

Efficacy in German Teacher Education

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Abstract

At the present time German teacher training is confronted with a great political will to bring about change. International comparative studies of recent years have shown a dissatisfying learning outcome. The most dramatic result is a strong interdependence of school success and social background. German teachers experience their profession as problematic. At present only 35% reach the normal retirement age. The article discusses structural differences in teacher training compared to other countries and analyses motivation for the choice of study, perceived self-efficacy, experience of stress, patterns of uncertainty avoidance and previous experience in a sample of 1358 students starting teacher training.

Key words: Teacher training; Career choice motivation; Self-efficacy; Experience of stress; Uncertainty avoidance

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INTRODUCTION

At the present time German teacher training is confronted with a great political will to bring about change. There

is much dissatisfaction both with the performance of school students in comparative international studies and with teacher training. The present study examines the performance of 1358 prospective teachers from two German universities against this background:

1. What is the motivation for the choice of a course of study and profession among students of teacher training?

2. What are the perceived self-efficacy, experience of stress, patterns of uncertainty avoidance and previous experience of students starting teacher training?

3. What expectations do they have in regard to teacher training?

To facilitate the interpretation of the results we briefly highlight the situation in German schools and teacher training in a number of chosen areas. At the centre of the presentation is the performance in international comparative school studies, the public perception of the stress suffered by teachers in comparison with the findings of empirical studies and research on professionalization, which is important in Germany. The account of the effectiveness of teacher training is given in the context of the concluding discussion.

German Teacher Training Against the Background of International Comparative Studies

In the public perception of the German educational system the disappointing performance in the big international comparative studies of recent years such as the TIMSS (Baumert *et al.*, 1998; Stigler *et al.*, 1999) and PISA (Klieme *et al.*, 2010) play an important part. Contrary to the high expectations German school students performed badly, whereas they occupied the top places in the primary school study PIRLS (Bos *et al.*, 2003). A particularly disappointing feature seems to have been the interdependence of school success and social background. In scarcely any other country this relationship was so clearly marked. This was corrected in the recent PISA studies, but not to the desired degree (Klieme *et al.*, 2010). In contrast to the reaction in many other European

countries, the media echo on the German performance in the study was immense. The press and the politicians saw in it a kind of insult to one's honour and a national failure of a school system of which one had hitherto been very proud. Against this background one of the central questions of German educational science is: What happens between the time when the children are around 9 years old (primary school) and the age of 15? If one adopts a comparative perspective it is evident that the level of competence has deteriorated dramatically. Something is going wrong in the German school system. The press and the politicians lay a substantial part of the responsibility for this phenomenon at the door of German teachers and teacher training (Kahl & Spiewak, 2005).

More far-reaching conclusions for educational policy to be drawn from the results of the international comparative studies, which go beyond the populist criticisms of teacher training, can be summarized as follows (Kiel, 2009): Highly selective school systems such as the German system, in which school students are distributed among different school types after their fourth year at school tend not to promote learning success on a broad scale. Integrative systems such as the comprehensive school seem to be superior in this respect to structured systems. All-day institutions seem to provide a way of reducing the relationship between social origin and school success. Not only the particular gifts but also the weaknesses of school students must be recognized as early as possible, if possible at the pre-school age, if the school students concerned are to be correspondingly encouraged. Pre-school language promotion and general promotion, above all for school students with a migration background or from socially disadvantaged milieus, must not only begin early but must also be developed in cooperation with the primary schools (Kiel, 2009). The diagnostic competence of teachers must be strengthened in the course of an increased professionalization. The present endeavours to achieve a so-called output orientation of the educational system are of particular importance. As in the Netherlands and the USA educational standards must be formulated in accordance with this output orientation, which the school students should reach at a minimum, middle and maximum level. The models for such output orientation are the Netherlands and the USA (Klieme *et al.*, 2003).

There is profound controversy on the implementation of such conclusions, which is both political and scientific, whereby the scientific conclusions are often influenced by political positions. Effectiveness is frequently seen in the field of tension between the different demands cited here. The newly trained teacher should acquire additional competence and not only adjust to the changed system but also work himself on the changes. Effectiveness demands of prospective teachers, teachers and the training system as a whole that they take an adaptive approach to the reform endeavours.

