson, 2009). In the case of the feedback intervention, the most important characteristic, which has to be considered within the framework of developing further feedback instruments for teacher education, is its process-orientation. The detailed description of participants' current level of counseling competence in terms of information on individual strengths and weaknesses as well as explicit corresponding improvement strategies (cf. Brown, 2004; Hattie & Timperley, 2007; Narciss, 2008) was beneficial in encouraging and guiding participants' learning efforts in the development of their counseling competence. Altogether, our findings concerning the beneficial effect of the outlined feedback intervention on participants' professional development also accord with the current state of research on the positive impact of feedback on teachers' and counselors' professional development (Caspar et al., 2004; Copland, 2010; Lambert et al., 2002).

The foundation of the training program and the feedback intervention on the model of teachers' counseling competence (Gerich et al., 2015) offered several advantages. This first concerns the process of selecting and arranging the specific training contents and feedback categories. The orientation on the empirical validated model ensured that the training program and the feedback contained the most important skills and abilities a teacher should possess in the context of counseling parents to support their children's educational progress. Secondly, due to the specified relation of knowledge, professional self-concept, and experience to counseling competence in the model, not only the improvement of the subcomponents of the four competence dimensions but also the advancement of

those important variables related to counseling competence could be focused within the development and implementation of the outlined interventions. Thirdly, the shared theoretical basis of the training program and the feedback intervention permitted an optimal match of the two examined interventions. Finally, in addition to the outlined comprehensive training program on the development of prospective teachers' abilities in all four dimensions of counseling competence, the multi-dimensionality of the model allows for the conception of modularized training programs on the advancement of specific subsidiary skills.

Assessment of Counseling Competence and its Related Variables

In order to design precisely tailored interventions for specific target groups, the scenario test used in the current study might be applied for the differential assessment of individuals' and groups' specific needs, the creation of individual competence profiles as well as the provision of detailed individual feedback on (prospective) teachers' counseling competence, such as in the current study. Given that prospective teachers typically do not have the opportunity to counsel parents and, therefore, observation in real counseling sessions is not possible, one major advantage of the scenario test is that it allows for the valid measurement of (prospective) teachers' counseling competence even outside the actual application situation (Gerich et al., 2016). In addition to its suitability for the cross-sectional ascertainment of participants' initial state of counseling competence at the beginning of the intervention period, the scenario test was also suitable for the systematic longitudinal evaluation of the training program and feedback intervention in the current study. This also applies to the multiple-choice test for the assessments of participants' knowledge of counseling and learning strategies as well as the self-assessment questionnaire for measuring participants' professional self-concept as a counselor and counseling experience. The additional items in the self-assessment questionnaire for the measurement of prospective teachers' confidence in view of forthcoming parent counseling talks in their future professional routines and their self-assessed competence improvement also proved helpful for the evaluation of the interventions. By means of these items, we were able to examine the intervention effects not only on an objective level. Rather, we could also show that the effects of the training program and feedback intervention were manifested in participants' subjective appraisal of their individual benefit from participating in the training program. Beyond the outcome-oriented comparisons of participants' pre-, post-, and follow-up test measures, the self-assessment items included in the weekly completed standardized diaries allowed for the evaluation of the interventions from a process-analytic perspective. In this context, the time-series data provided additional

information concerning the kind of trajectory of participants' values over the training period and enabled the comparison of the two experimental groups in this regard.

Limitations and Outlook

Although the findings of the current study already provide many important implications for teacher education, additional research is still necessary.

With regard to the procedure of the study, the design proved to be appropriate for the investigation of our research questions. By means of the pre-, post-, and follow-up tests, we were able to examine the effectiveness of the training program and feedback intervention as well as the stability of the intervention effects even beyond the end of the training period. However, beyond the follow-up test realized in the current study (eight weeks after the posttest), further investigations should strive for an additional, considerably later date of measurement – for example, when prospective teachers enter the profession – in order to further validate the long-term intervention effects. Moreover, subsequent studies should also examine intervention effects on additional measures, which are not included in the model of teachers' counseling competence (Gerich et al., 2015), such as prospective teachers' confidence in view of forthcoming parent counseling talks in their future professional routines, which was considered in the current study.

Concerning the quasi-experimental design of our study, we have to consider the possibility that our results were influenced by self-selection. Whereas the training program on counseling competence was carried out with students who attended an optional course on educational psychology (experimental groups), prospective teachers in the control group participated in an alternative compulsory course. Thus, prospective teachers who took part in the optional course may have been more motivated to increase their counseling competence than those who did not, which might have had an influence on the results. In this context, the lower average number of semesters of the control group compared to the experimental groups (see Table 5.1) must be critically reviewed as well. This difference between the observed treatment groups might also be a reason for the pretest-differences between the control group and the experimental groups regarding diagnostic-skills and counseling experience, as participants in the experimental groups might already have had more opportunities in their studies to train their skills in these areas. Regarding the exclusion of participants from analyses it is not to be assumed that this had an influence on the results as the excluded prospective teachers did not differ from those included in the analyses regarding their demographic data, except for their subjects of study. As a conse-

quence, future research should test whether the outlined results can be reproduced in a study with random assignment to the experimental groups and control group, preferably on the basis of larger sample sizes.

Consideration should also be given to the implementation of an additional experimental group, in which participants receive individual feedback but do not participate in the training program, in order to examine the effects of the feedback intervention independent of the training program. Although the pre-post comparisons provided evidence for the beneficial effects of the individual feedback intervention on prospective teachers' overall counseling competence as well as the dimension communication-skills, it did not cause additional increases in the remaining dimensions nor in participants' knowledge, professional self-concept, and experience. Analyses also failed to reveal additional improvements in participants' confidence and emotional distress in view of forthcoming parent counseling talks in future professional routines due to the feedback. A possible reason for these results might be that the additional effects of the feedback intervention have been overshadowed by the large effects of the training program. In fact, as participants who received the feedback intervention reported significantly higher competence improvements in the cross-sectional posttest self-assessments than prospective teachers who participated only in the training program, there is a strong indication for this explanation and, therefore, for the additional benefit of the feedback intervention as it has already been applied in the current study.

But also the feedback intervention itself might be further optimized with regard to its effectiveness, as the lack of additional improvements might also have been caused by certain insufficiencies of the feedback intervention. Here, a particular weakness of the feedback intervention might consist in the fact, that feedback was only provided on two occasions, namely after the pre- and posttest. In this context the beneficial effects of providing more frequent and repeated feedback throughout the intervention period should be investigated in subsequent studies. Moreover, a specific reflection assignment following the feedback may increase its effectiveness, as several studies have shown the positive impact of supporting feedback recipient's reflections on the information provided in the feedback (e.g., Anseel, Lievens, & Schollaert, 2009). Another modification of the feedback intervention may consist in a subsequent goal setting instruction, as several studies demonstrate the positive effect of the interplay between receiving feedback and setting learning goals on competence development (e.g., Rakoczy, Harks, Klieme, Blum, & Hochweber, 2013). Empirical evidence has shown that setting learning goals entails deeper, more self-regulated and persistent learning strategies as well as greater intrinsic motivation and performance (Grant & Dweck, 2003; Harackiewicz, Barron, Pintrich, Elliot, & Trash, 2002; Locke & Latham, 2002; Nicol & Macfarlane-Dick, 2006).

