Dear reader,

This is an Accepted Manuscript that has been published in *New Directions in Religious and Values Education. International Perspectives*, edited by Leslie J. Francis, David W. Lankshear, and Stephen G. Parker.

The document does not include the final publisher's layout or pagination.

Original publication: Manfred L. Pirner / Sebastian Röhl Religious and Professional Beliefs of Schoolteachers. Theoretical Deliberations and Preliminary Research Findings in: Francis, Leslie J. / Lankshear, David W. / Parker, Stephen G. (eds.), New Directions in Religious and Values Education. International Perspectives, pp. 183–197 Oxford et al.: Peter Lang 2021 https://doi.org/10.3726/b17253

Access to the published version may require subscription. Published in accordance with the policy of Peter Lang: <u>https://www.peterlang.com/repository-policy/</u>

Your IxTheo team



Manfred L. Pirner & Sebastian Röhl

The relationship of religious and professional beliefs of schoolteachers. Theoretical deliberations and preliminary research findings

Abstract

How do school teachers' religious beliefs influence their professional thinking and acting? While this question has triggered several empirical studies and theoretical discussions in the United States, it has been widely neglected in European educational research, or restricted to Religious Education teachers. In the paper some theoretical deliberations will be offered and empirical data from one recent pilot study in Germany will be introduced. The data suggest that different from the U.S. German teachers do not show as strong and clear relations between their religiosity and their profession. This may be due to different traditions of teacher education with a significant secular branch in the German context.

Introduction – illustrating the research perspective

In order to introduce to you the research perspective that will be unfolded in this paper we would like to start with a passage from an interview with a female Religious Education teacher in a Northern Bavarian primary school that we recently recorded (translation: mine).

This [assessing the achievement of pupils] is sometimes difficult. In RE I don't do that so much really. Also, I don't give bad marks. Everyone who does not fool around or severely misbehaves gets their 'two' [the second best grade after grade one]. [...] That's also what I tell my pupils that this is the freedom that I have in RE. I don't want to destroy the beautiful and valuable things that I convey to the pupils by grading them. But it's not only in RE. For me, it's also important in other subjects. I mean, from my Christian view and as a primary school teacher I want to make clear to my pupils: I don't

see you as a mark. The kids know that with me they will not be judged by a grade, so that I say, you are a bad child now or you are a good child now. I try to value them as persons.

This interview text would actually deserve a deep and detailed analysis. For now, it will suffice to only highlight two aspects. First: Obviously, the teacher holds certain religious beliefs that she somehow links with her professional beliefs and practice, in this case on assessing pupils' achievement. We can observe that her religious beliefs and her professional beliefs interact with one another, which leads to a relativization of marks, but also to a kind of reconceptualization of the assessment of pupils. This interaction between religious beliefs and professional beliefs is clearly prompted and promoted by the context of Religious Education, but it extends beyond RE to other school subjects. Obviously, not only RE teachers can be influenced by their religious or worldview beliefs in their professional beliefs and practice, but also teachers of other subjects.

Second, the fact that teachers' professional thinking and acting can be influenced by their religious or worldview beliefs can be judged differently. It clearly has normative implications. In our example it could be critically asked whether the teacher's religious beliefs do not impair her professional acting in a problematic way. Or it could be argued that the teacher uses her religiosity as a resource for developing a more humane way of dealing with the task of feedback and assessment of pupils. More generally, in state schools in pluralistic societies, influences by teachers' religious beliefs might be seen as endangering the neutrality of schools concerning religions and worldviews that is demanded of them. Public debates in a number of European countries about whether teachers should be allowed to wear head-scarfs or other religious symbols indicate that many people fear problematic effects of teachers' religious beliefs on their pupils. Vice versa, for faith-based schools, churches and other school-maintaining bodies tend to demand from their teachers to subscribe to the religious faith these schools represent. Of course, the assumption behind this demand is that the teachers' religious beliefs do make a difference (see e.g. Hunt et al., 2004) for the way they teach and educate young people.

