



Values in the school curriculum from teachers' perspective: A mixed-methods study

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ABSTRACT

The transmission of human values plays a key role in the educational landscape around the world (Matthes, 2014; Beck, 1990; Halstead, 1996), and educational frameworks (c.f. OECD, 2019; Council of Europe, 2016) as well as national school curricula (c.f. *National Curriculum*, Ofsted, 2018; *Lehrplan 21*, D-EDK, 2016) are based on values that are considered important. However, empirical research into how values are structurally reflected in school curricula and how these values are perceived in the school environment by teachers is very limited. This mixed-methods study is the first of its kind to provide findings based on data from Switzerland, where a new comprehensive curriculum has recently been introduced. Schwartz's theory of basic human values (1992), the most widely researched values framework, serves as its conceptual framework. A Qualitative Content Analysis of the Swiss educational curriculum (*Lehrplan 21*, D-EDK, 2016) revealed a wealth of references to values, with a focus on values belonging to Schwartz' higher order values *Openness to Change* (Basic values: *Self-Direction* and *Stimulation*), *Conservation* (*Tradition*, *Conformity* and *Security*) and *Self-Transcendence* (*Benevolence* and *Universalism*). On the other hand, values belonging to the higher order value of *Self-Enhancement* (*Power* and *Achievement*) did not play an important role in the investigated curriculum. In a complementary quantitative study, the value statements from the Swiss educational curriculum were embedded in a questionnaire, which 108 (102 female (94.4%), 6 male (5.6%)) primary school teachers completed with regard to how they perceive the value-oriented curricular contents in their school environment. Multidimensional Scaling revealed that teachers' perception of value-oriented curricular contents in their school environment was structured alongside Schwartz's motivational continuum of values, with values of *Openness to Change* being opposed to values of *Conservation*, and values of *Self-Transcendence* being opposed to values of *Self-Enhancement*.

1. Introduction

Values are central concepts in the social sciences, and the transmission of values is part of socialization, where behaviors and attitudes are passed on from one generation to the next (Makarova et al., 2018). For this reason, the importance of value formation through education is increasingly being discussed internationally (Matthes, 2004; Beck, 1990; Halstead, 1996), as it is precisely the school context that plays a key role in the development of personal value orientations in various contexts.

Schools promote the integration of adolescents into society by transmitting values and norms that underlie the democratic and constitutional order (Fend, 2008). Values are therefore conveyed through corresponding curricular educational goals at the *macrolevel* of

the school system and hold a prominent and relevant position in the international education policy setting. Supranational organizations such as the *Organization for Economic Co-operation and Development* (OECD) or the *Council of Europe* (CoE) have published frameworks in which values are explicitly mentioned as competences to be acquired (OECD, 2019). In national education frameworks (c.f. *National Curriculum*, OFSTED 2019; *Lehrplan 21*, D-EDK, 2016), values are highlighted as specific competences and the importance of teaching values is emphasized.

In his theory of school, Fend (1980) distinguishes between the qualification, allocation and integration functions of school. Specifically, for the integration function of the school system, this pertains to "whether it is designed in such a way that individual life perspectives, [...] as a whole, are brought into balance, whether it enables social participation in culture regardless of origin, race, and gender, and

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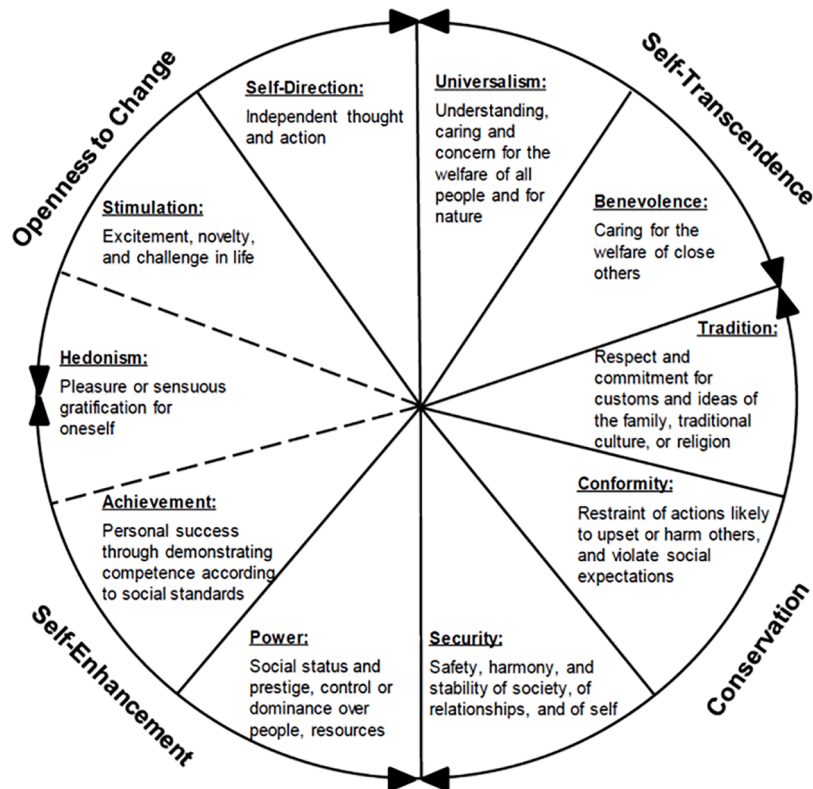


Fig. 1. Schwartz's model of human values (1992).

whether it contributes to securing humane living conditions. Effectiveness, social justice and humanity are quality criteria to be applied to education systems as a whole." (Fend, 1988, p. 542). This is also in line with Fend & Stöckli (1997, p. 4) that the socialization system of a society (and thus also the education system) must ensure that the upcoming generation is able to connect with the requirements of modern life.