Conclusion

The findings of the current study demonstrate that prospective teachers' counseling competence can be successfully fostered by means of appropriate teacher education programs. Given the current insufficient consideration of counseling competence in the context of teacher education, correspondent curricula on this important topic should become a fixed component in early teacher preparation as well as continuing education. In this context, the outlined training program could serve as a first blueprint for appropriate programs all around the world. Such programs should particularly include large sequences of active and reflective learning, as this has been shown to have a positive effect on participants' actual and perceived competence improvement within the current study. Moreover, our findings indicate an additional beneficial impact of providing individual process-oriented feedback on participants' competence development. However, in order to reliably determine the effectiveness of this intervention, further investigations are necessary. With regard to the current state of research (Epstein, 2005; Mandel, 2006), prospective teachers' increased perceived preparedness for their future professional routines due to participating in the training program presumably reduces the reality shock when prospective teachers enter the profession. This, in turn, could lead to greater job satisfaction and reduced occupational stress for teachers (Darling-Hammond, 2000; Pas et al., 2012) as well as the more frequent offering of counseling (Wild, 2003) from which both students and parents can benefit.

6 Study 3

6.1 Manuscript C: Using Simulated Parent-Teacher Talks to Assess and Improve Prospective Teachers' Counseling Competence³

Abstract

In research on parental involvement and teacher professionalization, counseling parents on the support of their children's learning processes is considered to be an increasingly important competence area of teachers. However, to date little research has been conducted on the development of appropriate approaches to the assessment of teachers' counseling competence. The current study describes the validation of a behavior-based instrument for the assessment of teachers' counseling competence including counseling talk simulations with standardized parents as well as the examination of its suitability as an intervention for the improvement of participants' counseling competence. The validation was carried out within the framework of a longitudinal quasi-experimental study with 51 prospective teachers. Multivariate repeated measures MANOVAs revealed the suitability of the counseling talk simulations both as an assessment instrument and an intervention. Results provide numerous implications for teacher preparation and continuing education, for example, the use of the counseling talk simulations as a didactical tool within the framework of teacher training programs.

6.1.1 Introduction

Counseling students and their parents is considered to be an increasingly important task for teachers (Guli, 2005; Valli & Rennert-Ariev, 2000). Consequent-

³ Gerich, M., & Schmitz, B. (2016). Using Simulated Parent-Teacher Talks to Assess and Improve Prospective Teachers' Counseling Competence. *Journal of Education and Learning*, 5, 285-301.

ly, it has even been specified as a key aspect in recent concepts of teachers' professional competences (e.g., Baumert & Kunter, 2006) as well as world-wide government recommendations and standards for teacher education (e.g., National Commission on Teaching and America's Future, 1997; Standing Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany, 2004). In particular, counseling parents concerning the support of their children's learning activities plays an increasingly important role (Whiston, Tai, Rahardja, & Eder, 2011), as research on parental involvement has frequently demonstrated its beneficial effects on students' academic development as well as their social, emotional, and behavioral adjustment (Cox, 2005; Hill & Tyson, 2009; Pomerantz, Moorman, & Litwack, 2007). Especially home-based involvement practices, such as providing assistance with homework, enhancing motivation, and structuring time for homework and leisure, have been shown to improve academic achievement (Fan & Chen, 2001; Henderson & Mapp, 2002). Consequently, parents increasingly request guidance from teachers concerning the support of their children in homework and learning activities (Hoover-Dempsey, Walker, Jones, & Reed, 2002). Consequently, in order to meet these high demands and capitalize on the full potential of involving parents in their children's learning processes, teachers have to possess essential counseling competences.

Assessment of Teachers' Counseling Competence

Although the current state of research clearly emphasizes the prominent role of teachers' counseling competence in parent-teacher talks in the development of high-quality educational processes, there has been little research on this important teacher competence. Approaches to the measurement of teachers' counseling competence in parent-teacher talks, in particular, are still rare. To date, there are only a few instruments for its standardized assessment, which are primarily based on self-reports. For example, Hertel (2009) developed a self-assessment questionnaire for the measurement of teachers' counseling competence including the scales personal resources, social cooperation competence, counseling skills and pedagogical knowledge, process competence, and coping. However, instead of capturing a person's real competences in specific situations, self-reports are more likely to record an individual's general self-concept (Spencer & Spencer, 1993) or the importance assigned to a specific behavior (Constantine & Ladany, 2000). On this account, approaches to the more objective and contextual assessment of teachers' counseling competence in parent-teacher talks are necessary.

To this, Bruder (2011) developed and validated a Situational Judgement Test (SJT) for the assessment of teachers' counseling competence in parent-teacher talks. As SJTs have been shown to have substantial criterion-related validities for the criterion of job performance (McDaniel, Morgeson, Finnegan, Campion, & Braverman, 2001), the author considered the SJT approach to be a promising method for measuring teachers' counseling competence in a behavior-based manner. The author developed 13 items measuring the scales counseling skills, diagnostic and pedagogical knowledge, collaboration and perspective taking, and coping. Each of the 13 items describes a short, realistic parent counseling situation in which a specific behavior is requested followed by four multiple-choice answer options presenting a range of possible activities. The participant is asked to choose the best and worst possible activities. In a subsequent study, Bruder, Keller, Klug, and Schmitz (2011) additionally established a short test form of the SJT including 6 of the original 13 items.

Scenario Test for the Assessment of Teachers' Counseling Competence

To date, one of the best validated instruments for the assessment of teachers' counseling competence in parent-teacher talks on the support of students' educational processes is a scenario test established by Bruder (2011) and Gerich, Bruder, Hertel, Trittel, and Schmitz (2015). The scenario test is based on the model of teachers' counseling competence in parent-teacher talks on the support of students' learning processes (in the following, we use the abbreviated term 'counseling competence') by Gerich et al. (2015; see Figure 6.1). This four-dimensional model was developed on the basis of literature on general counseling competence, counseling in schools, parent counseling, and counseling on learning strategies (e.g., Guli, 2005; McLeod, 2003; Sheridan, Kratochwill, & Bergan, 1996) as well as preliminary approaches to modeling teachers' counseling competence for the subsample of higher track secondary school teachers (Bruder, 2011; Hertel, 2009). The proposed model structure was empirically validated conducting structural equation modeling on the basis of 357 primary and secondary school teachers' data. The model includes the most important skills and abilities that a teacher should possess in the context of counseling parents in how to support their children's educational progress: (1) *communication skills*, containing general counseling practices such as 'active listening', 'paraphrasing', and 'structuring' the talk; (2) *diagnostic skills*, including aspects necessary to analyze existing problems and identify potential causes such as 'problem definition', 'search for possible causes', and 'perspective taking'; (3) *problem-solving skills*, comprising aspects necessary to develop and initiate appropriate and customized solutions for learning difficulties such as 'applica-

tion of learning strategies’, ‘goal orientation’, ‘solution and resource orientation’, and ‘cooperative actions’; and (4) *coping skills*, including strategies for ‘coping with criticism’ and ‘dealing with difficult situations’ in the course of the counseling talk. In addition to these four dimensions, the authors identified several specific variables that are positively related to the level of teachers’ counseling competence: *knowledge of counseling and learning strategies*, *professional self-concept as a counselor*, and *counseling experience* (in the following, these terms are used interchangeably with the abbreviations ‘knowledge’, ‘professional self-concept’, and ‘experience’).

