Assertiveness and adaptation: Prospective teachers’ social competence development and its significance for occupational well-being

Bastian Carstensen* and Uta Klusmann

Department of Educational Research and Educational Psychology, IPN – Leibniz Institute for Science and Mathematics Education, Kiel, Germany

Background. Difficult social interactions with students are reported to be among the main stressors of beginning teachers, and although social competence has been suggested to represent a vital resource for their transition into practice and early-career adaptation, this assumption has rarely been empirically studied.

Aim. We conducted two studies to investigate the predictive validity and development of prospective and beginning teachers’ social competence. In Study 1, we examined whether social competence predicts beginning teachers’ emotional exhaustion. Study 2 investigated whether university teacher training contributes to social competence development among prospective teachers.

Sample. The samples of both studies are based on large-scale assessments. Participants in Study 1 were 1,758 beginning teachers who had been tracked since their entry into university teacher training. Study 2 included 831 prospective teachers who were surveyed over a total period of two years.

Methods. Data were analysed utilizing a structural equation modelling approach (Study 1) and latent change score modelling (Study 2).

Results. The results of Study 1 revealed that social competence negatively predicts emotional exhaustion. Further, beginning teachers’ reports of classroom management functioned as a mediator within that relationship. According to the findings in Study 2, prospective teachers showed no significant enhancements of social competence within one year of university teacher training. However, there was a significant change considering the two-year interval.

Conclusions. Social competence, as a predictor of occupational well-being, may constitute one important resource for the early-career adaptation of beginning teachers. However, efforts to promote social competence within university teacher training should be increased.

According to Doyle (2006), teacher–student interactions in the classroom are inherently characterized by multidimensionality and simultaneity, unpredictability and immediacy of
events, publicity, and shared history. These characteristics make teaching particularly challenging and emotionally demanding for beginning teachers (Friedman, 2000; Hargreaves, 1998). They are mainly concerned about their interactions with students in class in terms of classroom management, student discipline, interpersonal conflicts, and poor teacher–student relationships (Dicke et al., 2015; Evers, Tomic, & Brouwers, 2004; Frenzel, 2014; Hargreaves, 2000). Ultimately, these interpersonal stressors are related to lower occupational well-being (Klusmann, Kutner, Voss, & Baumert, 2012; Chang, 2009; Fives, Hamman, & Olivarez, 2007; Klassen & Chiu, 2011).

According to the transactional model of stress and coping (Lazarus & Folkman, 1987), individual resources, among them situation-specific skills, are vital in dealing with stressors. In the light of the social challenges of the classroom, and in line with recent models of teacher research (Jennings & Greenberg, 2009; Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016), we argue that beginning teachers’ social competence might serve as such a resource. The term social competence is often used as an umbrella term for or synonymously with constructs such as emotional intelligence. While these approaches focus more on the emotional experience and its regulation, we focus directly on social interaction. In this context, social competence comprises the general ability of pursuing one’s goals while considering the interaction partner’s objectives at the same time and can be characterized by the two dimensions of assertiveness and adaptation (Rose-Krasnor, 1997; Seeger & Wittmann, 2017; Weinstein, 1969). Social competence has already been shown as a valuable predictor for job performance (Guillén Ramo, Saris, & Boyatzis, 2009; Hochwartner, Witt, Treadway, & Ferris, 2006) and occupational well-being (Segrin, Hanzal, Donnerstein, Taylor, & Domschke, 2007; Segrin & Taylor, 2007) in several working contexts. However, in the occupational context of teaching, the majority of studies have focused on relations between emotional competencies and teaching performance as well as indicators of well-being (Hirshberg, Flook, Enright, & Davidson, 2020; Jennings et al., 2017; Mérida-López & Extremera, 2017; Yin, Huang, & Chen, 2019).

Further, apart from the evidence of the effectiveness of interventions to promote social competence (Klemola, Heikinro-Johansson, & O’Sullivan, 2013; Tynjälä, Virtanen, Klemola, Kostiainen, & Rasku-Puttonen, 2016), empirical findings concerning the development of social competence in adulthood, and particularly in prospective teachers, are lacking.

The aim of the current study was to complement current research findings, which has so far focused primarily on emotional competencies. Thereby, the focus on assertiveness and adaptation, the two central dimensions of social competence, corresponds with the two-dimensional nature of social interaction (Baumrind, 1989; Leary, 1957). For this purpose, we used data from two panel studies. Study 1 was based on a sample of 1,758 beginning teachers who participated in the National Educational Panel Study (NEPS, Blossfeld, Rößbach, & Maurice, 2011) and who had been tracked since their entry into university teacher training. Using structural equation models, we analysed the longitudinal association between both social competence dimensions and emotional exhaustion. Additionally, we explored whether teacher reports of classroom management, as an indicator for classroom processes, mediate this relation. Study 2 included a sample of 831 prospective teachers who were surveyed as part of the Student Teacher Professional Development Study (STePS) at one German university over a total period of two years. Latent change score modelling was applied to investigate within-person changes in assertiveness and adaption. Further, we examined whether practical experiences in terms of school internships account for variation in trajectories in the course of university teacher training.
Social competence – general concept and its relation to teaching

Social competence is a generic competence, which enables individuals to perform ‘effectively’ in social interactions and serves as an umbrella term for several social and emotional competencies which are addressed in many fields of theoretical and empirical research, such as organizational, developmental, clinical, and educational psychology (Rose-Krasnor, 1997; Seeber & Wittmann, 2017). For instance, Rubin and Rose-Krasnor (1992) defined social competence as ‘the ability to achieve personal goals in social interaction while simultaneously maintaining positive relationships with others over time and across situations’ (p. 285). Hence, effective performance in social interactions refers to a balance between keeping track of one’s individual goals and considering the interaction partner’s goals (Rose-Krasnor, 1997; Seeber & Wittmann, 2017; Weinstein, 1969). These two dimensions are mentioned (with different labels) in most theoretical approaches used to describe human (social) behaviour (Baumrind, 1989), for example, influence and proximity (Leary, 1957; Wubbels, Créton, Levy, & Hooymayers, 1993), control and affiliation (Kiesler, 1983), power and love (Wiggins, 1979), basic needs for autonomy and relatedness (Ryan & Deci, 2000), and assertiveness and adaptation (Kanning, 2006). Also, research concerning teachers’ interpersonal behaviour and instructional quality proposes the concurrent performance of both assertive and adaptive types of behaviour (Hamre, Pianta, Mashburn, & Downer, 2007; Wubbels & Brekelmans, 2005). For instance, assertive teachers would lead, organize, and structure the classroom situation, while adaptation would refer to behaving in a friendly way, listening to and empathizing with their students and assisting them.