German Teacher Training Against the Background of Teacher Stress

The criticism on performance in the international comparative studies and the newly formulated demands encounter a teaching profession in Germany whose social reputation has not been particularly high for many years. When the former Federal Chancellor Gerhard Schröder was still Minister President in Lower Saxony he characterized teachers as "lazy bums" and as "Christmas geese who are not asked before they are slaughtered". He could be sure of the applause of the population. The Member of Parliament, Gilges, is recorded in the minutes of a sub-committee meeting as having said without much contradiction: "That wasn't a human being. It was a teacher" (NRWL, 2001). Even educationists, whom one might expect to have a closer affinity with teachers, have for years been making statements to the effect that teachers want "little 'morning jobs' with lots of holidays, good pay and the holding of routine lessons" (Struck, 1994, p. 16). In making such a remark the educationist Struck joins hands with the powerful President of the Employers' Association Hundt for whom teachers are "the world champions in taking paid holidays" (quoted after Psychotherapiereport, 2000).

Leaving aside this populism, it has been shown in large-scale empirical studies that German teachers experience their profession as problematic. At present only 35% reach the normal retirement age (Statistisches Bundesamt 2007/Federal Statistics Office). Of those who take their retirements early for health reasons at least half suffer from psychological and psychosomatic disturbances (see the Dritter Versorgungsbericht des Bundesinnenministeriums 2005/3rd Pensions Report of the Federal Ministry of the Interior, 2005). In the Potsdam large scale study of teachers with more than 20,000 test persons carried out by Uwe Schaarschmidt it turned out that around 60% of German teachers fall in so-called risk patterns in regard to their behaviour in dealing with stress and problems. The two risk patterns characterize on the one hand teachers suffering from burnout and, on the other hand, teachers whose health is endangered and who are moving in the direction of burnout. The essential criteria of the risk patterns are a lack of ability to maintain distance, a high tendency towards resignation and an inability to master problems actively (Schaarschmidt, 2005; cf. Schmid, 2003). Further factors are a lack of social integration and of social networks, although *cooperation* and exchange among the school staff are regarded as important resources for overcoming stress and the challenges of the teaching profession (Bohnsack, 2004, p. 158; Buhren & Rolff, 2002, pp. 113-115; Daschner, 2004, p. 299). These alarming figures are not only valid for teachers exercising their profession; 40% of students in their first semester already fall in these risk patterns (Herlt & Schaarschmidt, 2007). This can be interpreted to

mean not only that teachers suffer burnout in the course of exercising their profession, but that the subject of study itself attracts a clientele which has difficulties in dealing with stress.

In view of this specific clientele it is necessary to ask about the motives which lead to a decision in favour of teacher training. University teachers frequently complain that prospective teachers only identify themselves with their studies to a limited degree (Kiel, Geider & Jünger, 2004). Previous research on motives which takes the threefold school system into account reveals specific differences according to school type. Whereas students preparing for teaching at grammar schools (Gymnasien) state motives such as interest in the subjects studied or the desire to mediate knowledge, those preparing for teaching in primary or secondary general schools (Grund- und Hauptschulen) above all place the wish to work pedagogically with children and young people in the foreground (Kiel, Geider, & Jünger, 2004; Kiel *et al.*, 2007). Ongoing prospective teachers are provided with scarcely any opportunity to compare their expectations and wishes with the realities of their future profession. They begin their studies with unrealistic and even idealistic notions which they possibly also carry over into their professional life.

In the research of Henecka and Gesk (1996) students saw the causes of their failure not in the institution but in the “realization of a false choice of profession” and in “subjectively false conceptions of study” (pp. 180-181). Gesk (1997) describes the realization of a false choice of a course of study and the discrepancy between expectations and reality as the main reasons for breaking off the course of study. This points to expectational attitudes in regard to study and profession which are obviously not in harmony with realistic requirements. In general with respect to many of the quoted studies a realistic job preview seems to be necessary but is not provided during university teacher training.

