

CAREER MOTIVES, ITS CHANGE DURING TEACHER EDUCATION AND ITS IMPACT ON THE PERCEPTION OF PROFESSIONAL REQUIREMENTS OF STUDENT TEACHERS

Manuela Keller-Schneider
Zurich University of Teacher Education
m.keller-schneider@phzh.ch

Abstract: *Teachers' career motives are investigated in several studies, comparing school types, countries and subjects, analyzing their effects on progress and satisfaction during teacher education. There are few longitudinal studies on possible changes of the motives and their impact on further professionalization. This paper investigates on changes of career motives and their effect on the perception of the relevance of professional requirements, the competence in coping with them and their challenge. Results show, that career motives change during teacher education; intrinsic motives increase, altruistic and biographic ones and the motive of work with children decrease. Career motives, differentiated by distinctive patterns, shape the perception of professional requirements. Student teachers with less favorable patterns of career motives change their motives towards a better fit to the professional requirements. Coping with challenging and realistic requirements during per-service periods supports changes towards a better fit with the requirements of the profession.*

Keywords: *career motives; development; pre-service teaching; professional requirements; teacher education;*

1. Introduction

Intrinsic motives as well as extrinsic and altruistic ones shape the career of student teachers and its maintenance during teacher education. Intrinsic motives enhance the effectiveness of teacher education and the satisfaction (Skaalvik & Skaalvik, 2017; Martin & Steffgen, 2002). Entering teacher education, student teachers face the requirements they have to cope during University courses and during preservice teaching at several schools. They get to know teachers' requirements and daily hassles (Hobson et al., 2004). Coping with requirements, student teachers calibrate expectations with experiences (Thomson, Turner & Nietfield, 2012; Richardson & Watt, 2014), according the Eccles' expectancy-value-theory (1983).

Several studies focus on teachers' career motives. They compare countries, school-types or subjects (Drahmann et al., 2019; Keller-Schneider, Weiss & Kiel, 2018; Scharfenberg, 2019; Sinclair, 2008; Watt, Richardsn & Smith, 2017; Weiß et al., 2018;), investigate on career choice influences (Künsting & Lipowsky, 2011; Rothland, König & Drahmann, 2015), their relevance for the decision-taking for entering teacher education (Denzler & Wolter, 2009; Hobson et al., 2004; Pohlmann & Möller, 2010; Trojer, 2018) and for the progress during teacher education (Watt & Richardson, 2008) as well as the development of emotional exhaustion (Skaalvik & Skaalvik, 2017). Specially in periods of teacher shortage depending on the labour-market (Neugebauer, 2015), it is important to find motivated ones doing this job with high quality and satisfaction. Motives, such as *goals* to

reach through this profession and *reasons* for the choice or the maintenance of this decision, are relevant in different stages of a career.

1.1. Teachers' career motives

Following the most common categories, based on the early studies of Brookhardt and Freeman (1992), the most important motives for teachers' career are the *intrinsic* ones, related to the job, the activities and the requirements of this profession. *Extrinsic* motives, such as job-security and job-family-compatibility, with focus on the reward of the job, are crucial as well. In addition, *biographic* motives, based on experiences as student at school, and *altruistic* motives, such as shape the children's future, enhance social equity and contribute to society, are identified as supportive for the decision and the maintenance of the motivation. The *self-concept* of own teaching abilities, as a self-focused belief, influencing job motive (Blömeke & Kaiser, 2015), is relevant for self-confidence (Deci & Ryan, 2002) as a teacher, is identified as important as well (Wat & Richardson, 2007). These categories of motives, focusing the profession of teachers, are subsumed as *job-related motives*. There are *other reasons*, such as *recommendation* of others and *lack of motivation* or ideas for other professions, called fallback career motives (Watt & Richardson, 2007).

Figure 1 shows these categories of career motives, groups in *job-related motives* and *other reasons*, added with motives related to the choice of the education program (not relevant in this paper), influencing the different career stages.