The relevance of social (and emotional) competencies among teachers has been described in the prosocial classroom model by Jennings and Greenberg (2009). The model proposes a positive effect of social competence on the establishment of positive teacher–student relationships, effective classroom management, students’ psychosocial development as well as teachers’ occupational well-being. Likewise, in their literature review, Mansfield et al. (2016) have identified social competence as an important resource of (prospective) teachers, since it constitutes a prerequisite for the development of positive relationships. In particular, they refer to communication skills and strategies which support the establishment of supportive relationships on the one hand and contribute to the successful handling of challenging interactions on the other. Also, the prominent COACTIV model (Kunter, Kleickmann, Klusmann, & Richter, 2013) makes assumptions about the determinants of teachers’ professional success in terms of student and teacher outcomes. However, social competence is not explicitly mentioned in this framework of teachers’ professional competence. In this model, social competence would most likely be located within the teachers’ personal characteristics, which have an impact on the uptake of learning opportunities within teacher preparation and a direct relation to professional practice, for example, with regard to classroom management.

Social competence was primarily examined in the field of organizational psychology, often with a focus on job performance. Concerning this outcome, social competence was identified as a valuable predictor (Guillén Ramo et al., 2009; Hochwarter et al., 2006; Witt & Ferris, 2003). Also, there is some evidence for social competence aspects predicting well-being. Mallinckrodt and Wei (2005) found in a study with undergraduate students that those students with high social self-efficacy scored lower on psychological distress and perceived more social support. Segrin and Taylor (2007) showed an association between social skills and psychological well-being in an adult sample. In another study, Segrin et al. (2007) found that social competence predicted reduced symptoms of depression and life satisfaction as indicators of well-being. Perceived stress acted as a
mediator of this association, which is in line with stress theories (Lazarus & Folkman, 1987).

With regard to the teaching profession, empirical research focused on the relevance of emotional competencies for professional performance and occupational well-being. For instance, Brackett, Palomera, Mojica-Kaja, Reyes, and Salovey (2010) revealed a positive relationship between emotion regulation abilities and job satisfaction. The promotion of emotion awareness led to decreases in teachers’ psychological distress and perceptions of time urgency (Jennings et al., 2017), provoked better sleep quantity and quality (Crain, Schonert-Reichl, & Roeser, 2017), and resulted in lower levels of burnout (Roeser et al., 2013). Further, a recently published article showed that the targeted promotion of mindfulness and emotion knowledge leads to improvements in instructional quality (Hirshberg et al., 2020).

**Social competence, interaction with students, and teachers’ well-being**

Theoretical frameworks such as the transactional model of stress and coping (Lazarus & Folkman, 1987) propose that stress emerges when individuals fail to cope with the demands of their environment, hence when work-related stressors outweigh individual resources. One long-term consequence of stress is the burnout syndrome (Maslach, Schaufeli, & Leiter, 2001). In the present study, we refer to emotional exhaustion, which describes the stress dimension of burnout and includes feelings of strain and the depletion of one’s emotional resources. Emotional exhaustion is often used as an indicator of teachers’ (reduced) occupational well-being (Voss, Wagner, Klusmann, Trautwein, & Kunter, 2017; Dicke et al., 2015).

Social interactions with students are particularly relevant for beginning teachers’ occupational well-being (Schmidt, Klusmann, Lüdtke, Möller, & Kunter, 2017). There is ample evidence that student misbehaviour and problems with classroom discipline, motivating students, dealing with heterogeneity, or the establishment of relationships to students constitute major stressors for this group (Chaplain, 2008; Goddard & Foster, 2001; Veenman, 1984). In contrast, positive teacher–student interactions and relationships can act as a resource to maintain well-being and prevent emotional exhaustion (for a theoretical review, see Spilt, Koomen, & Thijs, 2011). For example, Aldrup, Klusmann, and Lüdtke (2017) showed that inexperienced teachers, in particular, benefit from positive interactions with their students and positive interactions were linked to lower emotional exhaustion.

These research results underline the high relevance of social interactions in the teaching profession and its relevance for maintaining occupational well-being.

**Do student teachers change in their social competence during university teacher training?**

The discussion about the stability and malleability of social competence in adulthood is ambiguous. Although social competence is partly regarded as a trait, other approaches point to its mutability (Rose-Krasnor, 1997; Seeber & Wittmann, 2017). In this, the use of the term competence, which includes knowledge, abilities and skills, and motivational aspects (Weinert, 2001), implicates malleability in principle. Further, even personality, which is moderately to strongly related to social competence (Kanning, 2006) and is generally assumed to be a highly stable individual feature, changes both over time (maturity principle; Roberts, Walton, & Viechtbauer, 2006) and through interventions
(Roberts et al., 2017). Similarly, there is evidence for the effectiveness of intervention programmes promoting aspects of social competence (Carstensen, Köller, & Klusmann, 2019; Crain et al., 2017; Jennings et al., 2017; Klemola et al., 2013; Roeser et al., 2013; Steins, Haep, & Wittrock, 2015).

In line with this evidence for malleability, policymakers aim to promote social skills in teacher education (the National Council for Accreditation of Teacher Education, 2010; the Conference of the Ministers of Education and Cultural Affairs of the States in the Federal Republic of Germany, 2014). Moreover, the lack of systematic approaches to foster social competencies has been criticized (Schonert-Reichl, Hanson-Peterson, & Hymel, 2015). The framework for building resilience in teacher education (Mansfield et al., 2016) supports this view by emphasizing the relevance of social competencies as personal resources for (prospective) teachers’ well-being. The authors assume that suitable learning opportunities within university teacher training might enhance associated skills.

Referring to the social cognitive learning theory (Bandura, 1977), prospective teachers may in particular benefit from practical experience because internships provide the possibility to observe experienced teachers (role models) and to gain teaching experience (mastery experience). Further, this practical experience could complement declarative knowledge about good teaching learned at university and might foster the application of both assertive and adaptive behaviour.

It can be concluded that the learnability of social competencies has already been observed in various contexts. For teachers, the relevance of social competence is stressed, but actually, little is known about its development during university teacher training.