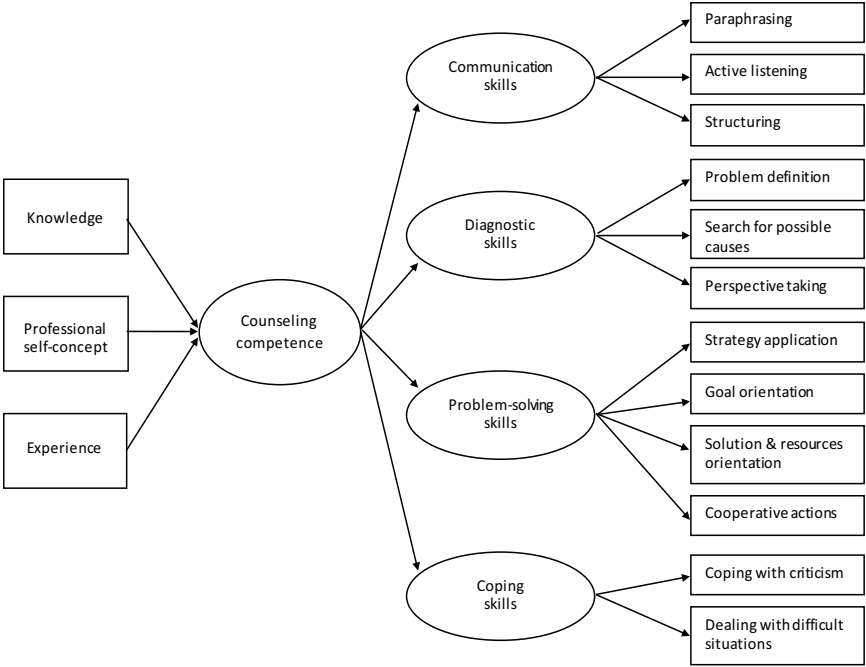


Figure 6.1. Model of teachers’ counseling competence (Gerich et al., 2015).

The scenario test was developed for the assessment of teachers' counseling competence both overall as well as subdivided into the four competence dimensions. As scenario tests have been shown to be appropriate to measure competences in a standardized and economical manner that is context specific and closely related to behavior (Hedlund, Witt, Nebel, Ashford, & Sternberg, 2006), they have often been used in research on professional competences, even in the field of teacher competences (e.g., Klug, Bruder, Kelava, Spiel, & Schmitz, 2013). The scenario test for the assessment of teachers' counseling competence contains a case study of a student with learning difficulties whose mother is seeking advice and thus requests a counseling talk. Participants are requested to respond to 12 open-ended questions referring to the information given in the case study. These questions represent the 12 content variables of the four dimensions of teachers' counseling competence (e.g., "What information would you collect prior to and during the talk with Kristina's mother in order to find possible solutions to implement after the talk?" for the variable search for possible causes). In the evaluation of participants' responses, the qualitative statements are converted into quantitative scores by means of a detailed rating system (for a comprehensive description of the scenario test, its development and validation, see Bruder (2011) and Gerich et al. (2015)).

Behavior-Based Instruments for the Assessment of Teachers' Counseling Competence

In the studies by Bruder (2011) and Gerich et al. (2015), the scenario test has been shown to be an objective and economic strategy for the itemized measurement of teachers' counseling competence. Nevertheless, behavior-based instruments for the assessment of teachers' counseling competence, for example, direct performance observation in concrete and realistic application situations (Kane, 1992), have yet to be developed.

In this context, a promising alternative is the performance observation in videotaped simulated parent-teacher talks involving role-playings with standardized parents. This approach appears to be suitable, as the level of counseling competence measured in role-play situations has already been shown to largely correspond to the level of counseling competence demonstrated in real counseling talks in a study with counseling students (Gallagher & Hargie, 1989). Moreover, because video recording has been shown to be an appropriate and valid strategy for the simultaneous assessment of multifaceted pedagogical skills, especially in the field of counseling (e.g., Admiraal, Hoeksma, van de Kamp, & van Duin, 2011), this method also appears appropriate for measuring teachers'

counseling competence in simulated parent-teacher talks on the support of students' learning processes.

One of the first approaches of applying simulated parent-teacher talks in the field of teacher education was established by Dotger and colleagues (Dotger, Dotger, & Maher, 2010; Dotger, Harris, & Hansel, 2008). In the Simulated Interaction Model (SIM), prospective teachers participate in a series of one-on-one interactions with standardized parents within the framework of a teacher training course. These standardized parents are carefully trained actors who are scripted to present specific statements, questions, or concerns - known as "verbal triggers" - during the parent-teacher talk simulations in accordance with a carefully designed case profile. In contrast, the teacher candidate taking part in the simulation is given an "appropriate" amount of background knowledge regarding the hypothetical student in terms of a general academic profile, but is not scripted in any way concerning his or her behavior during the interaction with the standardized parent. The simulated parent-teacher talks are videotaped in order to subsequently provide participants extensive feedback on their performance during the simulations. Furthermore, participants conduct detailed self-evaluations, supported by their careful review of the video recordings of their simulated interactions as well as individual and whole-group debriefing sessions.

In the first instance, the SIM was developed as an intervention for enhancing prospective teachers' communication skills in parent-teacher talks. In a subsequent study, Walker and Dotger (2012) utilized the videotaped simulations to measure prospective teachers' readiness for parent-teacher interactions. In this context, the videotaped simulations functioned as models of effective and less-effective teacher-parent communication. After reading the related background information of the hypothetical student and before viewing the respective videotaped simulation, participants were asked what they would do to make the talk successful, what strategies they would use, and what else they would like to know, if they were the teacher in this situation. Subsequently, candidates watched two videos that involved two different teacher models interacting with the same standardized parent and evaluated the teachers' performance along several dimensions derived from expert opinion. Moreover, candidates chose which of the two models performed better. Although Walker and Dotger (2012) used simulated parent-teacher talks, participants' conversation competences were not assessed via participants' own behavior in the specific situation. Instead, they were measured by means of participants' theoretical descriptions of how they would act in the given situation as well as their rating of the demonstrated conversational skills of specified teacher models.