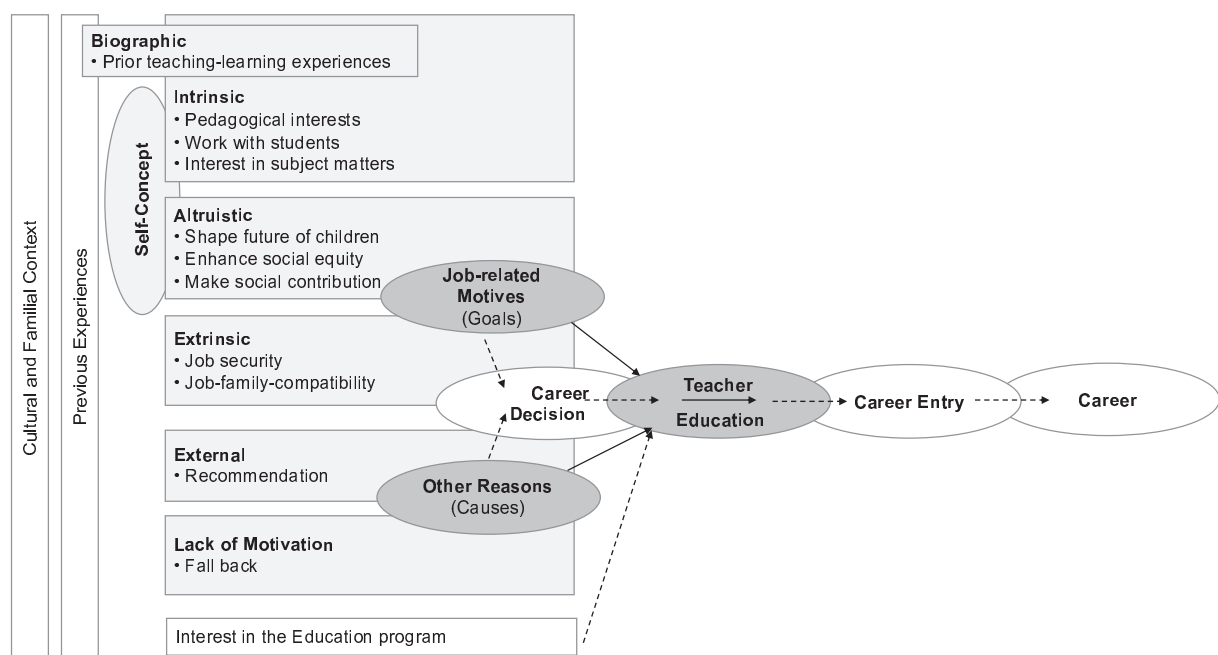


Fig 1: Motives for the career as a teacher, relevant in different stages of the career

1.2. Motives and their stability

Motives for the career as a teacher are not only significant for decision taking; they are relevant as well to maintain this decision during teacher education, for the decision to start the career as a teacher and to remain in this profession (Fig. 1). Experiences were balanced with expectations coping with requirements. If teacher education offers opportunities to act as a teacher during preservice-teaching, student teachers were challenged

to re-assess their decision, supported by their experience of teaching abilities and satisfaction doing this job.

Studies on career motives focus on the intensity of different motives of preservice teachers, categorized in several groups (see above); some focus as well motives of the education program (Pohlman & Möller, 2010), but few investigate the stability with a longitudinal design (Richardson & Watt, 2014). Results from a study on student teachers' motivation over the first two years of teacher education (König et al., 2016) in three countries identified changes, dependent on the model of teacher education and its focus on practical experiences. In Germany with a theory focused model of teacher education, intrinsic motives were stable; Swiss student teachers, attending a program with emphasizes on practical experiences (Arnold, 2014) show increasing intrinsic motives, decreasing altruistic motives and motive to work with children. Extrinsic motives didn't change. They identified an effect of learning opportunities and mentoring on these changes, shaped by the model of teacher education. Individual differences remain as an open question.

1.2. Perception of requirements and its effect on professional development

Following the transactional theory of stress and coping (Lazarus & Folkman, 1984), learning opportunities don't affect learning outputs in a mechanistic way. Individual's perception, based on the resources and the intensity of coping with them, is crucial for the achievement and the insights, emerging from challenging learning situations, based on the resource-focused opportunity-use-model (Keller-Schneider, 2014). Primary (*relevance* of requirement) and secondary appraisal (*manageability* with individual resources) shape the learning output as well (Fig. 2). *Motives*, as an element of the individuals' recourses, affect the appraisal of the relevance, the manageability of the requirements and the challenging coping with them. If the resources are too little or the requirements seem as unimportant, the individual will not get involved in working on this requirement. For professional development the perception of requirements as challenge is significant, based on a sufficient competence.