The present investigation

The objectives of the present investigation were twofold. First, we wanted to enhance insights into the relationship between beginning teachers’ social competence and their occupational well-being, because we assume that both assertiveness and adaptation play an important role for successful social interactions, particularly in the context of the teaching profession (Study 1). In line with theoretical models of stress and coping (Lazarus & Folkman, 1987) and previous research (Mallinckrodt & Wei, 2005; Segrin et al., 2007; Segrin & Taylor, 2007), we expected social competence on the dimensions assertiveness and adaptation to be negatively predictive for beginning teachers’ emotional exhaustion (Hypothesis 1a). In reference to the prosocial classroom model (Jennings & Greenberg, 2009), we further assumed that classroom management might benefit from teachers’ social competence, which, in turn, has shown to be related to occupational well-being (Schmidt et al., 2017; Hypothesis 1b). To test this assumption, we explored whether classroom management, as an indicator of social interaction quality in the classroom, mediates this relationship.

Second, we aimed to widen the knowledge about social competence development in the context of university teacher training (Study 2). As there is already evidence for the successful promotion of social competence aspects in prospective teachers by specific interventions (Steins et al., 2015), it seems possible that university learning opportunities, albeit not specifically aimed at promoting social competencies, might affect prospective teachers’ social competence as by-product (Kember & Leung, 2005). Therefore, we expected to find an overall moderate development of social competence in the course of one- and two-year intervals of university teacher training (Hypothesis 2a). Additionally, we examined whether practical learning opportunities within university teacher training affect the social competence development trajectories of prospective teachers. Based on
the social cognitive learning theory (Bandura, 1977) and empirical evidence about good implementation of school internships (Gröschner, Schmitt, & Seidel, 2013; Hascher, 2012), we expected a prediction of change in assertiveness and adaptation by prospective teachers’ completion of, and satisfaction with, curricular mandatory internships as well as the associated support provided by the university (Hypothesis 2b).

**STUDY 1**

**Method**

**Procedure**

We used data from the National Educational Panel Study (NEPS; Blossfeld et al., 20111). The starting cohort ‘First-Year Students’ examines university students’ professional development, educational choices, success in studies, entrance into working life, and professional success. The longitudinal data collection launched in 2010 (Wave 1) and is ongoing (Wave 12, year 2017), whereby study participants are contacted two times a year on average to gather information about the above-mentioned topics through personal interviews and online surveys.

The initial sample consisted of \( N = 17,910 \) beginning students, of which \( n = 5,743 \) were enlisted as prospective teachers. From this group of prospective teachers, we selected those who had already completed their university training and had entered the second phase of teacher education (\( n = 1,758 \)). In Germany, this second phase comprises an induction programme for a period of one and a half to two years in which prospective teachers begin to teach autonomously, observe more experienced teachers, and attend seminars, sharing their experiences with other beginning teachers, especially about classroom management and didactics (for a more detailed description, see Cortina & Thames, 2013).

Our selection criteria resulted in a total sample size of 1,758 beginning teachers. The analysis of sample selectivity revealed those in the study were more likely to be female, \( \chi^2(1) = 48.61, \ p < .001 \), effect size Cramer’s \( V = .09 \), were younger (\( p = .041, \ \eta^2 < .01 \)), had a slightly better grade point average (GPA, school-leaving examination; \( p < .001, \ \eta^2 = .01 \)), and were more likely to study at least one major classified to the field of science, technology, engineering, and mathematics (STEM; \( p < .001, \ \text{Cramer’s } V = .05 \)). Concerning the assessment of social competence, participants in the analysis sample reported slightly lower assertiveness (\( p = .040, \ \eta^2 < .01 \)) but no differences were found for reports of adaptation (\( p = .739, \ \eta^2 < .01 \)). In sum, despite statistical significance, the magnitude of differences was indicative of only small selectivity effects (see Table S1).

After selecting our sample for analysis, we rearranged time to correspond to phases of university teacher training and the transition into practice rather than measurement occasions (see Figure 1). As participants began the induction phase across the last four measurement occasions, this procedure served a consistent time metric for all cases to facilitate data analysis. After the rearrangement of the data, the first measurement point (\( t_1 \)) includes assessments of prospective teachers in the university phase of teacher

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1 This paper uses data from the National Educational Panel Study (NEPS): Starting Cohort First-Year Students, https://doi.org/10.5157/NEPS:SC5:12.0.0. From 2008 to 2013, NEPS data were collected as part of the Framework Program for the Promotion of Empirical Educational Research funded by the German Federal Ministry of Education and Research (BMBF). As of 2014, NEPS is carried out by the Leibniz Institute for Educational Trajectories (LIfBi) at the University of Bamberg in cooperation with a nationwide network.
education. The second measurement point \((t_2)\) refers to the first assessment after the transition into the German induction programme.

**Sample**

Participants were 27.11 years old \((SD = 2.49)\) when they entered the induction programme \((t_2)\). The majority of them were female (82%). The GPA for this sample was \(M = 2.17\) \((SD = 0.55);\) theoretical range from (1) very good to (6) insufficient). About half of the beginning teachers (51%) had graduated in at least one STEM subject; others had graduated only in non-STEM subjects (e.g., English, arts, history). About one third (28%) of the prospective teachers in the analysis sample completed the university phase of teacher training within the standard period of five years. Participants worked in elementary (24%) and secondary schools (76%).

**Measures during the University phase of teacher education \((t_1)\)**

**Social competence**

To measure the core dimensions of social competence, assertiveness, and adaptation, we used two subscales from the Interpersonal Competence Questionnaire (ICQ; Kanning, 2006). Each subscale includes five items that refer to social situations and that were rated from (1) poor to (5) good. Assertiveness items include keeping track of personal goals (e.g., ‘Telling a companion you don’t like a certain way he or she has been treating you’) and had an acceptable internal consistency, with \(\alpha = .73\). Adaptation items refer predominantly to socially accepted reactions in contexts of interpersonal conflict, for example, ‘Refraining from saying things that might cause a disagreement to build into a big fight’. The internal consistency for this scale was rather low, with \(\alpha = .58\).

**Stress experience related to university teacher training**

To control for teachers’ previous stress experience, we included a scale that assesses the amount of stress and exhaustion students experienced during university training (Westermann, Elke, Spies, & Trautwein, 1996). Three items were rated from (0) does not apply at all to (10) fully applies, for example, ‘I am often tired and exhausted due to my studies’. The internal consistency of this scale was acceptable, with \(\alpha = .77\).
Measures during the induction phase (t2)

Emotional exhaustion
Emotional exhaustion was measured with an established German version of the Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1996), adapted to the induction phase of teacher education. The scale comprises four items (e.g., ‘I feel emotionally drained from my work as a teacher candidate’), which were rated from (1) does not apply to (4) fully applies. The internal consistency was good, with $\alpha = .80$.