A first attempt to measure prospective teachers' own behavior in simulated parent-teacher talks was introduced by Wiesbeck, Bauer, Gartmeier, and Prenzel (2013). By means of videotaped simulations with standardized parents,

the authors aimed to assess prospective teachers' communicative competence in parent-teacher talks - a construct related to teachers' counseling competence. For the evaluation of the videotaped conversations, the authors applied a detailed rating system based on the study's underlying Munich model of teachers' communicative competence in parent-teacher talks (Gartmeier, Bauer, Fischer, Karsten, & Prenzel, 2011) comprising the three facets interpersonal relationship, problem-solving, and structuring the conversation.

Purpose of the Current Study

Even though Dotger et al. (2008, 2010) as well as Wiesbeck et al. (2013) already developed behavior-based simulation approaches to the assessment of teachers' communication skills, there are still no instruments for the behavior-based assessment of teachers' counseling competence in parent-teacher talks on the support of students' learning processes. Therefore, the superior aim of the current study was to develop and validate a behavior-based instrument based on the four-dimensional model of teachers' counseling competence (Gerich et al., 2015) involving counseling talk simulations with standardized parents in the same style of the SIM approach by Dotger et al. (2008, 2010) as well as the assessment approach by Wiesbeck et al. (2013). Here, in order to particularly utilize the instrument for the evaluation of specific teacher training programs on counseling, we strove for an instrument for the longitudinal assessment of changes in teachers' counseling competence due to specific interventions. For validation purposes, we aspired to compare longitudinal data acquired by means of the counseling talk simulations with longitudinal data gathered by means of the already established scenario test by Bruder (2011) and Gerich et al. (2015) described above.

In addition to its utilization as a measurement instrument, we aimed to examine whether participation in the counseling talk simulations could serve as an intervention for the improvement of prospective teachers' counseling competence within the context of teacher preparation. In the studies carried out by Dotger et al. (2008, 2010), participation in simulated parent-teacher talks provided prospective teachers an opportunity to practice their abilities to effectively partner with parents and, subsequently, led to an enhancement of participants' communication skills. The beneficial effects of practicing professional skills in concrete case-based application situations on the development of competences have also been demonstrated in other studies on teacher education (e.g., Grossmann, 2005). By means of active learning, learners are given the possibility to apply their theoretical knowledge in practical, realistic situations in order to acquire practical competences, gain experience, and facilitate the transfer of

training content to future professional routines. Based on this, active learning by the use of videotaped simulated parent-teacher talks appears to be a promising opportunity even in the context of enhancing prospective teachers' counseling competence in parent-teacher talks on the support of students' learning processes.

In summary, the present study addressed the following hypotheses:

1. The counseling talk simulations serve as an appropriate instrument for the assessment of changes in prospective teachers' counseling competence due to specific interventions. It is expected that intervention effects on teachers' counseling competence measured by means of the counseling talk simulations are consistent with measurements determined by means of the scenario test (Bruder, 2011; Gerich et al., 2015).
2. The counseling talk simulations serve as an effective intervention for the improvement of prospective teachers' counseling competence. It is expected that participation in the counseling talk simulations leads to an increase in teachers' counseling competence as well as the related variables (knowledge of counseling and learning strategies, professional self-concept as a counselor, counseling experience) identified by Gerich et al. (2015).

6.1.2 Method

Sample

The study took place at a university in the German federal state of Hesse within the scope of an optional training module on educational psychology for prospective teachers. The total sample consisted of 51 prospective teachers (66.7% women) ranging in age from 21 to 34 years ($M = 23.06$, $SD = 2.20$) who were currently in semester 2 through 10 of their studies ($M = 6.65$, $SD = 1.66$). 23 (45.1%) prospective teachers studied mathematics, 25 (49.0%) natural sciences, 8 (15.7%) languages, 20 (39.2%) social sciences, and 12 (23.5%) art, music, and/or physical education. None of the participants had previously gathered initial experiences in counseling parents; six students (11.8%) had previously participated in courses on counseling.

Procedure

The longitudinal study was carried out within the framework of a quasi-experimental study on the evaluation of a training program on counseling com-

petence for prospective teachers (for a detailed description of the training program and its evaluation, see Gerich, Trittel, & Schmitz, in press). In order to examine our research questions, we observed two experimental groups. The design was quasi-experimental, because the participants could not be randomly assigned to the intervention groups. Instead, the groups established themselves by the students' optional enrollment in one of two training courses. However, participants did not know about the different experimental conditions. The experimental groups did not significantly differ with regard to their demographic data.

Both experimental groups (experimental group 1 [EG1]: $N = 25$; experimental group 2 [EG2]: $N = 26$) participated in the training program as separate groups. The training program consisted of nine weekly sessions of 100 minutes each. Prior to and after receiving the training intervention, participants completed an extensive paper-pencil survey (paper-pencil pretest and posttest) for the assessment of participants' counseling competence, knowledge, professional self-concept, and experience, based on the four-dimensional model of teachers' counseling competence (Gerich et al., 2015). Experimental group 1 additionally participated in the simulated parent-teacher counseling talks at two different points in time (simulation pretest and posttest). The simulation pretest took place one week after the paper-pencil pretest and the simulation posttest was carried out one week before the paper-pencil posttest.

Measures

Paper-Pencil Tests

Within the framework of the paper-pencil pretest and posttest, participants' counseling competence was measured by means of the aforementioned scenario test established by Bruder (2011) and Gerich et al. (2015) (see section Introduction). Participants' responses to the 12 open-ended questions following the case scenario - which represent the content variables of the four-dimensional model of teachers' counseling competence (Gerich et al., 2015) - were converted into scores from 0 to 2 for each item using a detailed standardized rating system. The rating system includes an extensive set of potential answers to each question as well as detailed specifications on the respective scores to be awarded. The coding was carried out by well-trained raters with sufficient content knowledge on parent counseling and learning strategies. In order to test the objectivity of the rating system, and thus its robustness against any personal biases or predispositions of the raters, inter-rater reliabilities for each question were calculated in a

previous study (Gerich et al., 2015), resulting in satisfactory intra-class-correlations (ICC; McGraw & Wong, 1996) between ICC = .72 and ICC = 1.00.

Moreover, within the paper-pencil pretest and posttest, we measured the three variables, which are positively related to the level of teachers' counseling competence (Gerich et al., 2015): knowledge of counseling and learning strategies, professional self-concept as a counselor, and counseling experience. Participants' knowledge of counseling and learning strategies was measured by means of a multiple-choice test composed of nine closed-ended questions with four possible answers each. The knowledge test includes four multiple-choice items on professional knowledge of counseling (e.g., "What are the advantages of the active listening technique in a counseling talk?") and five items on knowledge of learning strategies (e.g., "Which possibilities does a student have to motivate himself/herself while studying?"). Participants are asked to choose the best answer or answers (the latter in cases where multiple answers were allowed, which is clearly marked next to the respective item). Participants' responses to all items are coded as either correct or incorrect. Item difficulties determined in a previous study ranged between .35 and .89 and thus fell within an acceptable range for inter-correlated items (Ramsey & Reynolds, 2000). The examination of scale reliability in a previous study revealed an acceptable Cronbach's alpha of $\alpha = .63$.