Coping with challenging requirements leads to new experiences. Emerging findings by reflecting the actions of teachers and students as well as the interactions and their effects, lead to a transformation of the individual resources to deal with subsequent requirements (Keller-Schneider, 2014). Not only knowledge grows during teacher education, but other individual resources, such as motives and beliefs, may change as well.

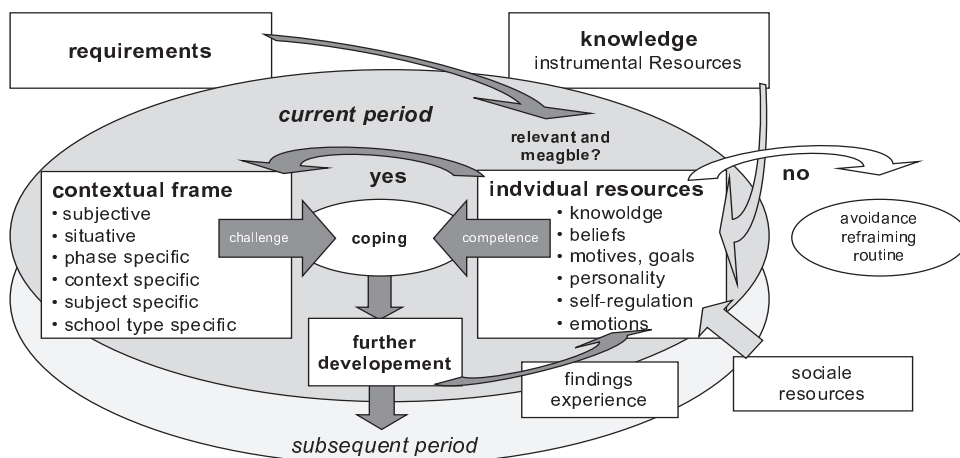


Fig. 2: Perception of professional requirements and its significance for professional development

During teacher education student teachers are challenged by different requirements. During courses at University they have to engage themselves in their learning and to build up knowledge, relevant for acting as teachers. During preservice teaching they deal with professional requirements, act as a teacher and reflect experiences to develop further competences. *Emerging insights* contribute to the professional growth, transform the structure of professional knowledge (Dreyfus & Dreyfus, 1986; Berliner, 2001; Neuweg 2014), but might change beliefs and motives as well.

1.3. Teacher education in Switzerland

Teacher education in Switzerland for kindergarden and primary school teachers (grade 1 to 6) close at bachelor-level, secondary teachers do a master's degree. Teacher education starts with a preservice teaching period, combined with seminars on professional knowledge and reflexions on activities as teachers and the effects on students, to learn about school through teachers' eyes. Additional goals are the re-assessment of the decision to get a teacher (Arnold et al., 2011) and the ability for this profession (Hanetseder & Keller-Schneider, 2006). Student teachers in Switzerland are involved in the school day; they have to take part as a teacher. During their education there are several preservice teaching periods, integrated in the curriculum (Keller-Schneider, 2016a), enhancing the learning effect (Allen & Wright, 2014). Combining theory and practice takes place not only during pre-service-teaching, several courses send the students in a school for observations and small units of teaching, to focus on a specific didactic approach or pedagogic-psychological phenome, that will be reflected in the course at University. Inductive didactic settings force teacher students to involve themselves in their education. Engagement and intensity of using learning opportunities effect their learning output (Keller-Schneider, 2014, 2016b).

According to the results of a comparative study on teacher education models (Arnold, 2014), the practical units in Switzerland and Austria are larger than the ones in Germany; Swiss student teachers' responsibility for their teaching in school is higher than the Austrian and German ones. Swiss student teachers are involved in the responsibility of their teaching during teacher education.

2. Research questions

Based on the transactional theory of stress and coping (Lazarus & Folkman, 1984) and on the findings, that motives for the career as a teacher changes (König et al., 2016), influenced by the teacher education system (Arnold, 2014), and that the use of learning opportunities by dealing with professional requirements affects the professional growth in individually different ways (Keller-Schneider, 2014), we assume, that also in this sample career motives change during teacher education individually different and that individual resources, such as career motives, shape the perception of requirements.