Classroom management
Participants were asked to report on their classroom management experience with ratings about class interruptions and student monitoring (e.g., ‘I notice immediately when students start to do something different’), encompassing three items (Fend & Specht, 1986). These were rated from (1) does not apply at all to (6) fully applies. The internal consistency was acceptable, with $\alpha = .61$.

Statistical analysis
To test our hypothesis about the predictive validity of beginning teachers’ social competence for emotional exhaustion (1a), we used a structural equation modelling approach. To take measurement error issues into account, analyses were modelled with latent variables estimated by manifest indicators. Further, the model included covariates,

![Diagram]

**Figure 2.** (a) Latent social competence factors assertiveness and adaptation as predictors for emotional exhaustion; (b) latent mediation model with social competence as predictor (t1), classroom management as mediator (t2), and emotional exhaustion as outcome (t2); in both models, all paths were controlled for gender, GPA, and school type. Additionally, previous stress experience related to teacher training at t1 was modeled as a predictor for emotional exhaustion (not displayed). The standardized regression coefficients are displayed in parentheses. Coefficients in bold were statistically significant at $p < .05$. 
namely gender, age, GPA, STEM subject, the standard period of study, and school type. Finally, serving as the individual baseline for later emotional exhaustion, stress experience related to university teacher training was included as a covariate. To test the hypothesis regarding the mediation of the relationship between social competence and emotional exhaustion through classroom management as an indicator of the quality of social interaction in the classroom (1b), we extended the model described above by including classroom management as a latent variable (see Figure 2).

A mediation analysis was performed, using the product-of-coefficients method (MacKinnon, Fairchild, & Fritz, 2007). With this method, direct and indirect effects are simultaneously calculated to gain information about the assumed mediation. For this analysis, we only took into account those students whose reports on classroom management (only recorded in the eleventh wave) were earlier than the reports on emotional exhaustion, as mediation analysis requires chronological precedence from independent variable to mediator to dependent variable (MacKinnon et al., 2007). This subsample included \( n = 1,269 \) beginning teachers and was comparable to the overall analysis sample (small selectivity effects for all variables).

Analyses were computed with Mplus, version 7.31 (Muthén & Muthén, 1998–2012). Missing data on study variables were treated with the full information maximum-likelihood (FIML) approach. This approach allowed us to include information about all participants in the data analysis, instead of excluding participants with incomplete data, which potentially would have caused biased results and narrowed validity (Enders, 2010).

Results

Descriptives

Table 1 presents the means, standard deviations, and correlations of the study variables. Socio-demographic variables showed minor correlations to the central study variables. Social competence scores were significantly related to classroom management (assertiveness: \( r = .19, p < .001 \); adaptation: \( r = .23, p < .001 \)). Also, classroom management was significantly related to emotional exhaustion (\( r = -.20; p < .001 \)). Further, emotional exhaustion showed a positive association with former stress experience during university teacher training (\( r = .31; p < .001 \)), which means that participants who felt stressed during university teacher training also tended to report higher ratings for emotional exhaustion related to teaching practice.

Direct relationship between social competence and emotional exhaustion

In a first step, we examined the direct effects of the two basic social competence dimensions on emotional exhaustion (see Figure 2a). These were both significant, with \( \beta = -.08 (p = .050) \) for assertiveness and \( \beta = -.11 (p = .037) \) for adaptation, supporting our first research hypothesis that beginning teachers with higher social competence experience less emotional exhaustion. Thereby, both dimensions of social competence appeared to affect emotional exhaustion in similar ways. Accordingly, beginning teachers who reported being more assertive as well as adaptive in social interactions during university teacher training also were less emotionally exhausted when being confronted with the demands of teaching in the induction phase.

In sum, this initial model explained more than 14% of the variance in emotional exhaustion and fitted adequately to the data, with a low root-mean-square error of
Table 1. Descriptive statistics and bivariate zero-order correlations between the study variables (Study 1)

|   | M (SD) |   |   |   |   |   |   |   |   |   |   |
|---|--------|---|---|---|---|---|---|---|---|---|---|
| 1 | Assertiveness (t1) | 3.25 (0.69) | 🟢 | .23 | .19 | -.14 | -.12 | -.08 | .05 | .10 | -.02 | .03 | .10 |
| 2 | Adaptation (t1) | 3.68 (0.54) | 🟢 | .23 | -.17 | -.16 | -.13 | .08 | -.09 | .00 | .05 | -.03 |
| 3 | Classroom management (t2) | 4.47 (0.60) | 🟢 | -.20 | .00 | .10 | .06 | .10 | -.05 | -.28 | -.19 |
| 4 | Emotional exhaustion (t2) | 2.21 (0.64) | 🟢 | .31 | .09 | -.02 | .00 | -.02 | .10 | -.06 |
| 5 | Stress experience (t1) | 3.98 (1.88) | 🟢 | .10 | .12 | -.01 | .09 | .01 |
| 6 | Sex (1 = female) | 82% | 🟢 | -.15 | -.06 | -.08 | -.08 | -.17 |
| 7 | Age | 28.35 (2.55) | 🟢 | .20 | -.05 | .01 | .04 |
| 8 | GPA | 2.17 (0.52) | 🟢 | -.11 | -.15 | -.12 |
| 9 | STEMa | 51% | 🟢 | -.13 | -.07 |
| 10 | Standard period of studyb | 72% | 🟢 | .33 |
| 11 | School typec | 76% | 🟢 |

aDummy coded (no STEM subject = 0, at least one STEM subject = 1); bDummy coded (within standard period of study = 0; standard period of study exceeded = 1); cDummy coded (elementary school = 0, secondary school = 1); significant coefficients (p < .05) are in bold.
approximation (RMSEA = .04), a high comparative fit index (CFI = .92), a high Tucker–Lewis index (TLI = .90), and a low standardized root-mean-square residual (SRMR = .04).