The self-assessment questionnaire on professional self-concept as a counselor and counseling experience consists of 23 closed-ended items. Participants are asked to respond to each item on a six-point rating scale ranging from 1 (*I completely disagree*) to 6 (*I completely agree*). The scale professional self-concept includes 15 items concerning prospective teachers' attitudes towards counseling, motivation for counseling, self-efficacy in counseling, and sense of self as a counselor (e.g., "I believe that, as a teacher, part of my job is to counsel parents."). The experience scale consists of 8 items on prospective teachers' previous education and experiences in counseling as well as reflection on one's own counseling behavior in previous counseling talks (e.g., "After finishing a counseling talk, I think about whether I am satisfied with my performance as a counselor."). The examination of scale reliability in a previous study indicated satisfactory Cronbach's alphas of $\alpha = .77$ for professional self-concept as a counselor and $\alpha = .86$ for counseling experience.

Counseling Talk Simulations

The development of the materials for the simulated parent-teacher counseling talks was also based on the model of teachers' counseling competence (Gerich et al., 2015). We constructed two specific case examples of hypothetical students

(*Manuel* for the simulation pretest and *Marie* for the simulation posttest) with certain difficulties in learning that are supposedly causing a decline in their achievement, which formed the basis for the preparation of the written instructional materials for the participating teacher as well as the actor portraying the simulated parent.

Similar to the scenario test, the materials for the participating teacher each include a detailed profile of the respective student providing general demographics (name, age, grade level), information on the student's social and personal characteristics, and, most importantly, current academic and behavioral conspicuities. Moreover, the profile outlines certain educational initiatives already taken by the teacher, previous communication with the student's parents, and the occasion of the upcoming teacher-initiated parent-teacher talk with the student's mother. The profile does not in any way specify exactly the teacher's actions, decisions, or verbalizations within the simulated counseling talk. The instruction materials additionally include the request of the participants to carefully read the profile, empathize with the teacher's character, and prepare for the upcoming counseling talk. In addition, participants are informed about the time limit of 15 minutes for the counseling talk.

For the role of the hypothetical students' parents, we also constructed detailed instructional materials that allowed for the careful preparatory training of the actors portraying the simulated parents within the counseling talk simulations. For both of the developed cases, those materials each include a detailed profile of the respective hypothetical student. In contrast to the student's profile presented to the participating teachers, the profile given to the simulated parents provides home-based background context as well as a detailed interaction protocol for the simulated parent-teacher talk. By means of this interaction protocol, the standardized parents are instructed to present exact predetermined questions, information, and statements - according to the verbal triggers in the studies by Dotger et al. (2008, 2010) - at specified times during the course of the parent-teacher talk. For instance, after the teacher addresses the hypothetical student's unsatisfactory homework completion, the simulated parent is instructed to signalize a certain helplessness concerning the corresponding causes by stating "I am completely at a loss as to what could be the problem with his/her homework completion". This statement is intended to examine whether the participating teacher is able to take into account potential causes for students' learning difficulties from different contexts (e.g., insufficient learning strategies, motivational or emotional problems) and ask appropriate and purposeful questions. At a later stage in the counseling talk, the simulated parent is instructed to suddenly criticize the teachers' professional practice by stating "I have had a look at your latest class test and it is my opinion that the exam questions were much too difficult", in order to examine the teacher's ability to professionally deal with paren-

tal criticism. Even though the standardized parents are instructed to closely adhere to the interaction protocol during the counseling talk simulations, they must also adapt to the individual conversational actions of the respective participating teacher. Thus, the training of the simulated parents particularly focused on additional contingency responses that they may employ during the simulation depending of the specific actions of the teacher. Excerpts of the instructional materials for the teacher and simulated parent concerning the case example *Manuel* are shown in Table 6.1.

Table 6.1

Excerpts of the instructional materials for the teacher and the standardized parent concerning the case example Manuel

Materials for the teacher

Instruction

Your task: In a role-play counseling situation, you will conduct a counseling talk with a student's parent. In order to successfully complete the task, it is important that you can identify with your role in the counseling talk. Please take your time reading the following scenario description. In the role-play situation, act just as you would in a real counseling talk with a parent. The role of the parent will be played by a trained role-player using a standardized script. You now have 10 minutes to prepare yourself for the counseling talk. Feel free to make notes to help you during the counseling talk. The role-play will last about 15 minutes and will be videotaped.

Scenario

You teach seventh grade math at a Gymnasium. Today you have a counseling talk planned with the mother of 12 year old Manuel. Since the beginning of the school year, you have noticed that Manuel's math grades are continually getting worse. He seldom does his math homework. When he does, it is often incomplete and sloppy. Because you often teach math during the first period of the day, you have noticed that Manuel is often late to school. Otherwise, Manuel is a rather quiet and nice student. You don't believe that he has any cognitive problems; and he seems to understand what you teach in class. During independent work times, Manuel is able to concentrate on his work. He also has good social ties to his peers. Based on conversations with other students, you know that he is interested in movies, computer games, and soccer. You have never met Manuel's parents, since they have never attended parent-teacher conferences. Manuel's mother cancelled an appointment that you had with her two weeks ago because she did not have time to attend. You asked his mother to participate in a counseling talk with you so that you can obtain an impression of Manuel's learning and homework situation at home. You also want to work with her to find ways to improve Manuel's learning and homework habits.

Table 6.1 (Continuation)

Excerpts of the instructional materials for the teacher and the standardized parent concerning the case example Manuel

Materials for the standardized parent

Scenario

You are the mother of 12 year old Manuel. He is in the seventh grade at a Gymnasium. You have always had the impression that he is a relatively good student. However, lately his grades have not been as good. You don't know why that is, since he is an intelligent child. He is constantly demonstrating his ability to quickly learn new things when he plays computer games on the weekends with his friends and always ends up the winner. He also often watches sophisticated movies and really enjoys thinking up new strategies for his soccer team. You promised him that you would finally make it to one of his games to cheer him on, but for the last year you have been working so much that you are usually grateful just to make it home in time for a family dinner. Your partner is also often away on business, so you are very proud that Manuel is such an independent child. In the mornings, Manuel has to get ready for school on his own, since you leave the house before he does. Still, you always take the time to make breakfast for him and pack his lunch, even though you think he is too old for that. However, you do regret the fact that you are so busy at work. For example, you would really like to be able to attend a parent-teacher conference so that you can talk with Manuel's teachers and other parents. Two weeks ago you even had to cancel an appointment with Manuel's math teacher because you just didn't have the time to go. Because of that, you are really glad that his teacher has made another appointment with you. You are truly interested in learning about how Manuel behaves at school and what type of student he is. Unfortunately, you don't have the opportunity at home to see how and when he studies and does his homework; and there must be some reason why his grades have gone down... So now you are on your way to the appointment with Manuel's math teacher and are really curious to hear what he/she has to say!