The importance of value education both in society and in the school environment is therefore undisputed, and although there are many theories about the role of value socialization in education, there is currently very little empirical evidence to support it. This is especially true when considering Schwartz's theory of basic human values as an overall framework. Thus it is that the present innovative study, by examining through examples how values are reflected in the common curriculum for primary schools in Switzerland and how teachers perceive these values in their school environment, makes a valuable contribution to the discussion of values and provides further valuable insights into the processes of value formation and value transmission for the school environment.

1.1. Values

For both Émile Durkheim (1897/1964) and Max Weber (1905/1958), values were crucial in explaining social and personal organization and change. Values play an important role not only in sociology, but also in disciplines like psychology, anthropology, or education. They are used to characterize cultural groups, societies, and individuals, to track changes over time, and to explain the motivational bases of attitudes and behavior. Further, they express broad goals (e.g., kindness) that are important to a person in life, and are linked to an individual's behavior (Bardi & Schwartz, 2003; Maio, 2010). According to the model of competences for democratic culture proposed by the Council of Europe, values are "general beliefs that individuals hold about the desirable goals that should be striven for in life. They motivate action and they also serve as guiding principles for deciding how to act"

(2016, p. 36). Nevertheless, the application of the values construct in the social sciences has suffered from the lack of a consensual understanding of basic values, of the content and structure of the relationships among these values, and of reliable empirical methods to measure them.

Since the 1950s, a consensus has gradually emerged on how to conceptualize basic values. Shalom H. Schwartz (Hebrew University of Jerusalem) devoted himself in the 1980s and 1990s to the question of the structure of human values. He summarized the main features of the conception of basic values implicit in the writings of many theorists and researchers and developed the best known and most frequently cited theory of values to date – The Theory of Basic Human Values (Schwartz, 1992, 1994). The universal structure of human values postulated therein was confirmed in an empirical study in 44 countries and has since been validated in over 80 countries. The samples include very diverse geographic, cultural, linguistic, religious, age, gender, and occupational groups (Bilsky et al., 2010; Davidov et al., 2008; Schwartz & Rubel, 2005). With these findings, not only a quintessence of longstanding research, but also an established basis for future reliable empirical research methods on values has been created. For this reason, Schwartz's Theory of basic human values provides the theoretical framework of our study.

In his theory Schwartz defines values as "desirable transsituational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity." (1992, p. 21). Values are relatively stable across situations and across time (Rokeach, 1973; Schwartz et al., 2012). A definition of the ten basic values and their motivational goals according to Schwartz can be found in Appendix A.

Schwartz and collaborators (Sagiv et al., 2017) found that personal values can be organized in a circular structure.

In this structure, single values are subsumed under the heading of ten basic values: *Universalism*, *Benevolence*, *Tradition*, *Conformity*, *Security*, *Power*, *Achievement*, *Hedonism*, *Stimulation*, and *Self-Direction*. These basic values are arranged as a circular continuum, in which neighboring values have similar motivational goals and opposing basic values have

conflicting motivational goals (Fig. 1). For example, basic values of *Universalism* and *Benevolence* share their motivation to support and help others and are compatible in this respect. But the pursuit of these so-called *Self-Transcendence* values potentially conflicts with the pursuit of opposed *Self-Enhancement* values (*Power* and *Achievement*), as these are targeted at obtaining prestige, control, and success for oneself. Besides these two opposing poles, the model presents a second dimension, which is composed of the poles *Openness to Change* (*Self-Direction*, *Stimulation*, and sometimes *Hedonism*; therefore, the dotted line in Fig. 1) versus *Conservation* (*Tradition*, *Conformity*, and *Security*). Due to this structure, variables that relate positively to one value tend to also relate positively to neighboring values, and to relate negatively to conflicting values.

Interdisciplinary studies on values – especially among children – have shown that values can be a product of genetics (Uzefovsky et al., 2016), individual characteristics (Daniel et al., 2014) or social or parental influences (Barni et al., 2013, 2011). Their transmission takes place in a variety of social contexts and involves different instances of socialization such as the parental home (Makarova et al., 2013), peers (Hurrelmann & Bründel, 2003) or schools (Berson & Oreg, 2016; Daniel et al., 2013; Luengo Kanacri et al., 2017).

1.2. Value transmission

Socialization and enculturation can be regarded as the two global processes involved in the transmission of values (Schönpflug, 2001). Socialization involves the deliberate shaping of individuals to adapt to the social environment. The common means of transmission in socialization are concrete child-rearing or child-training practices by parents and other educators or mentors (p. 175 ff.).