**Mediation through classroom management**
The mediated relationship between social competence, classroom management, and occupational well-being is displayed in Figure 2b. Assertiveness, the ability to successfully pursue personal interests within social interactions, was positively associated with classroom management ($\beta = .20, p = .001$). Likewise, the path between the ability to adapt to the circumstances of social interaction and classroom management was statistically significant ($\beta = .23, p = .001$), which indicates that self-reported social competence during university teacher training is predictive for later reports of classroom management throughout teaching practice in the induction phase. Further, classroom management was a significant negative predictor for emotional exhaustion ($\beta = -.27, p < .001$). According to this, the indirect effect via classroom management was statistically significant for as well assertiveness ($\beta = -.05, p = .014$) as adaptation ($\beta = -.06, p = .017$), indicating a fully mediated relationship between generic social competence and occupational well-being.

The total effects of social competence on occupational well-being, namely the sum of the direct and the indirect effects, were not statistically significant for both social competence dimensions, with $\beta = -.10, p = .066$, for assertiveness, and $\beta = -.01, p = .820$, for adaptation. This pattern may be a result of the oppositional direct and indirect effects in the mediation model.

The mediation model explained 18% of the variance in beginning teachers’ emotional exhaustion and suggests a link between the two dimensions of social competence, classroom processes indicated by classroom management, and emotional exhaustion. The fit to the data ranged from acceptable (CFI = .93; TLI = .91) to very good (SRMR = .05; RMSEA = .03) and indicated well to excellent model fit.

**Summary of study 1**
In Study 1, we investigated the relevance of social competence for beginning teachers’ well-being. As expected, the basic dimensions of social competence – assertiveness and adaptation – showed significant negative predictive validity for emotional exhaustion (Hypothesis 1a). This finding indicates that predispositions to act in assertive and...
adaptive ways within social interaction are beneficial for indicators of teachers’ occupational well-being. Second, we investigated, whether professional practice, indicated by classroom management behaviour, mediates the association between social competence and emotional exhaustion. The finding of a full mediation relationship (Hypothesis 1b) indicates that teachers who have already been highly assertive and adaptive during the first phase of teacher education were also more successful in classroom management during the induction phase. This resource, in turn, was negatively related to beginning teachers’ emotional exhaustion.

STUDY 2
Study 1 underlined that the social competence of teachers serves as a vital individual resource in dealing successfully with the (social) demands of teaching and results in lower levels of emotional exhaustion in beginning teachers, which corresponds to theoretical assumptions (see Jennings & Greenberg, 2009). If and how university training affects the development of prospective teachers’ social competence was examined in Study 2. We addressed the question of whether there is a significant intraindividual change in prospective teachers’ social competence (Hypothesis 2a) and, further, whether practical learning opportunities within university teacher training can explain the change (Hypothesis 2b). Thereby, we emphasized the role of prospective teachers’ school internships, which might provide effective opportunities to learn from experienced teachers and to gain experience in dealing with students (Bandura, 1977; Gröschner et al., 2013; Hascher, 2012).

Method
Procedure
The Student Teacher Professional Development Study (STePS\(^2\)) is a panel study on prospective teachers’ competence development at a German university. Launched in 2017, the study is ongoing with a yearly assessment of students’ development and encompasses currently three waves (see Figure 3). For each measurement occasion, all prospective teachers at the university were contacted and invited to participate in the study via email. The overall sample to wave 3 included \( N = 3,185 \) prospective teachers which corresponds to an average response rate of 31% of all potential eligible prospective teachers at this university over all waves. For our analysis of longitudinal change, we selected those participants who were assessed at least twice (\( n = 831 \)).

The analysis of sample selectivity showed only marginal differences between the analysis sample and filtered participants. For an overview, see Table S2. The analysis sample included slightly younger students (\( p = .002, \ \eta^2 < .01 \)), more female participants (\( p < .001, \ \text{Cramer’s} \ V = .07 \)), and students with a slightly better GPA (\( p < .001, \ \eta^2 < .01 \)). Concerning the study of at least one STEM subject, no statistically significant differences were found between the analysis sample and the filtered sample (\( p = .668 \)).

\(^2\) The Student Teacher Professional Development Study (STePS) is part of the "Qualitätsoffensive Lehrerbildung", a joint initiative of the Federal Government and the Länder which aims to improve the quality of teacher training. The programme is funded by the Federal Ministry of Education and Research (01JA1923). The authors are responsible for the content of this publication.
Sample
The description of sample characteristics refers to the participants' first assessment in the study (either wave t1 or t2). Participants were predominantly female (70%) and were 23.52 years ($SD = 3.34$) on average. The average GPA was 2.24 ($SD = 0.51$). Concerning the study majors, 344 (43%) of the prospective teachers in the analysis sample studied at least one STEM subject. 18% of the analysis sample already had a bachelor’s degree.

Measures
To address our research questions about the change in prospective teachers’ social competence and the factors that relate to this change, our measures included students’ self-reports about social competence, information about their attendance to mandatory internships, and control variables, namely gender, age, study of at least one STEM subject, and school GPA.

Social competence
The social competence assessment was comparable to that in Study 1. However, in Study 2, assertiveness and adaptation were each represented with three items instead of five and were rated from (1) poor to (4) good. The internal consistencies for assertiveness ($\alpha = .84$) and adaptation ($\alpha = .62$) were similar to those for Study 1.

Internships
Participants reported whether they had completed mandatory internships during university teacher education, including two bachelor internships (duration: three weeks each) and one master internship (4–8 weeks). Previous studies emphasized the critical role of accompanying university support for the effectiveness of internships (Gröschner

Figure 4. Latent change score model. Illustration of the latent change of social competence dimensions assertiveness and adaptation within one year (change t1–t2) and within two years of university teacher training (change t1–t3); covariates: age, sex, GPA, and STEM-subject (not displayed for the sake of clarity).
An established German instrument, originally constructed and validated by Westermann, Elke, Spies, and Trautwein (1996), was used to assess satisfaction with internships. The present version includes four items, which specifically relate to the satisfaction with the first bachelor, the second bachelor, or the master internship, respectively. Participants rated four items from (1) does not apply at all to (4) fully applies. For example, one item was ‘I learned a lot during my [...] internship’. The internal consistency was good, with $\alpha = .84$. The internship quality, namely the participants’ evaluation of the internship mentoring at university, was measured by a slightly adapted scale from Gröschner et al. (2013). The questions referred to the quality of courses in terms of knowledge gain fit to practical requirements and suggestions for practical work. The three items were rated from (1) does not apply at all to (4) fully applies. The internal consistency of the scale was good, with $\alpha = .89$.

**Statistical analysis**

Data analysis is based on an application of latent change score models, which are well suited to investigate true intraindividual change as well as the prediction of this change by exogenous variables (McArdle, 2009). Hence, this approach made it possible to examine the interindividual differences in intraindividual change on a latent level.