This may suffice to point to the academic, societal and even political implications that research on the relationship between religious beliefs and professional beliefs of schoolteachers has. Our example also makes clear why it is important to do such research and raise teachers' awareness for this relationship: On the one hand, possible influences of teachers' religious beliefs on their professional thinking and acting can become problematic, if they remain unconscious and are not included in professional reflection. On the other hand, teachers' religious beliefs may be valuable resources that can underpin, motivate and shape their professional, educational thinking and acting – if they are adequately reflected and responsibly related to professional expertise and requirements.

In the following, we will first give a brief overview of the state of empirical research on this topic, and, second, develop some theoretical perspectives. Finally, we will report about an empirical pilot study on this issue and draw a conclusion for teacher training.

The state of empirical research – a brief overview¹

Empirical research on links between teachers' religiosity or spirituality and their profession is scarce and mostly comes from the United States. For instance, in 2006 the Higher Education Research Institute found in a quantitative survey among more than 40,000 College professors significant correlations between the degree of spirituality and the professional beliefs of the respondents: A higher degree of spirituality was connected with a higher focus on students' personal development, civic minded values, a student-centred pedagogy, more advocacy for

¹ For a more detailed account see Häusler, Pirner, Scheunpflug & Kröner, 2019.

diversity and, in general, a more positive outlook in life and work, compared to a low degree of spirituality (see HERI, 2006, p. 7).

Several qualitative studies have provided evidence that for many U.S. teachers their religious beliefs motivate and shape their professional practice. They report, for instance, that their experience of God's love and grace motivates them to be sympathetic and helpful towards their colleagues and students (Kang, 2009; Nelson-Brown, 2007; Pajak & Blasé, 1989). However, as David Sikkink summarizes in a meta-study, the effects of religious beliefs are not exclusively positive: 'Teachers overwhelmingly mentioned positive effects of their personal religious lives on their professional lives, though a few males did mention that their religious commitments lead to feelings of anger, guilt, and conflict with their professional role.' (Sikkink, 2010, p. 167; see also Pajak & Blasé, 1989).

When we look for studies on the relationship between teachers' religious beliefs and their professional thinking and acting beyond the U.S., we soon discover a vast research deficit. We do find some empirical investigations on the effect of religious or worldview beliefs of science teachers on their concepts of teaching about science, especially about evolution theory (e.g. Clément, 2015; more references in Häusler et al., 2019). These studies primarily reveal the tensions many science teachers feel between religious creation belief and evolution theory and the uncertainty of many of them how to deal with these tensions.

Research on Religious Education (RE) teachers in Germany has also partly focused on the relationship of teachers' personal religious beliefs and their professional thinking and acting. Several studies found evidence that Christian RE teachers tend to bring in their own religious views into their teaching, but mostly not in a direct, 'authentic' way, but in a pedagogically reflected way (see e.g. Feige, 2001). While we know something about the religious contents and goals RE teachers try to convey to their pupils, we unfortunately know very little about their educational views and practices and whether or how these relate to their religious beliefs. Thus, we can say that the research deficit is extremely big concerning teachers without RE, but also extends to RE teachers.

Teacher beliefs – theoretical perspectives

What do we know about teachers' beliefs and how can the relationship between religious beliefs and the professional thinking and acting of teachers be theoretically conceptualized? The research on teacher beliefs has developed into a field of its own over the past decades (see e.g. Fives & Gill, 2015). Teachers' beliefs are usually taken to refer to the teachers' views about the nature of teaching and learning, the nature of the subject matter or the basic views of their pupils. Their importance is hardly contested, yet the way in which they interact and are connected to form belief systems is as under-researched as is their precise effect on teaching practice (see Fives & Buehl, 2012, p. 477). This also goes for investigations of the relationships between teachers' personal beliefs – such as religious or worldview beliefs – and their professional beliefs.

The religious, theological logic seems to be quite clear: Religious views or norms should guide your whole life, not only a religious part of it, including your professional life. This is the claim of most major religions, and of Christianity in particular. This can be seen to correspond with a psychological logic, as e.g. developed in Festinger's theory of cognitive dissonance (1957; Cooper, 2007). It assumes that humans have a desire to establish a certain degree of consistency between the diverse beliefs they hold. In this line, McAlpine, Eriks-Brophy und Crago (1996, p. 392) contend that 'educational beliefs are a substructure of the total belief system [of a person] and must be understood in terms of their connections to other, perhaps more influential, beliefs'.