According to Bronfenbrenner's ecological systems theory (2005), these processes are embedded in a complex system of relationships affected by multiple levels of the surrounding environment, from immediate settings of family and school to broad cultural values, laws, and customs. Significant evidence for the shaping of children's values in the family environment through transmitting processes has already been provided in several studies (e.g., Knafo & Schwartz, 2003; Makarova et al., 2018; Roest et al., 2010). These processes are characterized in everyday actions and behaviors by the educational goals of the parents – and implicitly – by the values of the parents (Herzog et al., 1997).

1.3. Value formation in the school context

Value formation in the school context is oriented towards the curricular requirements of the education system and aims for “the personal acquisition of values and value competences of the pupils” (Schubarth, 2010, p. 28, own translation). A basis for this are value-oriented teaching objectives (e.g., formulated as competences) that are given by means of educational policy settings via curricular contents.

Central developmental psychological work (c.f. Eccles, 1983; Eccles & Roeser, 2011) emphasizes the high importance of the school environment for the socio-emotional development of children and adolescents, and models of adolescent identity-personality development (Fend & Stöckli, 1997) see school as the place that offers multiple opportunities for internal representation in the self-system (self-efficacy and self-acceptance) via the gathering of experiences from the two functional systems of achievement and social acceptance. The school environment can be seen as the only place that has links to practically all developmental tasks of the social environment in childhood and adolescence (Havighurst, 1972) and has the social function of transmitting and reproducing social structures (cf. Rolff, 1997).

The educationally legitimized social mandate to carry out the tasks of the school is defined by the curriculum. It lays down conditions, contents and goals for teaching and serves as orientation for all actors in the school environment (education authorities, schools, teachers, parents,

and pupils). In view of the educational and socialization task of the school, it can pursue the goal of supporting the next generation in successfully mastering the coming challenges of a pluralistic society. Values thereby play an important role in national curricula as well as in the European educational context. The *Council of Europe* has presented a conceptual model of the competences that citizens need to participate “effectively in a culture of democracy” in Europe (CoE, 2016, p. 3). The competences included in the model include mainly universalist values (valuing human dignity and human rights, cultural diversity, democracy, justice, fairness, equality, and the rule of law) and self-direction values (knowledge and critical understanding of self). The *Office for Standards in Education* in the UK also highlights values-oriented skills as a core area of pupils' social development. Pupils' social development is demonstrated by “accepting and engaging with the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance for people with different faiths and beliefs. They will develop and demonstrate skills and attitudes that will enable them to participate fully in and contribute positively to life in modern Britain” (2018, p. 41). In Switzerland, the formation of students' values is also explicitly addressed in the first common curriculum for public schools in the 21 German- and multilingual cantons (*Lehrplan 21*) and requests for pupils to develop competences that enable them to explain, reflect on and stand up for societal and individual values.

The formation of values takes place at all three ecological system levels (Bronfenbrenner, 2005, see Section 1.2) of the school context. Societal and educational policies such as curricula are located at the macrolevel. The school environment, which includes all actors at a school location and manifests itself, among other things, through the school climate, forms the mesolevel. Interproximal processes between students and teachers in the classroom, which take place through educational goals and teaching objectives (see Section 1.2), form the microlevel.

In this context Fend (1990) speaks of implementation levels. At the *macrolevel*, the focus is on development policy decisions and the cultural content to be taught. These exist in the form of curricula, timetables, educational pathways, and examination regulations. The “translation” of these institutional requirements into the school environment as pedagogical communities with their local characteristics takes place at the *mesolevel*. Finally, at the *microlevel*, the content is again reinterpreted, selected, and arranged in specific ways, which corresponds to the level of implementation of cultural content from the curriculum by teachers in their teaching.

The largest study to date on how the school environment influences children's value priorities and structures was conducted in Israel by Berson & Oreg (2016), who surveyed over 49,000 students (grades 1 to 9), their teachers, their principals, and the school climate. Principals' values significantly predicted students' subsequent value priorities and structures for some higher-order value types (e.g., preserving what exists). In addition, school climate also showed a positive correlation with both students' and principals' value priorities and structures for each higher-order value type. A cross-sectional study of older children and adolescents by Daniel et al. (2013) showed that students' value priorities and structures were substantially similar to those of their teachers. Luengo Kanacri et al. (2017) further found that a positive school climate experienced by children at age 12 predicted the prosocial behavior of these children one year later.

Although previous research gives first valuable insights on how values in the school environment can influence children's value formation, an empirical analysis of values in the school curriculum (*macrolevel*) in relation to the value orientation of the school environment (*mesolevel*) is still lacking.

2. Focus of the present study

Human values have been identified as key constructs in the European educational landscape, and accordingly promoting children's

understanding of human values has become an important objective of education. Values-oriented content is prominently mentioned in a wide range of curricula and teachers in particular play an important role in the process of value transmission in the school context. Despite the high prominence and relevance of values and value-oriented contents in educational curricula, there is no systematically empirical research on how values are reflected in the curricula and how teachers, as the main actors involved in the process of value transmission, perceive this reflection in their school environment.

The present study applies the theoretical framework of Schwartz's Theory of Human Values (1992) to empirically investigate the following research questions:

- (1) How value-oriented is the content of the Swiss educational curriculum according to Schwartz's theory of human values?
- (2) How do teachers perceive the value orientation of their school environment?
- (3) How is the value-oriented content of the analyzed curricula related to teacher's perception of value orientation in the school environment?