To address our first and second hypotheses about development trajectories in social competence within university teacher training, we applied two steps of analyses. First, we used latent change models for assertiveness and adaptation to investigate the longitudinal development of prospective teachers’ social competence within university teacher training over one year ($t_1$–$t_2$) and two years ($t_1$–$t_3$; Hypothesis 2a; Model 1). Second, we extended the initial model and estimated the prediction of change in prospective teachers’ social competence by aspects of school internships (Hypothesis 2b, Models 2–4).

Separate models were calculated for assertiveness and adaptation (see Figure 4 for an illustration). Both models were set up with three items for social competence per measurement occasion. Thereby, residuals were allowed to correlate across time. As recommended for latent change score models, we established strong measurement invariance across time for both, the assertiveness and the adaptation model (see Table S3). Analyses were conducted with Mplus, version 7.31 (Muthén & Muthén, 1998–2012), using FIML to account for missing data (Enders, 2010). All analyses were controlled for socio-demographic covariates, namely gender, age, STEM subject, and GPA.

**Results**

In the following, we present findings on the latent change score models of assertiveness and adaptation, and the prediction of change by aspects of school internships within university teacher training. Descriptive statistics and correlations for the analysis sample are summarized in Table 2.

**Latent change in assertiveness and adaptation**

Students’ assertiveness and adaptation scores showed almost no meaningful correlations regarding the other study variables. Worth mentioning is the minor correlation between
Table 2. Descriptive statistics and bivariate zero-order correlations between the study variables (Study 2)

|   | M (SD)% | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    |
|---|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. Assertiveness (t₁) | 3.08 (0.67) | -     | **.67** | **.68** | .07 | -.01 | -.07 | .11 | .05 | .00 | .04 | .06 | **.11** |
| 2. Assertiveness (t₂) | 3.09 (0.68) | -     | **.77** | -     | .10 | .15 | .12 | .07 | .06 | -.08 | -.04 | .06 | **.10** |
| 3. Assertiveness (t₃) | 3.08 (0.72) | -     | -.00 | .03 | .09 | .03 | **.19** | -.01 | -.04 | .03 | -     | **.12** |
| 4. Adaptation (t₁)    | 3.29 (0.50) | -     | -     | **.81** | **.72** | **.22** | .13 | **.18** | **.11** | .06 | -     | **.00** |
| 5. Adaptation (t₂)    | 3.32 (0.50) | -     | -     | -     | **.89** | .15 | .18 | **.14** | .03 | -.08 | **.06** |
| 6. Adaptation (t₃)    | 3.38 (0.48) | -     | -     | -.13 | .18 | .13 | **.11** | -.10 | -     | **.17** |
| 7. Satisfaction with internships | 3.32 (0.63) | -     | -     | -.10 | -.11 | -.02 | .06 | -.13 | -     | -     | -     | -     |
| 8. Quality of internship mentoring | 2.45 (0.76) | -     | -     | -.10 | -.01 | -.04 | -.01 | .13 | -     | -     | -     | -     |
| 9. Sex                | 29.8%    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |
| 10. Age               | 23.52 (3.34) | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |
| 11. STEM              | 42.9%    | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |
| 12. GPA               | 2.24 (0.51) | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |

Note. Assertiveness (t₁–t₃) and adaptation (t₁–t₃) are latent factors; dummy variables: sex (female = 0, male = 1), STEM (no STEM subject = 0, at least one STEM subject = 1); all correlations in bold are statistically significant at p < .05.
assertiveness and adaptation ($r = .07–.15$), which supports the theoretically assumed orthogonality of the two social competence dimensions.

Regarding the longitudinal change, there was considerable rank-order stability in both social competence dimensions over one year (assertiveness: $r_{t1-t2} = .67$, $r_{t2-t3} = .77$; adaptation: $r_{t1-t2} = .81$, $r_{t2-t3} = .89$). Similar patterns apply to the change over two years, with $r_{t1-t3} = .68$ for assertiveness and $r_{t1-t3} = .72$ for adaptation. Although these results indicate substantial stability in change, the latent change models revealed also variance in change scores, which speaks for interindividual differences in change over time (see Table 3).

Mean-level changes in assertiveness ratings were not statistically significant, neither over the one-year interval ($\Delta M_{t1-t2} = 0.02$, $SE = .03$, $p = .509$, $d = .03$), nor the two-year interval ($\Delta M_{t1-t3} = 0.06$, $SE = .03$, $p = .836$, $d = .01$). In contrast, prospective teachers improved in their abilities to adapt to their interaction partners from the first to the third measurement point ($\Delta M_{t1-t3} = 0.09$, $SE = .02$, $p < .001$, $d = .24$). Thereby, the change within one year reached no statistical significance ($\Delta M_{t1-t2} = 0.03$, $SE = .02$, $p = .089$, $d = .08$).

There were no significant associations between the change in prospective teachers’ assertiveness and the covariates. The change in adaptation, however, was higher in those prospective teachers, studying no STEM subject ($\beta_{t1-t2} = -.17$, $p = .014$). Also, worse GPA was associated with development in adaptation ($\beta_{t1-t3} = .17$, $p = .017$).

### Latent change due to school internships

Change scores for social competence varied significantly and substantially between individuals, with $\sigma^2 = .32$ ($p < .001$) for assertiveness and $\sigma^2 = .07–.09$ ($p < .001$) for adaptation, indicating interindividual variation in intraindividual change. Little, Lindenberger, and Maier (2000) recommend investigating interindividual differences in change scores even in cases where the overall change of the relevant variable is non-significant. According to this, the second set of latent change models was applied to investigate the variance in prospective teachers’ social competence development trajectories. Both latent change models were extended with additional predictors of change. These were attendance to an internship (model 2), satisfaction with internships (model 3), and quality of internship university support (model 4). The model results are summarized in Table 4.