However, already classic theological traditions like Martin Luther's two kingdoms doctrine (see e.g. Bornkamm, 1966) advanced the insight that religious beliefs that may be valid for the life of the church or one's personal life cannot be directly and in the same way

applied to the realm of public, social and political responsibility. They rather must be *translated* or *transformed* in a way that does justice to the specific context. You cannot rule a state just by the commandment to love your neighbour – nor can you manage a classroom solely by this ethical principle. Theological concepts from Christian social ethics or approaches like public theology (see e.g. Pirner et al., 2018; 2019) take account of such insights. And in the field of psychology, present-day neuropsychologists have provided evidence that the human brain is to a considerable extent structured in 'compartments' or 'modules' and that therefore humans tend to be 'consistently inconsistent' in their beliefs and values (see e.g. Kurzban, 2010, p. 4).

Consequently, we cannot empirically expect simple, direct ways of interaction between teachers' religious beliefs and their professional beliefs. Rather we will probably encounter varying ways how teachers connect their religious beliefs with their professional thinking and acting and how they reflect on this.

It seems reasonable in this context to make a distinction between the actual relationships between teachers' religious beliefs and their professional thinking and acting on the one hand, and their *reflection* on such relationships on the other hand. The former can be empirically researched by correlating the two areas, religious beliefs and professional beliefs. For the latter, the first author has developed a structural model of what he abbreviates as beliefs on the **R**elationship between **P**rofession and **R**eligion/religiosity or RPR beliefs. Drawing on and further extending a classification suggested by Reusser, Pauli and Elmer (2011) this model comprises several dimensions that have been concretised in scales (see table 1; first published in a more extended version in German in Pirner & Wamser, 2017, pp. 116–117).

<insert table 1 about here>

Our research team used this model in several empirical studies from which we will choose one pilot study to report about more closely in the next section.

Teachers' religious and professional beliefs – some preliminary research findings from a pilot study

The team of the Nuremberg Research Unit for Public Religion and Education (RUPRE) has conducted two quantitative pilot studies in which we tested the newly developed scales and explored possible correlations between teacher students' religious beliefs and their professional beliefs (reported in Pirner, 2013) and one with teachers (see below). Also, we integrated some of the scales into a bigger empirical survey among RE teachers in Bavaria that will soon be published (Pirner & Kertes, 2020). At present, a research group consisting of Manfred Pirner, Stephan Kröner, Annette Scheunpflug and Nastja Häusler is conducting a research project (acronym "RebeL") funded by the German Research Foundation (Deutsche Forschungsgemeinschaft DFG) to investigate possible correlations between religious and professional beliefs among a bigger sample of teachers (with and without RE as subject) (see for current status and first results www.projekt-rebel.phil.fau.de > 'Information in English'). In this context the team also did an extensive validation study among university students of those two newly developed scales from RPR beliefs that we wanted to use in the *RebeL* project, "Intentional influence of teachers' religious/worldview beliefs on their pupils" and "Presence of religion in school culture" (Häusler et al., submitted). In another quantitative study connected with the research question introduced above, the authors of this text have explored in how far teachers at evangelical private schools see their profession as a 'calling' (by God) (see Röhl & Pirner, submitted).

In the following, we will restrict ourselves to reporting about the exploratory pilot study among 202 teachers, a convenience sample from the metropolitan area of Nuremberg, Fürth and Erlangen. Our research question was twofold: a) Are there correlations between the teachers' religious beliefs and their professional beliefs? b) How do teachers think about such possible correlations (RPR beliefs)?

In order to answer these two questions, we integrated three sets of scales into the questionnaire to cover three areas of content: religiosity (religious beliefs), professional beliefs and RPR beliefs. Table 2 shows an overview of the instruments we used for measuring religious beliefs and professional beliefs as well as Cronbach's Alpha for reliability, the mean value and the standard deviation.