Professionalization Research

Against this background professionalization theory plays an important role in Germany. It calls in a variety of ways for a kind of “professional identity” (van den Berg, 2002) or a so-called “professional self” (Bauer, Kopka, & Brindt, 1999), which should already be developed at the university. This demand, which is made at the national and international levels, comes up with widely differing conceptions on what such a professional identity or professional self should look like. There is a large degree of agreement, however, on the assumption of a fundamental metaphor: The professionalization of teachers has to do with continuous development. This development must be initiated, guided and supported (Gehrmann, 2003). The research on professional biographies of Sikes and Troyna (1991) and Terhart (1992) and the studies of the Swiss author

Huberman (1991) have been particularly formative in the German context for this metaphor. A more recent important approach is the so-called Bildungsgangdidaktik (didactics of educational development). The core idea of Bildungsgangdidaktik is that the development of occupational professionalism is characterized by the mastery of specific developmental tasks (Hericks, 2006). Hericks distinguishes between the following developmental tasks: *competence*, the development and recognition of possibilities for action; *mediation*, the development of one’s own role as mediator of cultural facts and subject contents; *recognition*, the development of a sound concept of the perception of school students as others in need of development; *institution*, the development of a sound concept of cooperation with colleagues within the limits of these overall conditions (Hericks, 2006). The idea of developmental tasks has been derived by the Bildungsgangdidaktik from Havighurst and Erik Erickson. The idea of those tasks has been related to the core concept of German educational thinking the concept of “Bildung”. Bildung usually refers to concepts of knowledge acquisition for personal development. The ubiquitous translation “Education” for the concept of “Bildung” is not adequate.

FINDINGS ON THE STUDENTS

Against the backdrop of the politico-scientific field of tension described above our empirical study focuses on the development of students in teacher training courses in Germany at Germany’s largest educational institution, the LMU (Ludwig Maximilian University) in Munich, Bavaria, which has been awarded the title of “excellence university”, and a smaller educational institution, the University of Passau, which is situated in a predominantly rural region in Bavaria. In a longitudinal study of 1358 students of the two universities we ask among other things: With what kind of motive for the choice of profession, what self-image, what perceived self-efficacy and what means of coping with uncertainty do the students enter upon their studies? What are the consequences deriving from the results of an effective teacher training in which students develop a professional self? In answering these questions, the outcomes must be set in relation to the limited resources for teacher training in the two universities. At the LMU in Munich, for example, around 40 professors are responsible for the training of 7800 students. At the faculty of philosophy in Passau 42 professors take care of 4999 students, a ratio of 119:1. At the University of Munich we have a ratio of 195 students to one professor in academic pedagogy. In comparison: at the universities of Berkeley and Stanford we have a ratio of students to professors of about 16:1.

The results will be compared with other findings and discussed against the background of an effective teacher training in Germany and of the professional situation of

teachers.

Motives for Choice of Course of Study and Profession

On the basis of 19 motivational complexes gained by analysis four main components of the motivation for choice of a course of study and profession were revealed for the students questioned at the universities of Munich and Passau. The 19 factors explain 62% of the variance. We evaluate the first two main components as intrinsic motivation, the last two as predominantly (main component 3) or exclusively (main component 4) extrinsic motivation.

1. Addressee related motivation (e.g. idealism, challenge/ creative opportunities, the promotion of school students' development, enjoyment of interpersonal contacts).

2. Subject-related motivation (e.g. interest in specific subjects, variety through study)

3. Motivation deriving from the overall conditions (e.g. professional/financial security, social/societal motives, self-determined planning of work, compatibility with family life)

4. Teacher training as a stopgap solution (e.g. teacher training as a stopgap, lack of knowledge and interest, expectation that study will be relatively undemanding)

In detail the picture is as follows: (see Table 1)

Table 1
Main Components of the Choice of a Course of Study and Profession

	Main components	Min	Max	M	SD	α
1	Addressee-related motivation	1.03	4.00	3.18	0.395	.94
2	Subject-related motivation	1.00	4.00	2.86	0.416	.79
3	Motivation through overall conditions	1.20	3.80	2.47	0.369	.77
4	Teacher training as a stopgap solution	1.00	3.18	1.56	0.416	.76

N = 1058/1024, Min = 1 Max = 4, M = Mean, SD = Standard Deviation, α = Internal Consistency

The main components presented here point on average to differing degrees of relevance. The great majority of the students are intrinsically motivated; motivation through the overall conditions is of medium relevance for about two thirds of the students, plays a significant role for around 7% and is scarcely relevant at all or completely irrelevant for the remaining quarter. In the case of just under 3% of those questioned the main component "stopgap solution" was above the arithmetic mean and for a total of 8% of those questioned at least one factor from the component "stopgap solution" was above the arithmetic mean and hence relevant. According to their own statements, therefore, there are relatively few persons among the students who regard teacher training as a stopgap solution and have taken it up for this reason.