Model 2 included dummy variables for completing the first bachelor internship, the second bachelor internship, or the master internship (in contrast to no internship, study).
Table 4. Prediction of change by school internships within university teacher training

| Assertiveness | Sex | Age | STEM | GPA | Bachelor internship (1st) | Bachelor internship (2nd) | Master internship | Perception of internships | Satisfaction | Quality | Adaptation | Sex | Age | STEM | GPA | Bachelor internship (1st) | Bachelor internship (2nd) | Master internship | Perception of internships | Satisfaction | Quality |
|---------------|-----|-----|------|-----|---------------------------|---------------------------|-------------------------|----------------------|-------------------------|--------------|---------|------------|-----|-----|------|-----|---------------------------|---------------------------|-------------------------|----------------------|--------------|---------|
| Model 1       | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 | t1  | t1-t2 | t1-t3 |
| Assertiveness | .002 | -.025 | .010 | .002 | -.023 | .014 | -.004 | -.022 | .014 | -.005 | -.026 | .010 | .092 | -.061 | -.071 | .102 | -.063 | -.071 | .097 | -.062 | -.072 | .108 | -.062 | -.062 | .004 | -.077 | -.084 | .014 | -.082 | -.092 | .011 | -.076 | -.078 |
| Internships   | Bachelor internship (1st) | -.042 | .050 | .010 | Bachelor internship (2nd) | .004 | .071 | -.095 | Master internship | .078 | .034 | .110 | Perception of internships | Satisfaction | .116 | .018 | .005 | Quality | .109 | -.016 | .055 | Adaptation | Sex | .127 | .004 | -.051 | .132 | .013 | -.054 | .130 | .006 | -.052 | .128 | .007 | -.056 | Bachelor internship (1st) | Master internship |
| Internships   | Bachelor internship (1st) | .059 | .062 | -.348 | Bachelor internship (2nd) | .092 | .087 | -.467 | Master internship | .058 | .149 | -.436 | Perception of internships | Satisfaction | .198 | .147 | .058 | Quality | -.001 | .135 | .100 | Note. n = 831 prospective teachers; standardized coefficients; significant coefficients (p < .05) are in bold.
respectively. Model results revealed that there were no significant associations between the attendance to internships and change in social competence, neither in the one-year interval nor within two years. The third model included prospective teachers’ satisfaction with their internship as a predictor. Both baseline scores were predicted by this subjective evaluation of the internships, with ($\beta = .12, p = .043$) for assertiveness and ($\beta = .20, p = .003$) for adaptation. However, there were no statistically significant relations to the social competence change scores.

The results for the prospective teachers’ quality rating as a predictor of change were similar (model 4). The perceived quality of university internship mentoring was positively associated with assertiveness baseline scores ($\beta = .11, p = .045$), but not with adaptation. Further, this predictor did not show any association with changes in either of the social competence dimensions.

**Summary of study 2**

Study 2 was conducted to gain more insight into the development of social competence throughout university teacher education. Our hypothesis about moderate development was partly supported by the data. The longitudinal analysis showed a small mean-level increase in students’ adaptation within two years of university teacher training. Thereby, it is not possible with the available data to determine whether this increase is due solely to education or whether it is also caused by natural maturation of the students. In contrast, the prospective teachers did not change concerning their assertiveness. Despite high rank-order stability, the change scores between the first and second measurement occasions varied meaningfully between prospective teachers. However, our assumptions of school internships, acting as practical learning opportunities and predicting changes in social competence, were not supported. Effects due to the characteristics of school internships within university teacher education were minor and limited to the social competence baseline scores.

**GENERAL DISCUSSION**

The main focus of both studies in the present research was the investigation of teachers’ social competence, as empirical evidence for its relation to occupational well-being is particularly lacking for the teaching context. In our studies, we focused on two core aspects of social competence: assertiveness and adaptation. Assertiveness comprises abilities that allow individuals to pursue their needs and goals in social interaction. Adaptation summarizes abilities that empower persons to perceive the needs of the interaction partners and to take these into account in one’s own actions. Accompanying the two dimensionality of social interaction, the combined application of assertive and adaptive behaviours has proven to be beneficial (Wubbels & Brekelmans, 2005). In Study 1, we concentrated on the predictive validity of social competence for beginning teachers’ occupational well-being. Study 2 aimed to capture insights into the development of social competence in prospective teachers throughout university teacher training.

**The role of social competence for beginning teachers’ occupational well-being**

The results of Study 1 showed that social competence is predictive for teacher well-being, as both basic dimensions of social competence were significantly and negatively linked to
emotional exhaustion. This finding supports our hypothesis that social competence might act as an individual resource of beginning teachers, helping them to face the social demands of teaching, and thus preventing stress experiences. In line with theory (Kunter et al., 2013; Lazarus & Folkman, 1987), the study further revealed that beginning teachers’ reports of classroom management function as a mediator within the relationship between social competence and emotional exhaustion.

Given these results, we agree with Baumert et al. (2013), who explicitly stated that a model of professional competence would be incorrectly specified if individual prerequisites and generic competencies, such as social competence, were directly included. Nevertheless, our investigation implies that social competence constitutes an important individual prerequisite as it affects professional practice in a positive manner and thus plays a significant role in teachers’ occupational well-being.

On a theoretical level, the underlying mechanism might be explained by the translation of generic social competence into profession-related competences and their application. Although teacher–student interactions are complex due to the hierarchical difference between teachers and students, the numerical proportion of interaction partners (one teacher vs. 20–30 students), developmental changes in student behaviour – to name just some of the aspects (see Doyle, 2006) – features of social competence supporting assertive and adaptive behaviours in general social contexts might also support behaviours needed to succeed in this specific social context of teaching. In this sense, it can be assumed that generic social competence is related to job-specific skills and might support their development. Thus, asserting oneself appropriately within teacher–student interactions is most likely reflected in classroom management skills such as the collaborative establishment of rules and expectations, or the providing of alternatives and freedom of choice. Similarly, adaptability might support teachers in taking the student perspective and in understanding the dynamics of conflict situations within the classroom, which might induce the establishment of a conflict-resolving climate within the classroom.

In sum, our findings indicate that social competence helps teachers to succeed in the specific challenges of teaching as shown by the example of classroom management, which was positively related to both social competence dimensions. The measurements at different time points in our study, with the social competence assessment in the first phase of teacher training, and the shifted assessments of classroom management and occupational well-being during the induction phase underline this assumption.

Social competence development in the course of teacher education
Study 2 concentrated on prospective teachers’ social competence development, whereby – contrary to our expectations – the longitudinal analysis of change did not indicate any significant intraindividual enhancements of assertiveness and adaptation within one year of university teacher training. However, there was a small, but significant change of in adaptation considering the two-year interval.