<insert table 2 about here >

For measuring the religious beliefs, we used the well-tested multidimensional centrality-of-religiosity scale developed by Stefan Huber (Huber & Huber, 2012) that links religious beliefs in a narrow sense with religious practices and religious experiences. As regards professional beliefs, we chose those (sufficiently tried and tested) constructs and scales that, from previous research and from theoretical deliberations, seemed likely to be in some way linked with religious or worldview beliefs. For instance, we hypothesized that religious teachers would be more inclined to emphasize educational goals against transmission goals, because the personality development of their students would be more important to these teachers than their students' acquisition of knowledge. Or, we assumed that religious teachers would prefer cooperative learning against competitive learning, because from their religious perspective they would want to promote their students' social competences along with other skills. The third set of instruments consisted of the self-developed RPR-beliefs scales that were introduced above – which, as can be seen in table 2 – all showed a quite satisfactory reliability.

To our disappointment, the correlation analysis between religious beliefs and professional beliefs did not produce the numerous and clear correlations that we had expected. There were only two significant, and only weak, correlations: The degree of religiosity correlated negatively with teachers' focus on discipline and with their self-efficacy (both with $r = .14^*$).

As the correlation results were not satisfactory we tried a cluster analysis, assuming that there might not be a linear correlation between religious and professional beliefs at all (see for more details Pirner, Röhl & Scheunpflug, submitted). And indeed we found that there may be rather a kind of bath-tub relationship. We found four clusters, which means four types of teachers. Two of the clusters show the tendencies of high idealism and commitment to pupil-centred values and practices, type 1 with high religiosity rates and type 2 with very low religiosity rates.

The teacher pilot study did yield some interesting results on RPR beliefs that can be seen in table 3. Because RE teachers have a special precondition as to relating religion to their profession, all RPR belief scales were calculated excluding the RE teachers (teachers without RE as a subject: n = 148).

<insert table 3 about here >

The results show that RPR reflexivity (exemplary item: 'How often do you think about possible links between religions/worldviews and pedagogy?') among teachers without RE as subject is not high (mean value = 3.6), but still about 60 % of them reflect at least *'from time to time'* about possible links between religions or worldviews and pedagogy.

Also, the majority of teachers without RE endorsed the epistemological belief that there is a general connection between educational concepts and a religion- or worldviewrelated foundation (mean value = 2.4), fewer of them, but still a substantial part (mean value = 2.8) affirmed that they would like to pass on some of their worldview or religious attitudes to their students. It is also interesting to see that there is a much higher endorsement for supportive influences of the teachers' religious or worldview beliefs on their professional thinking and acting (mean value = 3.2) than for conflictual influences (mean value = 4.1). To make it more concrete: About 33 % of teachers without RE affirmed that their religiosity/faith helps them 'to stay friendly and patient in difficult situations at school', while about 20 % of them indicated that they 'sometimes experience a conflict' between their religious or worldview beliefs and the requirements of their teaching profession.

As could have been expected, there were significant positive correlations between the respondents' religiosity (centrality scale) and all RPR areas. The strongest correlation (.829**) shows that the more religious the respondents consider themselves to be, the more will they experience their religiosity as supportive for their job. A less strong correlation affirms that higher religiosity may also increase the feeling of conflicts between the teachers' religious beliefs and the professional requirements of their job.

Discussion

The reported study has, as is usual for pilot studies, its clear limitations in that it is based on a rather small convenience sample that is in no way representative, and in the limited scope of statistical procedures that have been applied. Yet, it gives us some valuable hints for further research. Firstly, it has reaffirmed our estimation that research results from the United States cannot be simply transferred to European countries. The quite clear and numerous correlations between religious beliefs and professional beliefs of teachers in US research could not be reproduced in our sample. The possible 'bath-tub relationship' that we found hints of through cluster analysis may be interpreted to point to a difference between US-American teachers and German teachers: In Germany we have a strong tradition of a secular, critical kind of pedagogy for which emancipation from religion has always been and still is a major value. This might manifest itself in type 2 of the four clusters, in which a secular attitude is

combined with high idealism and commitment to student-centred values and practices, while, in tendency, a similar extent of idealism and student-centered commitment is combined with high religiosity in type 1 of the clusters. However, there is certainly more research needed to confirm this assumption; we will try to find out about this in our present *RebeL* project.