In line with these three questions, we pursued the objectives of exploring whether the value-oriented content of the curriculum follows Schwartz's value structure (question 1), whether we can validate our specially developed scale for the teachers' perception of this content in the school environment by means of appropriate statistical procedures (question 2) and how the teachers' perception of the value-oriented content of the curriculum in the school environment relates to the actual value-oriented content of the curriculum (question 3).

This study is embedded in an ongoing larger longitudinal international research project on the formation of children's values in school.¹ To answer the three research questions of our study, we analyzed the Swiss educational curricula of public schools in Switzerland and surveyed first grade primary school class teachers in Switzerland. There were two inclusion criteria: Firstly, the teachers should teach the pupils continuously as class teachers (teaching load of over 50%) from the beginning of grade 1 to the end of grade 2 and secondly, they should work in one of the 21 German-speaking cantons that have adopted and introduced the *Lehrplan 21*.

The study makes an important contribution to the continuing pursuit of gaining empirical knowledge of value transmission in the school context. The results will have an impact on the processes of value formation in the school context and provide important insights for future teacher education.

3. Methods

In our study we followed a mixed-methods approach that presents the findings of quantitative and qualitative analyses of a complementary nature. Following this research paradigm, we carried out the following main steps. First, we carried out a Qualitative Content Analysis of the curricular documents (Section 3.1). Second, we developed and validated a questionnaire scale for teachers' perception of the values-orientation in their school environment (Section 3.2). Third, we analyzed the results to compare the values-orientation of the curriculum with the teachers' perception of the values-oriented school environment.

3.1. Qualitative content analysis

The Qualitative Content Analysis aimed to answer the first question of our study *How value-oriented is the content of the Swiss educational*

¹ VALISE - The Formation of Children's Values in School: A Study on Value Development Among Primary School Children in Switzerland and the United Kingdom

curriculum analyzed according to Schwartz's theory of human values? and to analyze them in a structured and systematic way. It is a suitable method for analyzing qualitative data, as it enables rule- and theory-based as well as methodologically controlled evaluation of the data (Mayring & Fenzl, 2019). In our study we oriented ourselves using the core of the procedure of *Structured Content Analysis* (Mayring, 2015). MAXQDA version 2020 was used as the analysis software.

3.1.1. The Swiss educational curriculum

The data basis (source document) for our Qualitative Content Analysis was provided by the Swiss educational curriculum (*Lehrplan 21*).

The *Lehrplan 21* was developed over the period 2010–2014. It has been compulsory in all German-speaking and multilingual cantons of Switzerland since the summer of 2021 and is based on the learning and teaching concept of competence orientation. Prefaced by introductory remarks on general educational goals, the legal basis, the state's educational mandate, the general orientation of the primary school and its understanding of learning and teaching, the document's 470 pages describe in detail for each subject area the development of competencies for pupils in the form of competency areas, competencies, and competency levels over three *Cycles* (*Cycle 1*, ages 5–7; *Cycle 2* ages 7–13; *Cycle 3*, ages 14–16) of Public Schools in Switzerland. Overall, 363 competences and 2304 competence levels are described in this curriculum (D-EDK, 2016). The competences to be acquired are mapped sequentially over the three *Cycles*, and the skills and abilities that pupils should have acquired by the end of the respective *Cycles* are recorded in a consistent and coherent manner. In terms of its content, the *Lehrplan 21* for *Cycle 1* (ages 5–7), which our study is related to, is composed of the six subject areas: *Languages (D)*, *Mathematics (M)*, *Nature, Humans and Society (NMG)*; *Design (Visual Arts/Textile and Technical Design (BG/TG))*, *Music (M)* and *Sports (S)*, two curricular modules (*Media and IT* and *Vocational Orientation*), generic competences (personal, social and methodological competences) incorporated into all subject areas and modules, and the guiding principle of *Education for Sustainable Development* (BNE).

Referring to Fend (1990), curriculum content was selected to operationalize values in education at the *macrolevel* and a questionnaire scale was developed for teachers to assess the "translation" of value-based curriculum content at the *mesolevel* (school environment). It was also possible in this way to ask teachers questions about their value-based perceptions of the school environment, which they are expected to be very familiar with as they come from their compulsory curriculum.

3.1.2. Coding

The coding categories for the main category were built *deductively* in accordance with Schwartz's theory of human values. Each of the ten basic values (see Section 1.1) was allocated in the main category. The category system was in addition enriched *inductively* by a further subcategory such as the character of the nomination (*explicit/implicit*). A coding agenda was created, defining the rules according to which each text passage in the curriculum should be coded. An overview of descriptors as well as anchor examples for allocation of the identified text passages to the specific basic values according to Schwartz can be found in Appendix B.

During the coding process every text passage in the curriculum was examined with respect to value-oriented content in *explicit* statements (e.g., "It [the] primary school is based on Christian, humanistic and democratic values" (D-EDK 2016, p. 20, own translation, emphasis by the authors) or *implicit* references to values. (e.g., "The school as a place of social, participatory learning promotes the students' ability to relate, to work together and to take responsibility for the community" (D-EDK, 2016, p. 21, own translation).