Examples of the predetermined questions, information, and statements

- After Manuel's problems have been mentioned, ask at some point during the talk what you could do to improve Manuel's performance (if the teacher does not mention this without you asking): „What can we do to help Manuel do better again at school?“
 - After the teacher has suggested possible interventions, ask him/her to describe them in detail and ask what exactly you can do as a parent (if the teacher does not mention this without you asking): „Unfortunately, I don't know anything about this method. Can you tell me more about it, especially what exactly I should do?“
 - Express critique regarding the teacher's ability to control the class: “Manuel told me that he can't concentrate in class because it is often so loud. So it's not surprising that he isn't performing up to his usual standard. I'm starting to think that you don't have your class under control. After all, it's your job to make sure that the students can concentrate on their work!”
-

The simulations took place in a conference room of the research institution equipped with a table, two chairs, and a video camera. Each simulation began with a preparation phase in which the written case profile of the hypothetical student as well as additional written instructions were presented to the participants. Participants were given ten minutes to read the profile, prepare for the upcoming parent-teacher talk, and ask potential comprehension questions to the test administrator. The preparation phase was followed by the actual counseling talk phase. The video camera was activated, the simulated parent entered the room, and the conversation took place. After the teacher finished the talk, the simulated parent left the room and the video camera was switched off. In the case that the teacher did not bring the counseling talk to an end after a maximum of 15 minutes, the simulated parent terminated the conversation.

To analyze the participants' professional performance during the counseling talk simulations, we developed a detailed standardized rating system also based on the model of teachers' counseling competence (Gerich et al., 2015). By means of this rating system, participants' qualitative statements were converted into quantitative scores from 0 to 2 for each of the competence aspects outlined in the model (except perspective taking, as this aspect could not be adequately observed).

With reference to the evaluation system of the already well-established scenario test for the assessment of teachers' counseling competence (Bruder, 2011; Gerich et al., 2015), we defined precise encoding rules specifying which criteria need to be fulfilled to achieve one or two points as well as appropriate verbalization examples for the teacher. The coding was carried out by well-trained raters with sufficient content knowledge on parent counseling and learning strategies. Excerpts of the rating system are displayed in Table 6.2.

To verify the content validity of the applied case examples, we carried out an expert survey among a sample of 41 practicing teachers, as expert opinion is considered to be a standard method of establishing content validity (Carmines & Zeller, 1991). The sample consisted of 25 (61%) female and 16 (39%) male teachers ranging in age from 30 to 60 years ($M = 42.05$, $SD = 11.00$), with $M = 12.76$ ($SD = 9.55$) years of teaching experience. The respondents were asked to conscientiously read the two case profiles of the hypothetical students and, for each case, answer two questions on a six-point rating scale ranging from 1 (*I completely disagree*) to 6 (*I completely agree*): (1) "As a whole, I judge the depicted case example to be realistic"; (2) "The depicted case example describes a typical parent-teacher talk situation with a focus on learning guidance". Results indicated that the experts viewed the case examples to be realistic (*Manuel*: $M = 5.17$, $SD = .80$; *Marie*: $M = 4.63$, $SD = 1.14$) and typical examples of parent-teacher talk situations with a focus on learning guidance (*Manuel*: $M = 5.02$, $SD = 1.04$; *Marie*: $M = 4.53$, $SD = .85$), indicating a high degree of content validity

for the applied case profiles. In order to test the objectivity of the rating system, a random selection of 18 videotaped simulations was scored by two independent raters. Inter-rater reliabilities for each variable resulted in satisfactory intra-class-correlations (ICC; McGraw & Wong, 1996) between ICC = .76 and ICC = 1.00.

Table 6.2

Excerpts of the rating system for the analysis of the counseling talk simulations

Dependent Variable	Score	Criteria	Exemplary statements or questions
Paraphrasing	1	Use of conversation techniques; Paraphrasing (repeating in your own words what the parent has said) at an appropriate point in the talk	<i>"If I understand you correctly, you think...";</i> <i>"In other words...."</i>
	2	Use of conversation techniques; Paraphrasing at at least two appropriate points in the talk	<i>"If I understand you correctly, you think...";</i> <i>"In other words...."</i>
Search for possible causes	1	Naming possible causes; asking about possible causes	<i>"I think your child's grades have gone down because he is no longer motivated.";</i> <i>"What do you think has caused your child's grades to go down?"</i>
	2	Detailed inquiries concerning learning and homework situation	<i>"Does your child have his own desk at home?";</i> <i>"When does your child do his homework?";</i> <i>"Does your child make a learning plan when he is studying for a test?"</i>
Strategy application	1	Suggest an appropriate solution (e.g., homework journal, learning plan, checklists, learning contract, reward system, mistake analysis, etc.) + explanation of practical implementation	<i>"I would suggest that your child keep a homework journal in the next few weeks.";</i> <i>"It might help to make a weekly plan.";</i> <i>"With other students who had similar problems, I have had good experiences with reward systems."</i>

Table 6.2 (Continuation)

Excerpts of the rating system for the analysis of the counseling talk simulations

Dependent Variable	Score	Criteria	Exemplary statements or questions
Strategy application	2	Suggest several appropriate solutions (e.g., homework journal, learning plan, checklists, learning contract, reward system, mistake analysis, etc.) + explanation of practical implementation	<i>"I would suggest that your child keep a homework journal in the next few weeks.";</i> <i>"It might help to make a weekly plan.";</i> <i>"With other students who had similar problems, I have had good experiences with reward systems."</i>
Cooperative actions	1	Show understanding; Emphasize willingness to cooperate; Signal availability for future questions and comments	<i>"I completely understand how you feel.";</i> <i>"Together we will manage that.";</i> <i>"If you have any questions, you can always contact me."</i>
	2	Show understanding; Emphasize willingness to cooperate; Signal availability for future questions and comments + Actively include parent in problem definition as well as search for causes and solutions; offer support in implementing solutions or take on task yourself	<i>"I completely understand how you feel.";</i> <i>"Together we will manage that.";</i> <i>"If you have any questions, you can always contact me."</i> + <i>"Which of the possible solutions that I mentioned do you think would work best with your child?";</i> <i>"I'd be happy to fill out the weekly plan with your child."</i>

Analyses

Data analyses were performed using the software package SPSS Statistics Version 22. For all inferential statistics, the respective assumptions for the computed analyses were met. To examine the appropriateness of the counseling talk simulations to assess changes in prospective teachers' counseling competence due to

specific interventions (hypothesis 1), we performed multivariate repeated measures MANOVAs with the within-subjects factor time (pretest, posttest) for the simulation and scenario test data of the experimental group 1. Subsequently, we compared the results received from the counseling talk simulations with the results received from the scenario test. To investigate the suitability of the counseling talk simulations as an effective intervention for the improvement of prospective teachers' counseling competence, knowledge, professional self-concept, and experience (hypothesis 2), we performed an additional multivariate repeated measures MANOVA for the experimental groups 1 and 2 with the between-subjects factor group (EG1, EG2) and the within-subjects factor time (pretest, posttest) on the basis of the paper-pencil data.