In assessing the results the following point must be

taken into account: The motivation of students for a course of studies or a profession is generally influenced by the existence of good or bad employment opportunities at the time when they finish their studies (Terhart, 2004, p. 54f.) This is all the more so as teacher training in Germany predominantly prepares students for the teaching profession and for scarcely any other professional field. Whether they take up the teaching profession depends, moreover, on the employment opportunities in competing professions. If this study is set in relation to other studies on teacher training in German speaking countries – i.e. Austria and Switzerland – it strikes the eye that the percentage of students who regard their course of studies as a stopgap solution is comparatively low in the universities we have studied. In this context it must be pointed out that the data for our study were collected at a time when the prospects of employment for those completing teacher training were good in both the teaching profession and other competing professional fields, so that no one was under pressure to take up the supposedly safe course of studies in teacher training because the overall economic conditions were poor. A further possible explanation is the different organization of teacher training, which in Austria, Switzerland and partly at specific universities in the German State of Baden Württemberg is restricted to the training of teachers. At these particular institutions the courses of study are not regarded as particularly challenging (see Kiel, Geider, & Jünger, 2004; Mayr, 1996). In contrast to the situation in teacher training colleges, teacher training at Bavarian universities does not have the reputation of making lesser demands on students than other courses of study.

Previous Experience

In regard to previous experience it turned out that 65% of those questioned had already *taught* individual children and young people and that 37% had already *taught* groups of children or young people. Over 70% enjoyed these activities. A quarter of those questioned assessed this teaching as successful, a further 70% as rather successful. Overall, therefore, the prospective teachers do have relevant previous experience, although it is predominantly in the teaching or training of individual children or young people. Their own experience of school had strongly influenced the choice of the course of studies for 18% of the prospective teachers, who were motivated either by models or the wish for improvement. A further 39% were influenced to some degree in this way. For a total of 42.6% previous experience in school played only a slight part or none at all in their choice of profession (M = 2.62; SD = 0.933).

Perceived Self-efficacy

Are prospective teachers less optimistic about the chances of success than other persons? Findings from the data collected with the instrument of Jerusalem and Schwarzer

(Schwarzer & Scholz, 2000) on the general perceived self-efficacy of students at primary (Grundschulen), secondary elementary (Hauptschulen), secondary technical (Realschulen) and grammar schools (Gymnasien) and of teacher trainees for special needs schools with the emphasis on secondary schools are virtually identical (M = 30.06, SD = 3.432). The perceived self-efficacy of teacher trainees for special needs schools with the emphasis on primary schools alone is slightly lower. Comparative data on 12-17-year-old "German high school students" (M = 29.60, SD = 4.0, N = 3494), German adults (M = 29.28, SD unknown, N = 1660) and the values for 18-19-year-old upper school students calculated from data made available by Schwarzer and Jerusalem (N = 448, w = 52.7%, m = 47.3%, M = 29.97, SD = 4.18) are close to the values for prospective teachers (see: <http://userpage.fu-berlin.de/~health/selfscal.htm>, 22. 10. 2012).

The specific difficult situation of teachers in secondary schools and special needs schools can exercise a distorting influence on answers on general perceived self-efficacy. Coping with the particularly heterogeneous classes and challenges of special needs education creates highly problematic situations. Against this background items such as, for example, "I always succeed in solving difficult problems when I make an effort" or "I find it easy to achieve my goals" or "In unexpected situations I always know how I should behave" are possibly answered more cautiously than by prospective teachers on other courses of study.

Experience of Stress

We have not undertaken any direct measurement of the experience of stress at work, for example with Schaarschmidt's instrument, but we do have indications of problematic coping strategies. It is striking that only nine per cent of the students interviewed agreed without qualification to the statement that their reaction to *conflicts* was calm. This could point to the dimensions of *the ability to maintain distance* and *to cope actively with problems* mentioned by Schaarschmidt in the context of burnout. This assumed connection requires further research.