Mayring (2010) suggests having the entire analysis performed by more than one person and comparing the results. To take this into account and to ensure transparency and systematicity of the coding

Table 1

Frequency distribution of *implicit* and *explicit* value-oriented allusions from *Lehrplan 21 (Cycle 1)*.

Curriculum	Explicit value-oriented mentions	Implicit value-oriented allusions	N
<i>Lehrplan 21</i>	20	401	421

Table 2

Frequency distribution of value-oriented allusions from *Lehrplan 21 (Cycle 1)*: Basic Values.

Basic Value	Explicit mentions	Implicit allusions	N	%
Universalism (UN)	7	63	70	10.2
Benevolence (BE)	5	15	20	2.9
Tradition (TR)	0	27	27	3.9
Conformity (CO)	0	48	48	7.0
Security (SE)	0	22	22	3.2
Power (PO)	0	2	2	0.3
Achievement (AC)	0	25	25	3.7
Hedonism (HE)	2	48	50	7.3
Stimulation (ST)	4	198	202	29.6
Self-Direction (SD)	9	209	218	31.9
Total	27	657*	684*	100.00

*Identified coded text passages can relate to more than one basic value. For this reason, the numbers presented in this table (N = 684) differ from those in Table 1 (N = 421).

Table 3

Frequency distribution of value-oriented allusions in *Lehrplan 21 (Cycle 1)*: Higher Order Values.

Higher Order Value	Explicit	Implicit	N	%
Self-Transcendence (UN, BE)	12	78	90	13.1
Conservation (TR, CO, SE)	0	75	97	14.1
Self-Enhancement (PO, AC)	0	24	27	4.0
Openness to Change (HE, ST, SD)	15	455	470	68.8
Total	27	657	684	100.00

Table 4

Teachers' perception of their value-oriented school environment: Basic Values (N = 108).

Basic Value	Number of items	N	M	SD	V
Universalism (UN)	2	108	3.87	.85	.73
Benevolence (BE)	2	108	4.22	.82	.66
Tradition (TR)	2	108	3.65	.76	.57
Conformity (CO)	2	108	4.24	.63	.39
Security (SE)	2	108	4.48	.62	.38
Achievement (AC)	4	108	3.72	.77	.60
Hedonism (HE)	2	108	4.13	.68	.46
Stimulation (ST)	2	108	3.76	.89	.80
Self-Direction (SD)	2	108	4.11	.68	.46

Table 5

Teachers' perception of their value-oriented school environment: Higher Order Values (N = 108).

Label	N	M	SD	V
Self-Transcendence (UN, BE)	108	4.04	.78	.61
Conservation (SE, CO, TR)	108	4.12	.55	.30
Self-Enhancement (AC)	108	3.72	.77	.60
Openness to Change (ST, SD, HE)	108	4.00	.64	.42

process, coding was performed by the first author of this article and agreement on the application of the coding scheme to the coded content was continuously reflected upon and discussed with the co-authors. Thus, consensus on coding was reached discursively without

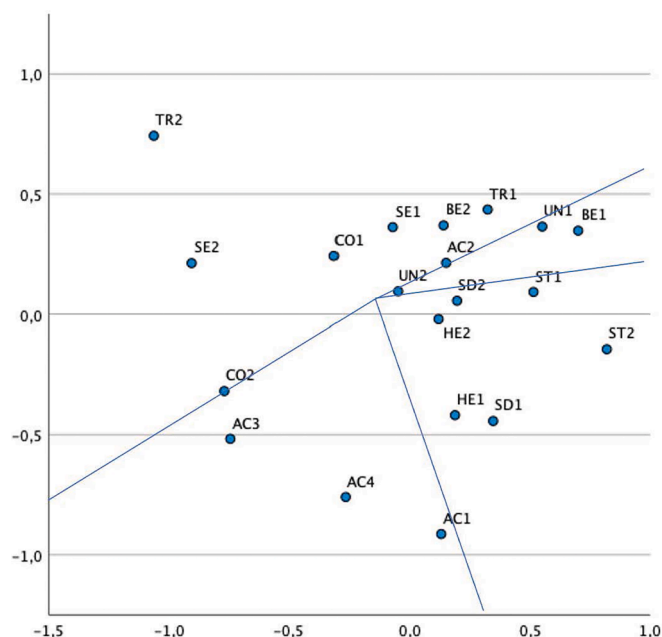


Fig. 2. Multidimensional scaling of teachers' perception of their school environment operationalized through 20 self-developed items from *Lehrplan 21*. Each point represents one item. Stress 1 = 0.234; UN=Universalism, BE=Benevolence, TR=Tradition, CO=Conformity, SE=Security, AC=Achievement, HE=Hedonism, ST=Stimulation, SD=Self-Direction.

Table 6

Priorities/Frequencies and rankings from survey data and qualitative analysis of the curriculum: Higher order values.