Secondly, the newly created construct of RPR-beliefs has proved meaningful and provided interesting results that can be linked to qualitative research. Especially the considerable number of respondents who affirmed that their religiosity/faith is a source of support and motivation can be compared with the above-reported qualitative studies from the U.S. and be complemented by one qualitative study from Germany. In it, Ralf Bohnsack (2009) was able to show through interviews of 22 teachers that their spirituality and especially the central aspect of 'ontological trust' ('Seinsvertrauen') is an important factor stabilising the teachers' self and motivating them to focus on their students' personality development.

Furthermore, the conflict or tension felt by a considerable part of the respondents in our pilot study between their religious beliefs and the requirements of their teaching profession can remind us of similar tensions voiced by RE teachers in qualitative interviews conducted by Hans-Güter Heimbrock in the German state of Hesse (Heimbrock, 2017). His analysis of typical ways how the RE teachers deal with those tensions stimulated the first author of this text to develop a stage model (see Pirner & Wamser, 2017) that has meanwhile found further support by the findings from interviews with Bavarian RE teachers. To extend this aspect of research to teachers without RE as a subject is, among many others, a task that is still to be done.

References

Bohnsack, F. (2009). *Aufbauende Kräfte im Unterricht. Lehrerinterviews und empirische Belege.* Bad Heilbrunn: Klinkhardt.

- Bornkamm, H. (1966). *Luther's doctrine of the two kingdoms in the context of his theology*. Minneapolis, MN: Fortress Press.
- Clément, P. (2015). Creationism, science and religion: A survey of teachers' conceptions in 30 countries. *Procedia Social and Behavioral Sciences*, 167, 279–287. doi: 10.1016/j.sbspro.2014.12.675
- Cooper, J. (2007). *Cognitive dissonance: 50 years of a classic theory*. London: Sage Publications.
- Dresel, M. (2008). Skalen zu Unterrichtsstilen und Lernarrangements von Lehrkräften. Unveröffentlichtes Manuskript. Augsburg: University of Augsburg.
- Feige, A. (2001). Die Religionslehrerinnen und -lehrer als Symptom der Entkoppelung von Kirche und Gesellschaft. Zeitschrift für Pädagogik und Theologie 53, 289–296.
- Festinger, L. (1957). A theory of cognitive dissonance. Stanford, CA: Stanford University Press.
- Fives, H., & Buehl, M. M. (2012). Spring cleaning for the "messy" construct of teachers' beliefs: What are they? Which have been examined? What can they tell us? In K. R. Harris, S. Graham & T. Urdan (Eds.), *APA educational psychology handbook: Volume 2 Individual differences and cultural and contextual factors* (pp. 471–499). Washington, DC: APA.
- Fives, H., & Gill, M. G. (Eds.) (2015). International handbook of research on teachers' beliefs. New York: Routledge.
- Gerecht, M., Steinert, B., Klieme, E., & Döbrich, P. (2007). Skalen zur Schulqualität.
 Dokumentation der Erhebungsinstrumente. Pädagogische Entwicklungsbilanzen mit Schulen (PEB) (2nd, revised edition). Frankfurt a.M.: Gesellschaft zur Förderung Pädagogischer Forschung.
- Häusler, N., Pirner, M. L., Scheunpflug, A., & Kröner, S. (2019). Religious and professional beliefs of schoolteachers a literature review of empirical research. International Journal

of Learning, Teaching and Educational Research, 18(5), 24–41. Available open access at: http://www.ijlter.org/index.php/ijlter/article/view/1479