Table 6.3

Results of the multivariate repeated measures MANOVAs for the examination of intervention effects on the basis of the scenario test data and the counseling talk simulation data

Dependent variables	Pretest	Posttest	Main effect time	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i>	η^2
Scenario test				
Counseling competence ^a	.83 (.20)	1.81 (.16)	396.42 ***	.94
Communication skills ^a	.44 (.21)	1.81 (.32)	316.88 ***	.93
Diagnostic skills ^a	1.42 (.27)	1.83 (.19)	29.23 ***	.55
Problem-solving skills ^a	.91 (.29)	1.84 (.16)	167.74 ***	.88
Coping skills ^a	.54 (.48)	1.74 (.29)	157.09 ***	.87
Counseling talk simulations				
Counseling competence ^a	.99 (.22)	1.39 (.18)	52.96 ***	.69
Communication skills ^a	.70 (.26)	1.10 (.32)	22.68 ***	.49
Diagnostic skills ^a	1.16 (.37)	1.58 (.34)	18.12 ***	.43
Problem-solving skills ^a	1.05 (.32)	1.65 (.27)	61.71 ***	.72
Coping skills ^a	1.04 (.43)	1.22 (.50)	2.45	.09

Note. ^aRange 0-2 (0 = min. parameter value; 2 = max. parameter value). * $p < .05$. ** $p < .01$. *** $p < .001$.

6.1.3 Results

Appropriateness of the Counseling Talk Simulations for the Assessment of Changes in Prospective Teachers' Counseling Competence due to Specific Interventions

The repeated measures MANOVAs for the experimental group 1 revealed a significant overall main effect of the within-subjects factor time (pretest, posttest) for the simulation data (*Wilks' lambda* $\Lambda = .246$, $F(4,21) = 16.05$, $p < .001$, $\eta^2 = .75$) as well as the scenario test data (*Wilks' lambda* $\Lambda = .043$, $F(4,21) = 116.28$, $p < .001$, $\eta^2 = .96$). As hypothesized (hypothesis 1), we found significant positive main effects with large effect sizes (Cohen, 1988) measured by means of both instruments with regard to prospective teachers' overall counseling competence as well as the dimensions communication skills, diagnostic skills, and problem-solving skills. Against our hypothesis, analyses revealed different results concerning the coping skills dimension. Table 6.3 displays the comparison of the results of the repeated measures MANOVAs for the examination of intervention effects on the basis of the counseling talk simulation data and the scenario test data, including pretest and posttest means as well as standard deviations.

Appropriateness of the Counseling Talk Simulations as an Intervention

The multivariate repeated measures MANOVA for the experimental groups 1 and 2 with the between-subjects factor group (EG1, EG2) and the within-subjects factor time (pretest, posttest) on the basis of the paper-pencil data resulted in a significant overall interaction effect for group * time (*Wilks' lambda* $\Lambda = .487$, $F(7,43) = 6.46$, $p < .001$, $\eta^2 = .513$). In accordance with our hypothesis (hypothesis 2), closer inspection revealed significant effects with large to medium effect sizes (Cohen, 1988) of participation in the counseling talk simulations on prospective teachers' overall counseling competence, the dimensions problem-solving skills and coping skills, as well as knowledge and professional self-concept. For the dimensions communication skills and diagnostic skills as well as counseling experience analyses did not reveal significant intervention effects. Pretest and posttest means, standard deviations, and results of the repeated measures MANOVA are displayed in Table 6.4.

Table 6.4

Results of the multivariate repeated measures MANOVA for the examination of intervention effects of participation in the counseling talk simulations

Dependent variables	Pretest	Posttest	Interaction group * time	
	<i>M (SD)</i>	<i>M (SD)</i>	<i>F</i>	η^2
Counseling competence ^a			14.11***	.22
EG1	.86 (.19)	1.81 (.15)		
EG2	.87 (.15)	1.58 (.25)		
Communication skills ^a			3.54#	.07
EG1	.44 (.21)	1.81 (.32)		
EG2	.49 (.22)	1.64 (.40)		
Diagnostic skills ^a			2.32	.05
EG1	1.42 (.27)	1.83 (.19)		
EG2	1.30 (.31)	1.55 (.34)		
Problem-solving skills ^a			6.76*	.12
EG1	.91 (.29)	1.84 (.16)		
EG2	1.05 (.27)	1.71 (.26)		
Coping skills ^a			6.79*	.12
EG1	.54 (.48)	1.74 (.29)		
EG2	.46 (.40)	1.25 (.62)		
Knowledge ^b			24.65***	.34
EG1	5.20 (1.12)	7.72 (.98)		
EG2	6.38 (1.02)	7.19 (1.13)		
Professional self-concept ^c			6.65*	.12
EG1	4.50 (.41)	5.15 (.44)		
EG2	4.48 (.39)	4.83 (.37)		
Experience ^c			1.02	.02
EG1	1.95 (.63)	3.28 (.65)		
EG2	2.13 (.75)	3.24 (.63)		

Note. ^a Range 0-2 (0 = min. parameter value; 2 = max. parameter value); ^b Range 0-9 (0 = min. parameter value; 9 = max. parameter value); ^c Range 1-6 (1 = min. parameter value; 6 = max. parameter value). * $p < .05$. ** $p < .01$. *** $p < .001$.

6.1.4 Discussion

The central purpose of the current study was to develop and validate a behavior-based instrument for the assessment and improvement of teachers' counseling competence involving counseling talk simulations with standardized parents.

The simulated parent-teacher talks turned out to be an appropriate instrument for the measurement of changes in prospective teachers' counseling competence due to specific interventions. This conclusion is drawn in view of the consistencies of the intervention effects of the training program measured by means of the counseling talk simulations and the already established scenario test for the assessment of teachers' counseling competence (Bruder, 2011; Gerich et al., 2015) for almost all examined variables. Here, following the approaches established by Dotger et al. (2008, 2010) and Wiesbeck et al. (2013) proved to be expedient. The fact that the counseling talk simulations were developed on the basis of the four-dimensional model of teachers' counseling competence (Gerich et al., 2015) allows for the behavior-based assessment of teachers' counseling competence on an overall level as well as subdivided into the single dimensions. This, in turn, enables the differential assessment of individuals' and groups' specific needs, the creation of individual competence profiles, and the subsequent design of precisely tailored interventions for specific target groups. Moreover, as the results of the current study revealed, the counseling talk simulations can be used for the systematic evaluation of the according interventions.