Based on these two assumptions, the following research questions were investigated:

- (1) How do career motives change during teacher education?
- (2) What types of different profiles can be identified?
- (3) What differences can be identified and do these types develop differently?
- (4) How do career motives shape the perception of professional requirements at the beginning of teacher education, two years later and their type-specific development?

3. Method

To investigate on these research questions, data from a longitudinal study at Zurich University of teacher education were used.³

Data collection: The data were collected by a paper-pencil-questionnaire, at the beginning of teacher education and two years later. Data were collected during a compulsory seminar.

Instruments: To collect data on career motive, the Fit Choice scales of Watt and Richardson (2007) were used, containing twelve motives for the career as a teacher (Fig. 1). The perception of professional requirements, measured by its relevance, the experienced competence and the challenge, were captured by the Professional Requirement scales of Keller-Schneider (2014), containing seven scales on professional requirements.⁴

Sample: The longitudinal sample contains 189 students, 83,4% are female, average age is 21,4 years (SD 2,9 years) at the beginning of teacher education.

Data processing: After descriptive analyzes of career motives, changes were provided by variance analyzes (GLM, repeated measurement). By cluster analyzes (k-Means, followed by a discriminant analyze for assignment security prove) of the career motive at the beginning of teacher education (t1), different profiles were identified. Differences between these types were investigated by multifactorial variance analyzes (ANOVA t1, t2, GLM repeated measurement).

4. Results

Results are presented corresponding to the research question. First we show the career motives extent (start, two years later) and their stability or changes (4.1), results on types of career motives' profiles and their differences (4.2), followed by results on type-specific development (4.3) and type-specific results on the perception of professional requirements (4.4).

4.1 Motives for the career as a teacher and their development during teacher education

Figure 3 shows the extents of career motives at the beginning of teacher education (t1) and two year later (t2), after a period of pre-service-teaching combined with seminars of planning and reflection on the in-field activities.

³As a part of the EMW-study of König and Rothland (2013), with additional focus on beliefs on learning and teaching and the perception of professional requirements.

⁴The requirements were identified by qualitative content analyze of notes from facultative supervision sessions of beginning teachers during their first two year of teaching as fully responsible teachers. A model of the latent structure of these requirements was identified (Keller-Schneider, 2010), later a short version was developed, used in this study.