Higher Order Value	Teachers' survey on values in the school environment: (Means)	Rank	Distribution in <i>Lehrplan 21</i> (Frequency)	Rank
Self-Transcendence (UN, BE)	4.04	2	90	3
Conservation (SE, CO, TR)	4.12	1	97	2
Self-Enhancement (AC)	3.72	4	27	4
Openness to Change (ST, SD, HE)	4.00	3	470	1

calculation of the ICR as suggested by some qualitative researchers (Braun & Clarke, 2013; Madill et al., 2000). "Qualitative researchers' role is not to reveal universal objective facts but to apply their theoretical expertise to interpret and communicate the diversity of perspectives on a given topic" (O'Connor & Joffe 2020, p. 4).

3.2. Development and validation of the questionnaire scale

Based on the results of the Qualitative Content Analysis two statements according to Schwartz's corresponding basic values were finally

Table A.1
Definition of the ten basic values and their motivational goals according to Schwartz (1992).

Basic Value	Motivational goal (Schwartz, 1992)	Anchor examples (D-EDK, 2016) [Own translation]
<i>Universalism</i> (UN)	"[...] understanding, appreciation, tolerance, and protection for the welfare of all people and for nature" (p. 12).	"It [The public school] awakens and promotes an understanding of social justice, democracy, and the preservation of the natural environment" (p. 20).
<i>Benevolence</i> (BE)	"[...] preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, loyal, forgiving, honest, responsible, true friendship, mature love)" (p. 11).	"[The pupils] can describe characteristics of friendship (e.g., affection, shared interests) and reflect on their own expectations" (p. 302).
<i>Tradition</i> (TR)	"[...] respect, commitment, and acceptance of the customs and ideas that one's culture or religion impose on the individual (respect for tradition, humble, devout, accepting my portion in life, moderate)" (p. 10).	"[The pupils] can tell about festive occasions in the family or the environment (e.g., birthday, Christmas) and name characteristics (e.g., preparation, roles, rituals, objects)" (p. 308).
<i>Conformity</i> (CO)	"[...] restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms" (p. 10).	"[The pupils] can gain experience with conversation behavior and conversation rules in the large group (e.g., change of speaker, class conversation) and reflect on their usefulness" (p. 92).
<i>Security</i> (SE)	"[...] safety, harmony, and stability of society, of relationships, and of self" (p. 9).	"[The pupils] can independently cover distances in the home and school environment, recognizing and naming safe and unsafe places and observing traffic rules" (p. 297).
<i>Power</i> (PO)	"[...] attainment of social status and prestige, and control or dominance over people and resources (authority, wealth, social power, preserving my public image, social recognition)" (p. 9).	"[The pupils] can recognize who exercises power and how abuse of power is countered by means of exemplary situations (e.g., from stories, from fairy tales, from everyday life)" (p. 303).
<i>Achievement</i> (AC)	"[...] personal success through demonstrating competence according to social standards" (p. 8).	"[The pupils] can expand their receptive vocabulary by directing their attention to specific words and phrases" (p. 69).
<i>Hedonism</i> (HE)	"[...] pleasure or sensuous gratification for oneself (pleasure, enjoying life)" (p. 8).	"[The pupils] can put themselves in situations and roles to music and act them out (e.g., a butterfly, a bear playing, child on a sleigh ride)" (p. 439).
<i>Stimulation</i> (ST)	"[...] excitement, novelty, and challenge in life (a varied life, an exciting life, daring)" (p. 8).	"[The pupils] can engage in watching, reading, listening, and talking about new picture books, audio books, audio dramas, movies over and over again" (p. 97).
<i>Self-Direction</i> (SD)	"[...] independent thought and action-choosing, creating, exploring" (p. 5).	"[The pupils] can describe themselves as a person with multiple characteristics (e.g., external features, family,

Table A.1 (continued)

Basic Value	Motivational goal (Schwartz, 1992)	Anchor examples (D-EDK, 2016) [Own translation]
		friends, hobbies) and distinguish themselves from others" (p. 270).

formulated as items for the questionnaire for each basic value.² The result was 20 items, which we included in the teachers' questionnaire. For example, item SE_1 (*Security*) is: "Our school environment creates an environment in which bullying, discrimination and peer-on-peer abuses are not accepted and are dealt with quickly, consistently, and effectively" or item HE_1 (*Hedonism*) is "Our school environment promotes leisure and joy as important values."

The two basic value types of *Stimulation* and *Self-determination* both belong to the higher order value *Openness to Change*, which emphasizes independence of thought, action or feeling as well as a willingness to change. As individual values (guiding principles), they can be distinguished, but in certain cases they overlap in terms of content. Thus, a (self-determined) exploratory behavior (basic value *Self-determination*) fundamentally also contains a stimulatory component (value type *Stimulation*). An overview of all 20 items developed for the teacher's questionnaire can be found in [Appendix C](#).

The questionnaire scale was tested in the piloting phase of the *VALISE* project (January/February 2021) and validated with data from the first survey (March-May 2021) in an online survey. The timing of the survey thus coincided with the onset of the COVID-19 pandemic. *Unipark* was used as the survey software.

The surveyed sample included 108 (102 female (94.4%) and 6 male (5.6%)) class teachers from seven German-speaking cantons in Switzerland, of whom 73 teach in pure first classes (67.6%), 35 (32.4%) in mixed year classes. The average age of the teachers was 38.3 years (range 21–63 years, SD=13.4). In all, 98 teachers (90.7%) were born in Switzerland, 10 (9.3%) in another country. Their average teaching experience was 12.8 years (range 1–39 years, SD=11.2). The question in the survey for this scale was: "The following questions relate to your school environment. For each statement, please tick the box that applies to you. Our school environment ..." and could be answered with a likert-5 scale offering the following response options: [1] not at all, [2] rather not, [3] a little, [4] somewhat, [5] a lot.