A further reference to coping strategies which are not favourable to good health can be found in the items on cooperative ability. The students questioned tend to learn independently (M = 5.18, SD = 0.848, min = 1, max = 6) and less together with others (M = 3.87; SD = 1.246). To this extent beginning students seem, at least in a rudimentary fashion, to have the lone warrior mentality criticized by teachers (Bohnsack, 2004, p. 158; Daschner, 2004, p. 299), which is promoted by the structures of school, university and practical training (Referendariat) aiming at individual performance, although the students assume of themselves that they work productively in groups (M = 4.82, SD = 0.872).

Study Expectations

Study expectations are generally very high. On a scale of 1 – 4 the mean of all expectations relating to studies is 3.22 (SD = 0.329). The expectation of being well prepared for practical training (*Referendariat*) reveals the highest mean (M = 3.66; SD = 0.556). The *Referendariat* is a two-year trainee programme at schools in which all ongoing teachers have to participate after completing the university phase of their education. 62.7% of those questioned agreed completely that it offered the methods they need for their later teaching (M = 3.61; SD = 0.548).

On the other hand the statement "I expect the acquisition of scientific-theoretical thinking from my studies" was answered fully positively by only 24.8% (M = 3.07; SD = 0.671). To this extent the students interviewed reveal clear preferences in regard to the practical component of their training, whereas only a minority expected scientific socialization. At the level of university interaction this leads to the complaint of students that many of the university teachers are not practical enough. At the same time the university teachers complain that the students show little interest in science and that from the university teacher's point of view their expectations in this regard are deficient.

Table 2
Study Expectations

Factor	Mean	Standard deviation
Subject-specific preparation for the profession	3.460	0.449
Personal/social enhancement	3.347	0.461
Counselling facilities	3.031	0.592
Intellectual challenge	3.084	0.484
Clear structures/certainty education	2.872	0.530
Mediation/Control of Practical Knowledge	3.078	0.530
	3.273	0.435

Min=1 Max=4

Uncertainty Avoidance

The students were questioned by means of the Uncertainty Avoidance Index (Hofstede, 2001), which was specially adapted to their situation. The UIA indicates whether an uncertain situation is experienced more as a chance or as a threat. The higher the index value the more the uncertain situations are felt to be threatening, the lower they are the more they are seen as a chance. For all of the students involved the overall result was a mean value of 66.9. This mean corresponds almost exactly to the index value ascertained by Hofstede for the entire German population. The index value for 65 future primary school teachers is clearly higher with a mean of 72.5. In contrast the mean for future teachers in secondary general schools (Hauptschulen) is M = 69.8, in secondary intermediate schools (Realschulen) M = 72.6 and in grammar schools (Gymnasien) M = 59.2. Students entering primary school teaching therefore view uncertain situations to a greater degree as a threat than students entering other school types. If one considers the total sample, a clear gender

bias can be established: men (with an index value of 57.1) view uncertain situations more as a chance than women (index value 69.2).

DISCUSSION

Motives for Choice of Course of Study and Profession

The present study confirms findings from other studies on the motivation behind the choice of a course of studies and a profession by prospective teachers. In almost all of the previous research intrinsic and extrinsic motivational complexes can be found. Allowing for individual differences, the decision to study for the teaching profession is motivated, on the one hand, by the activity, the challenges it presents and work with young people (intrinsic components) and, on the other hand, by general conditions such as time management, compatibility of family and profession, opportunities to study and to exercise the profession close to one's home and similar considerations (extrinsic components) (For a summary see Lipowsky, 2003, p. 91f.; cf. Eberle & Pollak, 2006b; Mayr, 1996; Rauin, 2007).

In regard to our first key question on the motivation for the choice of the course of study and profession the high share of "addressee-related motivation" seems problematic. It can also be found in a series of comparable studies although from case to case a different form or a different designation for "addressee-related motivation" might be chosen, such as, for example, "enjoyment of social contacts" (e.g. Mehmel, 1992, p. 22; Ulich, 1998, p. 69; Terhart *et al.*, 1994, p. 57) or, as in the 1960's already, "pleasure in dealing with children (Bachmair, 1969, see pp. 11-14, 69, 81). This aspect is particularly important in the case of future primary school teachers. If they are asked what is concealed behind such a motive, the answer is, among other things, that it is nice to be able to take on a kind of mother role for children or to share physical closeness with them. On the basis of an interview study with primary school teachers Mehmel speaks in this context of statements characterized "by a need for loving closeness" (Mehmel, 1992, p. 23). Combe and Helsper (1996) speak in this connection of a transfiguration of the primary teacher's profession as extended or "professionalized" motherliness (p. 508), which possesses the corresponding attributes, so that the insight into professional demands remains blocked.