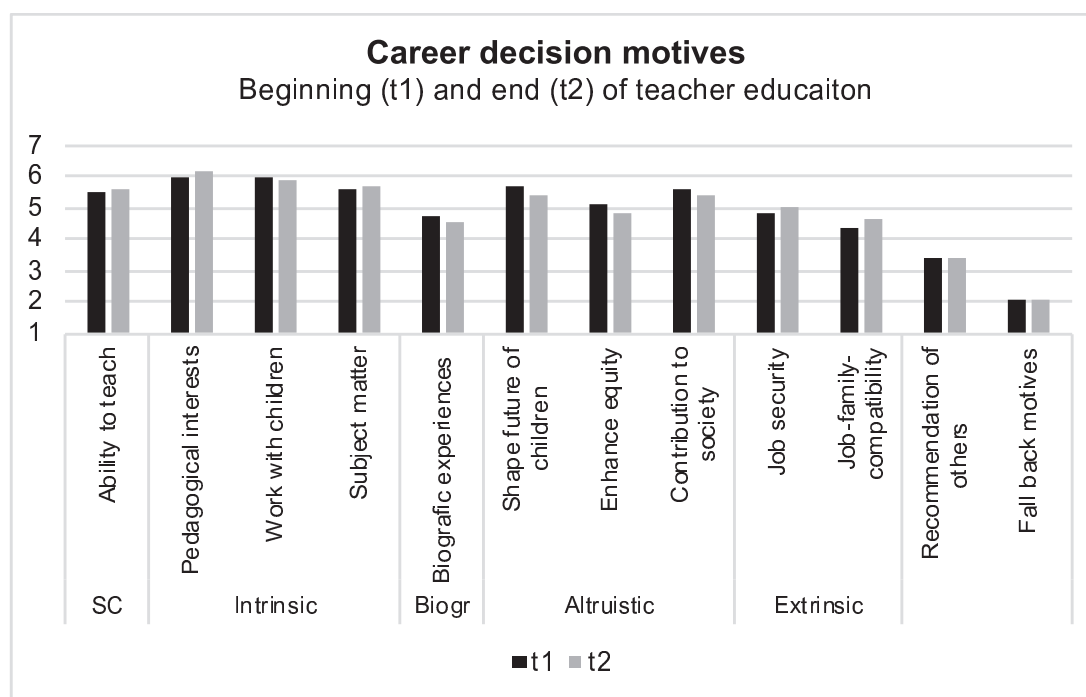


Figure 3: Motives for the career as a teacher

Intrinsic motives, such as pedagogical interests, the motive to work with children and subject matter, as well as the *self-concept* of teaching abilities show high levels, followed by *altruistic*, *extrinsic* and *biographic* ones. Other reasons, such as others' *recommendation* and especially the *lack of motives* for other professions (fall back) are less weighted (Fig. 3).

The results of descriptive analyzes show large standard deviations in *altruistic* and *biographic* motives as well in the motive of others' *recommendation* and the *lack of motive* for other professions, referring interindividual differences (Tab. 1).

Results on the significance of *changes over time* show that career motives change, but in different directions (Tab. 1). There is an *increase* of the teaching self-concept and the intrinsic motive of pedagogical interests. The intrinsic motive to work with children and altruistic motives, such as shape children's future and contribute to equity, *decrease*. The differences are of high significance and with quite strong effects. Biographic motives, based on prior experiences as students, decreases as well, but with low significance and a weak effect. The intrinsic motives of subject matter and the extrinsic motives of job security and job-family-compatibility as well as the motives of others' recommendation and the lack of motives are *stable*.

Table 1. Motives for teacher career (t1, t2, development)

Motives	t1 M/SD	t2 M/SD	GLM (t1-t2)
Self-concept	5.47/.73	5.637.87	t1<t2, p=.013, $\eta^2=.032$
Activity related motives	5.95/.82	6.13/.90	t1<t2, p=.016, $\eta^2=.031$
Work with children	6.13/.92	5.90/1.07	t1>t2, p<.001, $\eta^2=.065$
Subject matter	5.64/1.24	5.63/1.10	n.s.
Biographic motives	4.76/1.53	4.5/1.63	t1>t2, p<.02, $\eta^2=.029$
Shape future of children	5.71/.99	5.41/1.06	t1>t2, p<.001, $\eta^2=.080$
Enhance equity	5.13/1.27	4.82/1.31	t1>t2, p<.001, $\eta^2=.058$
Contribution to society	5.48/1.13	5.35/1.12	n.s.

Job security	4.93/1.19	5.02/1.25	n.s.
Job-family-compatibility	4.44/1.40	4.59/1.43	n.s.
Recommendation of others	3.35/1.57	3.41/1.65	n.s.
Lack of motives (fall back)	1.92/1.01	2.07/1.12	n.s.

Comments: t1= at the beginning of teacher education, t2= after two years of teacher education

4.2 Types with different patterns of career motives and their development

The investigated motives show large standard deviations (Tab. 1); different patterns can be assumed. By cluster analyses on motives at the beginning of teacher education (t1), four types with different profiles were identified (Fig. 4).⁵

Type 1 (n=33, 17.6%) shows a *fall back* profile with a lack of motives for other professions, paired with the extrinsic motive of job security; altruistic motives are below average. For *Type 2* (n=20, 10.7%), the smallest group, the *extrinsic motives* of job-family-compatibility and job security are characteristic, related with a lack of intrinsic and altruistic motives. Type 1 and type 2 show similarities, but with different characteristics; both types show, compared with others, a low self-concept of teaching abilities, low pedagogical interests and low interests to work with children. *Type 3* (n=86, 46%), the biggest group, entitled as *well motivated*, shows intrinsic motives as well as biographic, altruistic and extrinsic motives on over average levels, amended with others' recommendation. Lack of motive is low. In *Type 4* (n=48, 25.7%), the motive to *work with children* is characteristic, related with extrinsic motives, others' recommendation and lack of motives on a under average level.