- Häusler, N., Pirner, M. L., Scheunpflug, A., & Kröner, S. (submitted). How do teachers relate their professional and religious beliefs (RPR reflexivity)? A validation study of two newly developed scales. *Journal of Beliefs and Values*.
- Heimbrock, H.-G. (Ed.) (2017). Taking Position. Empirical studies and theoretical reflections on Religious Education and worldview. Teachers' views about their personal commitment in RE Teaching. International contributions. Münster: Waxmann Verlag.
- HERI (Higher Education Research Institute). (2006). Spirituality and the professoriate. A national study of faculty beliefs, attitudes, and behavior. Retrieved October 26, 2018, from http://spirituality.ucla.edu/docs/results/faculty/spirit_professoriate.pdf
- Huber, S., & Huber, O. W. (2012). The Centrality of Religiosity Scale (CRS). *Religions*, *3*, 710–724.
- Hunt, T. C., Joseph, E. A., & Nuzz, R. J. (Eds.). (2004). Catholic Schools Still Make a Difference, 2nd Edition: Ten Years of Research, 1991-2000. Washington D.C., National Catholic Educational Association.
- Kang, S. J. (2009). "I can't do it without my faith." A mixed methods study of teachers' efficacy and personal religiousness (Paper presented at the Annual Meeting of the American Educational Research Association San Diego, April 13-18, 2009).
- Kurzban, R. (2012). Why everyone (else) is a hypocrite. Evolution and the modular mind.Princeton, N.J.: Princeton University Press.
- McAlpine, L., Eriks-Brophy, A., & Crago, M. (1996). Teaching beliefs in Mohawk classrooms: Issues of language and culture. *Anthropology & Education Quarterly*, 27, 390–413.

- Nelson-Brown, J. E. (2007). The keys of the kingdom. How teacher religious identity impacts their experience of teaching. *Dissertation Abstracts International. A: The Humanities and Social Sciences*, 67, 40-84.
- Ortenburger, A. (2010). Professionalisierung und Lehrerausbildung. Zur Bedeutung professionsbezogener Einstellungsmuster für Studienwahl und Studienverläufe von Lehramtsstudierenden. Eine explorative Längsschnittstudie. Frankfurt a. M.: Peter Lang Verlag.
- Pajak, E., & Blasé, J. J. (1989). The impact of teachers' personal lives on professional role enactment. A qualitative analysis. *American Educational Research Journal*, 26, 283–310.
- Pirner, M. L. (2013). Religiosität und berufsbezogene Überzeugungen von Lehramtsstudieren-den. Eine quantitativ-empirische Pilotstudie. Pastoraltheologische Informationen 33(1), 123-134. (http://repositorium.unimuenster.de/document/miami/da231e76-d425-4dfe-813a-256578762c58/2013-1_s123-134 Pirner.pdf)
- Pirner, M. L., & Kertes, D. (2020, in press). Religionslehrende in Bayern. Eine empirischquantitative Studie. Stuttgart: Kohlhammer.
- Pirner, M. L., Lähnemann, J., Haussmann, W., & Schwarz, S. (Eds.). (2018). Public theology, religious diversity, and interreligious learning: Contributing to the common good through religious education. New York: Routledge.
- Pirner, M. L., Lähnemann, J., Haussmann, W., & Schwarz, S. (Eds.). (2019). Public theology perspectives on religion and education. New York: Routledge.
- Pirner, M. L., Röhl, S., & Scheunpflug, A. (submitted). Religiosität und berufsbezogene Überzeugungen von Lehrerinnen und Lehrern. Eine quantitativ-empirische Pilotstudie. *Theo-Web. Zeitschrift für Religionspädagogik.*
- Pirner, M. L., & Wamser, D. (2017). Religiosität und Lehrerprofessionalität. Zur Bedeutung von bildungstheologischen Überzeugungen und bildungstheologischer

Reflexionskompetenz. In H.-G. Heimbrock, H.-G. (2017). (Ed.). *Taking Position* (pp. 111–126). Münster: Waxmann Verlag.

- Reusser, K., Pauli, C., & Elmer, A. (2011). Berufsbezogene Überzeugungen von Lehrerinnen und Lehrern. In E. Terhart, H. Bennewitz & M. Rothland (Eds.), *Handbuch der Forschung zum Lehrerberuf* (pp. 478–495), Münster: Waxmann.
- Röhl, S., & Pirner, M. L. (submitted). Berufen zum Lehrerberuf Zusammenhänge zwi-schen Berufungsempfinden, Selbstregulation und motivationalen Orientierungen bei Lehrkräften evangelikal orientierter Schulen. Zeitschrift für Pädagogik.
- Schwarzer, R. & Jerusalem, M. (1999). Skalen zur Erfassung von Lehrer- und Schülermerkmalen. Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen. Berlin.
- Sikkink, D. (2010). Do religious school teachers take their faith to work? Research evidence from the United States. *Theo-Web. Academic Journal of Religious Education*, 9(1), 160–179. (Online at: www.theo-web.de).