Personal contact is also considered to be an important source of gratification by other teacher trainees preparing to teach in other school types. At the same time, however, this contact is also a central source of frustrations, when the teachers do not receive the recognition they expect from these contacts (Sieland, 2003, p. 147). In this connection one speaks of a gratification crisis.

One of the main components of the "addressee-

related motivation" is the factor "idealism". Idealism is not only a source of motivation. In a bureaucratic school and an action field full of contradictions it can become a source of frustrations. The situation is similar with the factor "promotion of school students' development". From a psychoanalytical point of view these factors in the motivation for the choice of a profession are problematic when the ego-ideals, in this case the ego-ideal of a teacher who wishes to accompany or promote the development of weak and gifted children, are not achieved. If this situation lasts for a longer period of time the discrepancy between the ideal and reality can have a neuroticizing effect (see Mertens, 2000).

Overall conditions in the teaching profession such as the professional and financial security resulting from tenure guaranteed by the state, partially self-determined time management and the compatibility of family life with the half-day school are of medium importance for many beginning students. These overall conditions will change in the future in view of the trend towards full-day schools, so that the course of studies will be started with unfulfillable expectations. For persons motivated predominantly by the overall conditions it must be asked whether they, on the one hand, can do justice to the demands of the teaching profession and, on the other hand, can find satisfaction in the profession.

The consequences in regard to the efficacy of teacher training are as follows:

- Provision of realistic information over the entire spectrum of the profession: The strong idealistic component in the addressee-related motivation conceals the fact that teachers do not only teach. Interaction with colleagues, parents, the heads of schools, the school bureaucracy and institutions external to the school are part of school life. The provision of realistic information on the various tasks, fields of activity and systemic constraints is essential, so that the students can reflect on their motivation when choosing their course of studies and their profession. Knowledge of the subjects to be taught and of the specific didactic methods and forms of work are particularly important for the higher age-groups.

- Destabilization of study decisions: Reflection is supported when study decisions are not only stabilized but also destabilized. In this context counselling is necessary in regard to change of subject, breaking off the course of studies and change of profession. At German universities such counselling does not generally take place.

- Reinforcement of self-reflective and reflective aspects: Teacher training cannot be sustained by idealistically determined, addressee-related motivation alone. Study and profession must be seen as developmental tasks which must be solved again and again in an age-adequate manner (Hericks, 2006). In this connection the universities of Munich and Passau have developed three seminars on the development of such self-

reflective aspects. 1. A seminar on biographical anamnesis, which deals on the one hand with the creation of an awareness for the patterns of interaction and relationship which students “bring with them” to their studies from their familial, educational and socialization processes and, on the other hand, with the identification of already existing competencies which are relevant to the teaching profession. 2. A seminar on the analysis of strengths and weaknesses in the third or fourth semester. 3. A seminar for candidates coming up for their final examinations on the transition to the practical training programme (Referendariat), which prepares them specifically for their new environment and their new roles. A particular aim of this seminar is to strengthen the distancing capacity of the students in regard to the biographical patterns they have developed but also in regard to what they are taught at university and in their practical training.

Previous Experience, Perceived Self-Efficacy and Uncertainty Avoidance

Previous experience in and outside school plays an important part in study decisions. It is striking that a high percentage of first-year students have had previous experience in individual care and supervision and rather less in the care or training of groups. On the basis of positive experience in the training of individuals students regard themselves as well-suited for the teaching profession. This subjective estimate of suitability is, however, deceptive: on the one hand the situation with many addressees and reference persons is structurally different from the care involved in individual private lessons or in the care of babies and small children. On the other hand, in a fundamental study on first-year students Schaarschmidt has established that many persons start teacher training who already have disadvantageous coping strategies in regard to teachers’ health and the experience of pressure (Herlt & Schaarschmidt, 2007, p. 157). Among these disadvantageous coping strategies are excessive commitment, a lack of distancing capacity and difficulties in coping actively with problems. These disadvantageous coping strategies can lead to a particular experience of pressure under the conditions found in normal schools and can counteract the positive previous experiences. The negative experience of pressure is strengthened by the fact that young teacher trainees seldom cooperate and do not react calmly to conflicts.