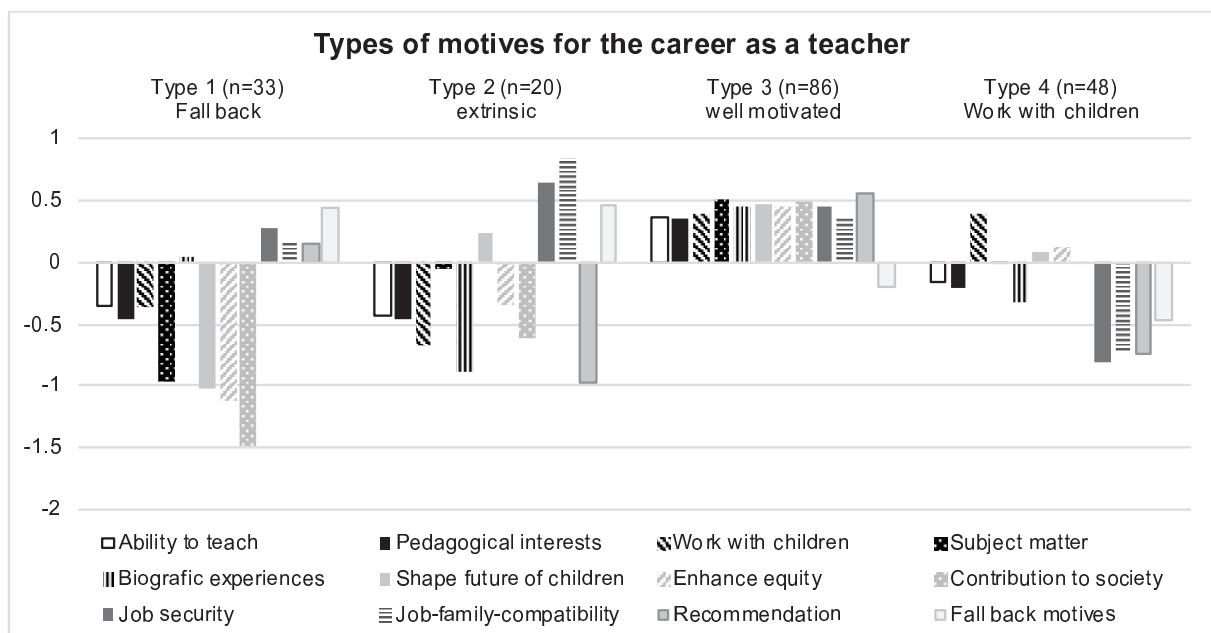


Fig. 4: Profiles of different types of motives for the career as a teacher(t1)

4.3. Differences between the types of motives and their development over the first two years of teacher education

Table 2 shows differences between the types at the beginning of teacher education⁶, after two years and between their development.

⁵ Results of discriminant analyze: Wilks Lamda = .10; accuracy 93%

Differences between the types: The identified types differ with high significance and strong effects. At the *beginning* of teacher education, the altruistic motive of contribution to society shows the strongest effect, followed by the recommendation of others, the extrinsic motive of job security and the altruistic motive of enhance equity. The smallest effect lays in the proximal motives of the self-concept of teaching abilities and the pedagogical interests. *Two years later* the significance of the differences and the effects are lower. There is no significant difference in the motive of work with children. Differences in altruistic and extrinsic motives, others' recommendation and the lack of motives (fall back) are still significant, but with lower effects. The differences between the types in job related motives and beliefs (self-concept) after two years are smaller than at the beginning, when the types were identified.

Differences between type-specific developments: Results on the development of the career motive types show *changes* in the motives of others' recommendation, in altruistic and biographic ones; *stability* is identified in the self-concept of teaching abilities, in the motives of pedagogical interests as well as in the lack of motives; based on the weak effect, the motive of job-family-compatibility can be judged as stable as well.

Table 2. Differences between the types of career motives in their motives

Motives	ANOVA t1	ANOVA t2	GLM t1-t2 p/eta
Self-concept	<.001/.133	.001/.082	n.s./.016
Pedagogical interests	<.001/.140	.019/.053	n.s./.028
Work with children	<.001/.188	n.s./.033	.010/.060
Subject matter	<.001/.276	.010/.060	.009/.062
Biographic motives	<.001/.196	.041/.044	.011/.059
Shape the future of children	<.001/.283	.003/.074	.019/.053
Enhance equity	<.001/.338	<.001/.160	.003/.074
Contribution to society	<.001/.459	<.001/.166	.001/.092
Job security	<.001/.369	<.001/.153	.049/.042
Job-family-compatibility	<.001/.298	<.001/.121	.016/.005
Others' recommendation	<.001/.385	.025/.050	<.001/.141
Fall back career	<.001/.153	<.001/.114	n.s./.010

Comments: t1= at the beginning of teacher education, t2= after two years

The results on the *type-specific development* of career motives (Tab. 3) show type-specific characteristics.