Table 1

Structural model of the teachers' beliefs on the **R**elationship between **P**rofession and **R**eligion/religiosity = RPR beliefs (source: own model, Pirner)

Dimensions	Subdimensions	Exemplary items
RPR reflexivity	RPR reflexivity	How often do you think about (possible) links between religions/worldviews and pedagogy?
Epistemological beliefs	Relationship between religions/worldviews and pedagogy	There is no pedagogical concept without references to worldviews or religions.
	Supportive influence of religious/worldview beliefs on teachers (personal)	My religious or worldview beliefs are a source of motivation for my teaching profession.
Person-related beliefs	Conflictual influence of religious/worldview beliefs on teachers (personal)	How often do you experience a conflict between your religious or worldview beliefs and the requirements of your teaching profession?
	Intentional influence of teachers' religious/worldview beliefs on their pupils (personal)	I would like to pass on some of my worldview or religious attitudes to my students.
Context-related beliefs	Importance of religion in school culture	How important are, in your view, religious school celebrations?

Table 2

Content area	Description of scales	Source	α	М	SD	r
Religious beliefs	Centrality of religiosity scale (10 items)	Huber & Huber, 2012	.94	3.0	1.01	1
Professional beliefs	Focus on education vs. transmission (3 items)	Ortenburger, 2010	.74	3.7	0.77	n.s.
	Teacher idealism (3 items)	Ortenburger, 2010	.75	2.0	0.86	n.s.
	Focus on relation teacher- student-relations (4 items)	Ortenburger, 2010	.67	2.1	0.67	n.s.
	Professional self-efficacy (3 items)	Schwarzer & Jerusalem, 1999	.68	2.4	1.90	146*
	Reference norm for assessments (6 items)	Dresel, 2008	.76	2.4	0.63	n.s.
	Error culture (3 items)	Dresel, 2008	.67	1.6	0.50	n.s.
	Competitive vs. coope- rative learning (5 items)	Dresel, 2008	.76	3.4	0.91	n.s.
	Discipline-centered teaching style (3 items)	Gerecht et al., 2007	.69	2.8	0.73	148*
	Student-centered teaching style (4 items)	Gerecht et al., 2007	.67	2.2	0.69	n.s.

Content areas and instruments of the pilot study: religious and professional beliefs (N = 202 teachers)

Notes: All scales were measured by a 5-point Likert scale with 1 as the highest value (e.g.: A mean value [M] of 1.6 on "error culture" indicates that the vast majority of respondents appreciate a positive error culture in class). α = Cronbach's Alpha; M = mean value; SD = standard deviation; n.s. = not significant; r (centr. sc.) = Pearson's correlation coefficient relating to the centrality-of-religiosity scale. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Content area	Name or description of scales	Source	α	М	SD	r centr.sc
RPR beliefs	RPR reflexivity (4 items)	Pirner & Wamser, 2017	.86	3.6	0.78	448**
	Epistemological beliefs (6 items)	Pirner & Wamser, 2017	.86	2.4	0.82	.521**
	Person-related: personal, supportive influence (4 items)	Pirner & Wamser, 2017	.97	3.2	1.30	.829**
	Person-related: personal,	Pirner & Wamser,	.80	3.7	0.95	.271*

2017

2017

2017

beliefs:

conflictual influence (4

Person-related: personal,

intentional influence (4

importance of religion in

school culture (3 items)

Context-related

items)

items)

Table 3 Content areas and instruments of the pilot study: RPR beliefs (teachers without RE as subject: N = 148)

Notes: All scales were measured by a 5-point Likert scale with 1 as the highest value (e.g.: A mean value [M] of 2.4 on 'importance of religion in school culture' indicates that a small majority of respondents affirm that religion – e.g. religious school celebrations – is important at school). α = Cronbach's Alpha; M = mean value; SD = standard deviation; n.s. = not significant; r (centr. sc.) = Pearson's correlation coefficient relating to the centrality-of-religiosity scale. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Pirner & Wamser,

Pirner & Wamser,

2.8

2.4

.88

.89

1.00

1.00

.510**

.664**