A confirmatory Multidimensional Scaling analysis (MDS) (Borg et al., 2018) based on Schwartz's original model (1992) was conducted to examine whether and to what extent the pattern of correlations between the value items match Schwartz's assumptions about the structure of human values.

Both procedures used in this mixed-methods study, the qualitative content analysis of the curriculum and the results from the survey refer to the same theoretical model of basic human values according to Schwartz. This enabled us to compare the results of both methods categorically within the same theoretical framework and to obtain a more comprehensive picture of the phenomenon of interest. This ultimately contributed decisively to answering the research question to what extent the value-oriented contents of the curricula correspond to

² One exception was made by excluding the basic value *Power* because the definition of this basic value according to Schwartz as "[...] attainment of social status and prestige, and control or dominance over people and resources (authority, wealth, social power, preserving my public image, social recognition)" (1992, p. 9) is contradictory to two passages found in the curriculum which state that "[The pupils] can recognize who exercises power and how abuse of power is countered by means of exemplary situations" (D-EDK, 2016, p. 303). Moreover, the acquisition of competencies to attain power would not represent a desirable educational goal in the sense of a pedagogical or social orientation of the (primary) school.

Table B.1

Sample extraction of the coding agenda for the qualitative content analysis.

Abbr. BV=Basic Value	Category	Definition (<i>It is defined which components should fall under a category.</i>)	Anchor example (<i>Specific text passages from the document are given as sample examples for the category.</i>)	Coding rule (<i>Where demarcation problems exist between individual categories, rules are formulated to ensure clear classifications.</i>)	Comments
BV.03	<i>Achievement</i>	All text passages that point to an interpretation of the basic value <i>Achievement</i> (cf. Schwartz, 1992).	"[...] can ask for individual words and phrases from the listening text and thus expand their receptive vocabulary." (D-EDK, 2016, p. 69, own translation)	Passages in the text that, include expressions with the meaning of: "to be successful", "to be competent", "ambition", "personal success by demonstrating competence in social standards", "to be capable, influential" or "to perform", "to enhance", "to improve", "to extend" etc. or a reference to a quality statement like for example ("to run as fast as possible")	
BV.04	<i>Power</i>	All text passages that point to an interpretation of the basic value <i>Power</i> (cf. Schwartz, 1992).	"[...] can recognize who exercises power and how abuse of power can be countered." (D-EDK, 2016, p. 303, own translation)	Passages in the text that, include expressions with the meaning of: "social status and prestige", "authority and leadership", "control or dominance over people and resources", "social power", "wealth", "maintaining public image" etc..	
BV.05	<i>Self-Direction</i>	All text passages that point to an interpretation of the basic value <i>Self-Direction</i> (cf. Schwartz, 1992).	"[...] can recognize the intentions of stories and describe the effect of stories on themselves." (D-EDK, 2016, p. 300, own translation)	Passages in the text that, include expressions in the sense of: "independent thought and action", "creativity", "curiosity", "freedom", "being creative" etc.	Only code when children report what they experience, perceive, explore, learn, etc. or when they describe in their own words, tell stories, or reflect on situations.
BV.07	<i>Stimulation</i>	All text passages that point to an interpretation of the basic value <i>Stimulation</i> (cf. Schwartz, 1992).	"[...] can engage in watching, reading, listening, and talking about new picture books, audio books, audio dramas, movies over and over again" (D-EDK, 2016, p. 97, own translation).	Passages in the text that, include expressions in the sense of: "variety", "living an exciting life", "experiencing novelty and challenges in life", "excitement", "daring", "experienced", "perceive", "fathom", "explore", "experiment", "try out", "experience", "feel", "touch", "sense", etc.	

teachers' perceptions of their value-oriented school environment.

4. Results

The result section is structured according to the methodology used to provide a research synthesis. First, it presents the findings from the Qualitative Content Analysis of the curriculum (Section 4.1). Second, it shows the results of the validation process for the scale developed using data from the survey conducted (Section 4.2). Finally, the relationship between the results from the Qualitative Content Analysis and an analysis of the data collected from the survey is displayed (Section 4.3).

4.1. Qualitative content analysis of the curriculum

The analysis of the existence of value-oriented contents aimed to create the best possible synthesis to finally generate questionnaire items that cover each specific basic value according to Schwartz's model of basic human values.

4.1.1. Code distribution

In addition to the Qualitative Content Analysis, a quantitative evaluation of all codes was carried out to obtain an overview of the distribution and frequency of the codes found in the document.

The distribution of the coded *explicit* value-oriented mentions and *implicit* value-oriented allusions to values shows that in *Lehrplan 21 implicit* allusions (which describe a desired or expected value-oriented behavior) can be found more frequently than *explicit* mentions. The numerical frequency distribution of *explicit* and *implicit* value orientations is shown in Table 1.