Table 3. Type specific changes of motives for the career as a teacher

Motives	Type 1 ($p \square \square^2$)	Type 2 ($p \square \square^2$)	Type 3 ($p \square \square^2$)	Type 4 (p / \square^2)
Self-concept	t1<t2**/.218	n.s.	n.s.	n.s.
Pedagogical interests	t1<t2*/.174	n.s.	n.s.	t<t2**/.148
Work with children	n.s.	n.s.	t1>t2***/.201	t1>t2**/.132
Subject matter	t1<t2*/.115	n.s.	t1>t2**/.081	n.s.

⁶ The identification of types is based on.

Biographic motives	n.s.	n.s.	t1>t2 ^{***} /.198	n.s.
Shape future	n.s.	n.s.	t1>t2 ^{***} /.247	n.s.
Enhance equity	n.s.	n.s.	t1>t2 ^{***} /.176	t1>t2 [*] /.120
Contribution to society	t1<t2 [*] /.133	n.s.	t1>t2 ^{**} /.115	n.s.
Job security	n.s.	n.s.	n.s.	t1<t2 [*] /.119
Job-family-compatibility	n.s.	n.s.	n.s.	t1<t2 ^{**} /.149
Others' recommendation	n.s.	t1<t2 ^{**} /.347	t1>t2 ^{**} /.076	t1<t2 ^{***} /.211
Fall back career	n.s.	n.s.	n.s.	n.s.

Comments: p= level of significance ^{} <.05, ^{**} <.01, ^{***} <.001, η^2 =etasquare*

Type 1, standing out by a lack of motives for other professions, shows changes in the proximal motives of teaching activities: the self-concept of teaching abilities grows significant (strong effect), as well as pedagogical interests, subject matter and, of lower significance, contribution to society. These changes lead to a profile of a better fit to motives of the teaching profession. *Type 2* with significant extrinsic motives don't change during the first years of teacher education; only the motive of others' recommendation increases. *Type 3*, motivated by all categories except the lack of motive, show a decrease in work with children, subject matter, biographic and altruistic motives. The self-concept of teaching abilities, pedagogical interests, extrinsic motives and the lack of motives don't change. It seems, that type 3 experience a realistic turn in the altruistic motives. *Type 4*, with below average motives, except the motive to work with children, show an increase of intrinsic and extrinsic motives and others' recommendation; the motive to work with children and the altruistic motive of enhance equity decrease during teacher education.

4.3. Differences between the types in their perception of professional requirement

Motives for a teaching career shape the perception of professional requirements (Tab. 4). At the *beginning* of teacher education, the types differ significant in most of the components of the *competences* to deal with professional requirements. They differ as well in the perception of requirements *relevance* and *challenge*. *After two years* of teacher education, most of the differences disappear. Regarding the differences in their *development*, the types differ mainly in the development of the *relevance* of professional requirements, except the relevance of the individual fit of teaching, classroom management and the balance of own resources. They differ in the development of *challenge* by the requirements of preparation and classroom-management and in the development of the *competence* in preparation. The types seem to converge in their perception of relevance, competence and challenge by professional requirements, but there are type-specific differences in their development.

Table 4. Differences between the types in their perception of professional requirements

	ANOVA (p/ η^2)	t1	ANOVA (p/ η^2)	t2	GLM t1-t2 (p/ η^2)
Competence in					
Preparation	.004/.087		n.s.		.016/.058
Individual fit	.003/.089		n.s.		n.s.
Classroom management	n.s.		n.s.		n.s.
Work with parents	n.s.		n.s.		n.s.
Cooperation with staff	.011/.072		n.s.		n.s.
Resource balance	n.s.		.018/.066		n.s.
Role-taking	.01/.073		n.s.		n.s.