The results of the current study also highlight the effectiveness of the counseling talk simulations as an intervention within the framework of teacher education programs on counseling. The exposure to realistic and complex application situations allowed prospective teachers to practice and refine their professional counseling competences, acquire professional knowledge of counseling and learning strategies, and develop a professional self-concept as a counselor. Moreover, by means of the simulated parent-teacher talks, prospective teachers were enabled to engage in and address common problems of the professional counseling practice while they were still under the care and guidance of the teacher training course. Consequently, the outlined simulation approach might serve as an inspiration for the design of future teacher education programs on parent or student counseling. In this context, the video recording of the simulated counseling talks could be used for the subsequent joint analysis of participants' counseling behavior, in order to provide prospective teachers the opportunity to conduct detailed self-evaluations and reflect on multiple aspects of their professional performance, which is considered to be a key element in the context of integrating theoretical knowledge and practical skills (Ericsson, Krampe, & Tesch-Römer, 1993; Parsons & Stephenson, 2005). Particularly in research on teacher education, the importance of reflection following active learning for the

long-term development of practical competences is consistently highlighted (Admiraal et al., 2011; Watts & Lawson, 2009). As reflections induced by watching video recordings of one's own professional practice have been shown to be beneficial in the context of acquiring professional competences in teacher education programs worldwide (Bryan & Recesso, 2006; Rich, Recesso, Allexsaht-Snider, & Hannafin, 2007), even the analysis of the videotaped simulated counseling talks might support prospective teachers in developing their professional counseling competences. Here, the focus of the self-reflections should be on the identification of potential differences between participants' beliefs regarding good counseling and their actual practices (Bryan & Recesso, 2006; Rich & Hannafin, 2008) as well as the recognition of individual strengths and weaknesses of their counseling behaviors (Rich et al., 2007; Wu & Kao, 2008). This might lead to the setting of specific individual learning goals, a heightened motivation to improve one's own counseling competence, and an increased personal responsibility for one's own learning processes (Andrade & Valtcheva, 2009). Finally, this might result in a long-term increase in participants' counseling competence (Rich et al., 2007; Taras, 2010) and professional self-concept (Beijaard, Meijer, & Verloop, 2004).

In addition to the one-time recording and watching of a simulated parent-teacher talk for the determination of prospective teachers' current counseling competence, the viewing of videotaped simulations recorded at different times could provide participants the opportunity to observe their individual progress over the course of the specific teacher training program (Tripp & Rich, 2012). In addition to individually watching and reflecting on the videotapes, prospective teachers should be provided the opportunity to collaboratively watch and discuss their videos with peers in a learning group (Harford, MacRuairc, & McCartan, 2010), as evidence-based feedback and suggestions for improvement from a discussion group might also encourage efforts for continuing professional development (Tripp & Rich, 2012). In this connection, prospective teachers should be given feedback not only by peers but also by educators. In this case, the feedback should provide prospective teachers with information on their individual strengths and areas for improvement as well as encourage reflections on their counseling behavior in the past simulation and, on that basis, support the preparation for the next simulation. However, not only the individual participant but also the entire learning group could benefit from the collaborative analysis of the simulation videos, as the viewing of video cases represents a powerful instructional tool in developing teacher competences (Brophy, 2004) and professional identities (Maclean & White, 2007). In terms of model learning, prospective teachers can learn about effective professional practice by observing the successes and struggles of others taking part in the simulations and the subsequent self-evaluation of their own practice (Masingila & Doerr, 2002). This has been

demonstrated for skills relevant to communicating with parents, in particular (Walker & Dotger, 2012). Activities involving video analysis, moreover, have the potential to meaningfully guide the acquisition, activation, and application of prospective teachers' knowledge (Seago, 2004) and help them to relate their university learning to their later professional practice (Marsh & Mitchell, 2014). Furthermore, the introduction of video models contributes to prospective teachers' understanding of the expectations regarding their later professional performance (Baecher, Kung, Jewkes, & Rosalia, 2013).

Limitations and Outlook

Although the current study yielded important new findings for the assessment and improvement of prospective teachers' counseling competence, the results must be viewed in light of several limitations that may be addressed in future studies.

Firstly, it has to be mentioned that the application of the counseling talk simulations as an assessment instrument as well as an intervention requires an extensive amount of resources. Consequently, for the assessment of teachers' counseling competence in the context of studies with large sample sizes, the utilized scenario test (Bruder, 2011; Gerich et al., 2015) still appears to be the method of choice, as it allows for the context specific and standardized measurement of teachers' counseling competence in a highly economical manner (cf., Hedlund et al., 2006). Nevertheless, the counseling talk simulations turned out to be appropriate within the framework of teacher education programs on counseling with smaller numbers of participants such as in the current study. However, as our results are based on a relatively small sample, they may not necessarily be generalizable to the entire population of prospective teachers. Therefore, additional studies should focus on the replication of the outlined findings on the basis of a larger set of participants.

Another limitation concerns the inconsistent assessments determined by means of the simulations and the scenario test regarding the intervention effects of the training program on prospective teachers' coping skills. A possible reason for this may consist in certain weaknesses of the applied rating system for the analysis of participants' coping skills within the simulations. On this account, future research should focus on the continuing optimization of the rating system, particularly regarding the competence dimension coping skills. However, the divergent results delivered by the two instruments may also be caused by the different requirements of the simulation context and the scenario test completion context. Within the simulations, participants must react immediately to the simulated parent's questions and statements, whereas they have the possibility to

carefully consider their responses while completing the paper-pencil scenario test. This difference might become particularly apparent when participants are challenged to cope with difficult situations in the course of the counseling talk. In this context, consideration could also be given to the differing extent of evoking socially desirable behavior. It is conceivable that the social observation context and the direct interaction with a conversational partner within the simulations lead to more socially desirable responses (e.g., refrain from criticism) than the completion context of the scenario test. Consequently, additional possible reasons for the divergent results of the two instruments concerning the dimension coping skills are specific weaknesses of the scenario test, namely an insufficient suitability for the representation of difficult situations in a parent-teacher talk. Therefore, future research should also focus on the further validation of the scenario test regarding the assessment of participants' coping skills. However, it should be noted that even the counseling talk simulations have a certain laboratory character. Although the implementation of simulated parent-teacher talks allows for the observation of actual behavior in concrete, realistic application contexts, the simulations are still based on role-playing with standardized parents. Thus, with special regard to validation in the field, data collected by means of the counseling talk simulations may be compared with video recordings of real parent-teacher talks in teachers' professional routines.

An additional limitation of the current study concerns the missing intervention effects of participation in the counseling talk simulations on the development of prospective teachers' communication skills, diagnostic skills, and experience. A possible explanation may be that prospective teachers participated in the simulations only on two occasions. In this context, the beneficial effects of providing participants more frequent and repeated opportunities to practice their professional counseling competences and, consequently, gain essential experience should be investigated in subsequent studies. As already mentioned above, continuing research might also address the examination of additional beneficial effects of standardized individual feedback concerning prospective teachers' counseling performance during the counseling talk simulations on their competence improvement.

Within the framework of the continuing improvement of the counseling talk simulations, continued efforts should also focus on the development of additional case scenarios with varying levels of complexity and various types of students' and parents' demands. This will allow for the coordination of the selected case scenarios' degree of difficulty with participants' individual competence level as well as provide prospective teachers the opportunity to demonstrate and develop their counseling competences in increasingly demanding counseling situations.

Finally, the simulated parent-teacher talks and subsequent feedback by peers and teacher educators could also be implemented in the continuing education of practicing teachers. As the videotaping of real-life parent-teacher talks is permitted by parents only in a very small minority of cases, the videotaping of the simulations could provide in-service teachers the opportunity to discuss and reflect on their professional performance in parent-teacher talks even in later stages of their professional career.

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Talks

Modeling, Intervention, Behavior-Based Assessment

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