In regard to perceived self-efficacy there is no difference between the students under study and other comparable groups of the population in Germany. The prejudice expressed in public discourse that people who are less confident about their prospects of success prefer to take up the teaching profession could not be confirmed.

As with perceived self-efficacy, there was no difference between the entire sample of the students studied and the average of the German population in regard to coping with uncertainty. The gender bias is

striking, however, and is particularly evident in primary schools, in which the teachers are predominantly female. In regard to the Uncertainty Avoidance Index the following general remarks can be made: the students characterized above encounter a profession which is marked to a high degree by uncertainty. This uncertainty results, on the one hand, from the many contradictory expectations directed at teachers (see Kiel, 2005, pp. 199-201; Hagemann, 2003). School students might wish for a “buddy” type of teacher, although some of them can’t cope with a cooperative leadership style; colleagues wish for iron-handed discipline; the school directors expect the observation of regulations; the parents want at all events a recommendation for a secondary school or promotion to the next grade, although teachers are obliged by society to make selections. Teachers cannot do justice to this field of contradictory expectations; they are *not* able to fulfil all expectations.

At the same time, according to professionalization theory, teachers will be confronted in their profession with uncertainty in regard to the criteria for situation adequate action and in regard to the consequences of their actions. Without well-founded knowledge of the subjects they teach, of psychological processes, teaching and learning, pedagogical intervention, group dynamic processes, moderation, conflict management, counselling and coaching, cooperation with colleagues, parents and institutions outside the school and without a knowledge of the life world of their students and of the demands on their action competence in the present and the future teachers will not be able to meet the requirements of professional action. Our own research, published findings and the literature on the teaching profession and professionalization indicate that teacher training should take its orientation on the one hand from the students and, on the other hand, from the professional requirements.

The consequences in regard to the efficacy of teacher training are as follows:

– Acquisition of coping strategies: In the university phase of training elements are important which deal with distancing capacity, the regulation of commitment, the use of personal resources and strategies for coping actively with problems. Examples have been presented by Schaarschmidt and Kieschke (2007).

– Preparation for coping with uncertainty: As a structural problem of the teaching profession the question of coping with uncertainty must also be addressed in the first phase of training (at university). Students need a theoretical foundation for their actions because their activities under uncertain conditions call for a high level of reflection (Bauer, 1998, p. 346; Combe & Helsper, 1996, p. 12; Eberle & Pollak, 2006a, p. 563; Helsper, 2003, 2004; Stichweh, 1996, pp. 53-54).

– Perceived self-efficacy expectations: In regard to perceived self-efficacy no particular measures seem to be called for.

Expectations in Regard to Teacher Training

The expectations in regard to a practically oriented teacher training are problematic in as far as teacher training at the university can only prepare students for specific school practice to a limited degree. The practical component of training takes place in Germany in the Referendariat, an one or two-year (depending on the rules of the federal states) trainee programme at schools.

The consequences in regard to the efficacy of teacher training are as follows:

Provision of information on the entire professional spectrum: This point has been dealt with above, but is also important in this connection.

The relationship of theory and practice: the expectation of receiving training at the university which is as practical as possible or even of reducing theory in favour of practice seems to us to be an expectation based on an inadequate construction of the problem. It seems much more important to us that research outcomes should be transformed for teacher trainees into implementation-oriented, theory-guided models and then put into practice in teaching.

CONCLUSION

Our understanding of the efficacy of teacher training is different from the usual sense. It is not a question of helping as many students as possible to finish their studies as successfully as possible in the shortest possible time and with the minimal use of resources. We understand efficacy of teacher training as a training system which enables teachers to react self-reflectively, adaptively and creatively to changes in the educational system and to cope professionally with the structures of structural uncertainty. The preconditions for such a training system are a consistent orientation on a realistic job preview and the development of theory-guided, implementation-oriented action models for practical implementation.

To this end the students need seminar forms which encourage self-reflection and the development of action strategies and enable them to cope with developmental tasks in regard to the development of a professional self in the teaching profession. Such course types and counselling and coaching facilities can only be realized when the ratio of teachers to students at German universities is clearly improved and time is allotted for self-reflective processes.

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