Relevance of			
Preparation	.001/.109	n.s.	.007/.068
Individual fit	.0001/.120	n.s.	n.s.
Classroom management	.013/.070	n.s.	n.s.
Work with parents	.019/.065	n.s.	.021/.056
Cooperation with staff	.001/.109	n.s.	.008/.067
Balance own resources	n.s.	n.s.	n.s.
Role-taking	.0001/.142	n.s.	.002/.089
Challenged by			
Preparation	n.s.	.05/.051	.05/.044
Fit to individuals' needs	.013/.07	.05/.052	n.s.
Classroom management	n.s.	n.s.	n.s.
Work with parents	n.s.	n.s.	n.s.
Cooperation with staff	.011/.073	n.s.	.006/.072
Balance own resources	.008/.077	n.s.	n.s.
Role-taking	.055/.050	n.s.	n.s.
<i>Comments: t1= beginning of teacher education, t2= after two years</i>			

Discussion

Confirming results from prior studies as mentioned in the introduction, proximal motives, related close to teachers' activities, such as pedagogical interests, the motive to work with children and the self-concept of teaching abilities are highly distinctive. They don't spread widely at the beginning of teacher education and two years later. The wide standard deviations of the other motives indicate diversity in the motives of student teachers for the career as a teacher. Based on this, different profiles of motives can be expected.

The results show, that motives for the career as a teacher change during the first two years of teacher education. Most of the proximal motives increase during teacher education, the intrinsic motive of work with children and altruistic motives decrease. Career motives shape the maintenance and the change of motives for the career as a teacher during teacher education with pre-service teaching periods integrated, as the one in Switzerland (Keller-Schneider, 2016a). Challenged by professional requirements, student teachers reframe their motives and abilities for the job as a teacher. Based on this finding, comparing results from different studies on career motive of student teachers, it is essential to take in account the period, in which the student teachers were asked about their motives for the career as a teacher.

The identification of types distinguishes different patterns of career motives with type-specific characteristics. *Type 3* with a favorable profile for the career as a teacher, with motives on a high level, seems to experience a realistic turn through coping with professional requirements, experiencing the requirements of a teacher and the responsibility for their acting during of pre-service teaching. The less favorable fall back *type 1* and the extrinsic motivated *type 4* show a development towards a profile with a better fit to teachers' requirements. The extrinsic motivated *type 2* doesn't change in its motives; the experience of challenge by professional requirements has no effect. Results on motives of student teachers with no differentiation do not take in to account the variety of interindividual differences.

Following the changes of motives for the career as a teacher over the first two years of teacher education, the types converge. Experiences with requirement during teacher education seem to equalize the different profiles of motives. But the development of career motives is type-specific. *Type 1* with lack of motives increases its self-concept, intrinsic and subject matter motives. *Type 2* with significant distal motives don't change. *Type 3*, over

average motivated, shows a decrease especially in the altruistic motives. Type 4, characterized by the motive of work with children, increase in pedagogical and extrinsic motives, paired with a decrease of the motive to work with children and the altruistic motive to enhance equity. Even the pattern of motives was not favorable at the entrance in teacher education, coping with professional requirements lead to a change towards a better motive fit, except of the pattern with dominant extrinsic motives (type 2), resistant towards a change of career motives.

Types of different patterns of career motives at the beginning of teacher education differ in their perception of professional requirements. Career motives shape the relevance of these requirements, the competence in coping with them and the challenge. Not only learning opportunities are shaped by career motives (König et al., 2016), but their perception as well, as assumed. These effects change during the first years, the effect of career motives at the beginning of teacher education diminish. Types seem to converge in their perceptions as well as in their motives. But in their development of the relevance of professional requirements they differ.

Conclusions

If motives for the career as a teacher change during teacher education and differences converge, reflections on motives for the career and their re-assessment is of high importance. The fact, that beginning teachers with a lack of motives for professions by entering teacher education can increase their motivation by coping with requirements, embedded in realistic learning situations and challenging pre-service teaching periods with high responsibility for their acting. But high motivated student teachers change their motives; dealing with requirements in the field leads to a realistic turn in their altruistic motives. Intrinsic motives, a favorable self-concept of teaching abilities and not to high altruistic motives are helpful to master the increasing complexity of professional requirements in the career entry phase. To be aware of own motives and their changes is helpful, because career motives matter for the professional development.

So far, we know about career decision motives, differences between countries, school-types, and subjects as well, and we know about influences on them, as reported in the introduction. We know about their development during teacher education, their effects on the perception of professional requirements and type-specific differences, as worked out in this paper. But we don't know about their changes entering the career as a beginning teacher and about their influences on coping with professional requirements during career entry phase. Further research has to be done.

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