Most evidence about the development of social competence aspects refers to children and adolescents, whereas insights for adulthood are lacking. However, it can be assumed that social competence in adulthood is sensitive to change, for example, through maturation and individual experience. In the context of university teacher training, there is an ongoing discussion about factors that support the development of generic capabilities like social competence. Mansfield et al. (2016) mention methods such as the examination of case studies and videos illustrating the personal challenges of teachers, or...
the practising of communication skills for common job-related situations. According to Kember and Leung (2005), learning environments should focus on the understanding of key concepts, activate students’ engagement in learning activities, and give feedback and assistance to foster social competence. The establishment of such methods in university teacher training could lead to supporting the development of social competence and approaching the effects of specific interventions with a focus on the promotion of skills that relate to social competence (Carstensen et al., 2019; Klemola et al., 2013; Steins et al., 2015). An alternative would be to integrate such interventions into the university teacher training, as the standard German curriculum does not yet include those (Hohenstein et al., 2014).

For a better insight into the determinants of social competence development, we further attempted to predict the variance in the individual change trajectories by practical learning opportunities, using school internships as an indicator. The results did not confirm the assumption that prospective teachers might benefit from well-prepared and well-conducted internships in terms of their social competence. As internships provide an opportunity to both observe the performance of qualified teachers and to experience the reality of teaching oneself (Gröschner et al., 2013; Hascher, 2012), we had expected to obtain a more pronounced development of prospective teachers’ social competence. However, practical obstacles might have reduced the impact of prospective teachers’ observations and experience. First, each internship only involved a small amount of independent teaching and restricted opportunities to gain mastery experience and to familiarize themselves with teaching. Second, the observation of qualified teachers’ performance might in some cases contradict university lectures and not represent desirable teaching performance. So, internships do not necessarily promote the individual development of best-practice teaching. Rather, prospective teachers might adopt their role models’ behaviour patterns in a non-reflecting manner (Chitpin, Simon, & Galipeau, 2008; Wideen, Mayer-Smith, & Moon, 1998).

Nevertheless, previous studies have shown that, in terms of competence development, prospective teachers benefit from well-organized practical experience, involving preparation courses at university and supportive internship mentoring in the schools (Brouwer & Korthagen, 2005; Gröschner et al., 2013). This accompanies the positive association between baseline social competence scores with internship satisfaction and perceived quality of university support. However, the direction of this association remains unclear, as it is also possible that more assertive and adaptive prospective teachers benefit more from their internships and are therefore more satisfied.

**Limitations and directions for future research**

Some limitations of the present investigation should be considered. In Study 1, we operationalized classroom processes only through brief assessments of teacher-reported classroom management. Assuming that the teacher–student interaction in the classroom is very complex (Doyle, 2006), this approach is only an approximation. Further, by design, the mediation analysis could only be performed with a subsample of our analysis sample. Concerning Study 2, the main limitation refers to the sample, which was restricted to students at one university. In other universities, the structures may differ, for example, in the promotion of social competence aspects or the implementation of internships. But studies also show that institutional structures are mostly irrelevant for self-reported competencies (Kunina-Habenicht et al., 2013; Zimmermann, Rösler, Möller, & Köller, 2018).
Both studies within the present investigation were based on large-scale assessments of prospective and beginning teachers. This certainly allows for profound conclusions about several important topics within the field of teacher education. However, this kind of study design has some inherent limitations such as the focus on self-reports. It should be noted that we did not have any information about the actual instructional performance and behaviours in interactions with students. Further, the assessment of social competence was very short, which might have caused the low internal consistency of the adaptation assessment in both studies as the Interpersonal Competence Questionnaire typically demonstrates good reliability (Kanning, 2006).

The present investigation sheds light on the relevance of social competence for beginning teachers and (the antecedents of) its development in the context of teacher education. Concurrently, new questions arise that should be considered in future research. In principle, the assessment of social competence with self-report questionnaires can provide valid insights into mechanisms and general behavioural tendencies (Paulhus & Vazire, 2007). However, the assessment of beginning teachers’ actual behaviour could give further insights into the relationship between socially competent performance in the classroom situation and occupational success in terms of occupational well-being. Additionally, the inclusion of student assessments would allow investigating both sides of the interaction within classrooms. Further, the present investigation focused on (the quality of) mandatory internships within university teacher training as determinants of social competence development. Future studies should identify further factors such as the impact of specific training programmes on the development of prospective teachers’ social competence.

Practical implications for teacher education
The present investigation showed that social competence constitutes a generic precursor that could be utilized to identify prospective teachers who might need further support to overcome the challenges of teaching. The assessment of social competence, due to its generic character, is already possible in the early stages of teacher education. So, prospective teachers who are potentially at risk for problems concerning teaching and interacting with students could be identified early and, if necessary, supported by appropriate university programmes.

The present investigation also revealed that social competence is scarcely affected by university teacher education. Accordingly, the curricula of university teacher education programmes should enhance their efforts to promote social competence. One possibility is the development and inclusion of specific interventions. These interventions could be obligatory for all students or could preferably be offered to students ‘at-risk’, that is, those with deficiencies in assertiveness and adaptation.

Conclusion
The present study examined the role of social competence for beginning teachers’ well-being when entering the teaching profession and whether prospective teachers get prepared for the interpersonal challenges of teaching within their university preparation. Thereby, social competence dimensions of assertiveness and adaptation were predictors of beginning teachers’ occupational well-being, mediated by classroom management as one key dimension of teacher–student interaction in the classroom. However, the second part of our investigation revealed that as well assertiveness as adaptation showed slight
development in the first phase of teacher education. Hence, university teacher training should enhance efforts to promote social competence as a basis for the professional development of prospective teachers.

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**Conflicts of interest**

All authors declare no conflict of interest.

**Author contributions**

Bastian Carstensen (Data curation; Formal analysis; Investigation; Methodology; Writing – original draft; Writing – review & editing) Uta Klusmann (Conceptualization; Project administration; Resources; Supervision).

**Data availability statement**

The present research is based on data from two large datasets. The data that support the findings of the first study are available from https://doi.org/10.5157/NEPS:SC5:12.0.0. Restrictions apply to the availability of these data, which were used under licence for this study. Data are available, free of charge, to individuals with a valid NEPS data usage contract. Data basing the findings of the second study will be available from the corresponding author upon reasonable request.

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**Supporting Information**

The following supporting information may be found in the online edition of the article:

**Table S1.** Selectivity Analysis between the Baseline Sample and the Analysis Sample of Beginning Teachers in Study 1.

**Table S2.** Selectivity Analysis between the Baseline Sample and the Analysis Sample of Prospective Teachers in Study 2.

**Table S3.** Fit Indices for Measurement Invariance Tests for Assertiveness and Adaptation.