The analysis of the distribution of *explicit* mentions and *implicit* allusions to value orientations on the individual ten basic values according to Schwartz shows that the passages identified in *Lehrplan 21* can be assigned most frequently to the basic values of *Self-Direction* (31.9%),

Stimulation (29.5%) and *Universalism* (10.2%). Table 2 shows the numerical and percentage frequency distribution of *explicit* and *implicit* value orientations among the ten basic values.

Analysis of the distribution for the four higher order values shows that the passages of *explicit* naming and *implicit* hinting at value orientations found in *Lehrplan 21* can be assigned most frequently to the higher order value *Openness to Change* (68.7%) and least to *Self-Enhancement* (4%). The complete numerical and percentage frequency distribution of the coding of *explicit* and *implicit* value orientations to the four higher order values is shown in Table 3.

4.2. Development and validation of the questionnaire scale

4.2.1. Descriptives

The results as to which basic value from *Lehrplan 21* teachers perceive or interpret as the highest and lowest in describing their school environment are shown in Table 4. The individual items for each basic value were combined and the mean was calculated from them. It becomes apparent that the teachers perceive the basic values *Security* ($M = 4.48$), *Conformity* ($M = 4.24$) and *Benevolence* ($M = 4.22$) as most applicable to describing their value-oriented school environment. The basic values *Tradition* ($M = 3.65$), *Achievement* ($M = 3.72$) and *Stimulation* ($M = 3.76$) are perceived least.

Table 5 shows the subsumption of the results for the four higher order values. Teachers perceive the higher order value *Conservation* ($M = 4.12$) as most applicable in actually describing their value-oriented school environment. The higher order values *Openness to Change* ($M = 4.00$) and *Self-Enhancement* ($M = 3.72$) are perceived least by the teachers.

4.2.2. Multidimensional scaling (MDS)

To substantiate our measurement of the value-oriented school environment we analyzed the structure of the data from the teacher's

Table C.1
Items developed for the teacher's questionnaire.

Basic Value according to Schwartz (1992)	Item
	<i>Our school environment:</i>
UN_1	... promotes the ability to recognize, respect and value the similarities and differences between cultural, religious, ethnic, and socioeconomic communities.
UN_2	... develops and encourages an understanding for the preservation of the natural environment.
BE_1	... cultivates a range of social skills in different contexts, for example working and socializing with other pupils, including those from different religious, ethnic, or socioeconomic backgrounds.
BE_2	... appreciates and tolerates other people's faiths or beliefs that may be different from one's own.
TR_1	... values knowledge and understanding of one's own cultural affiliations.
TR_2	... is based on Christian values.
CO_1	... promotes knowledge of the socially appropriate verbal and non-verbal communicative conventions which apply in our society.
CO_2	... sets clear routines and expectations for the behavior of pupils across all aspects of school life, not just in the classroom.
SE_1	... creates an environment in which bullying, discrimination and peer-on-peer abuses are not accepted and are dealt with quickly, consistently, and effectively.
SE_2	... builds an environment in which pupils feel safe.
AC_1	...inspires pupils to understand what they need to do to reach and succeed in the careers to which they aspire.
AC_2	... encourages and motivates all pupils to achieve school goals.
AC_3	... sets high expectations for every pupil.
AC_4	... uses appropriate assessment to set targets which are deliberately ambitious
HE_1	... promotes leisure and joy as important values.
HE_2	... fosters sense of enjoyment and fascination in learning about oneself, others, and the world.
ST_1	... arouses curiosity about, and interest in discovering and learning about, other cultural orientations and affiliations and other world views, beliefs, values, and practices.
ST_2	... fosters willingness to participate in and respond positively to artistic, musical, sporting, and cultural opportunities.
SD_1	... enables pupils to organize their learning increasingly independently and to work on their own learning ability.
SD_2	... helps engender an appreciation of human creativity.

survey by conducting a multidimensional scaling analysis. The aim was to map Schwartz's value structure for the scale we developed onto the data and thus to validate the scale. For this purpose, we portrayed the 20 items in a joint two-dimensional space. We computed a matrix of inter-correlations of all 20 items (two items per basic value except four items for the basic value *Achievement*)

The MDS portrays these correlations as distances in space: The higher the correlation between each pair of items, the closer they are in space. Following all recent studies on value structures, we employed a starting configuration (c.f. Döring et al., 2010), where each item starts at its ideal position within Schwartz's value model. We then tested whether the space could be partitioned according to the four higher order values. As a measure of fit between the pattern of correlations and their representation in space, we inspected *Stress 1*.

The joint value structure is presented in Fig. 2. The value structure clearly confirms Schwartz's prototypical model, and the space can be clearly partitioned into regions for the four higher order values, where these regions for each higher order value include the corresponding items. The arrangement of regions follows Schwartz's circular structure. A few items in the structure are slightly misplaced and located in the

adjacent region. The *Stress 1* for this solution is 0.234, which is significantly smaller (i.e., better) than for random data. Presenting random data for 20 items in two dimensions would yield a *Stress 1* of 0.3 (Spence & Ogilvie, 1973).

4.3. The relationship between the results from the qualitative analysis of the curriculum and the survey data

Table 6 shows the relation of the means from teachers' perceptions of curriculum-derived value-oriented alignment for the four higher order values in their school environment and the frequency distribution of coded value-oriented text passages from the analyzed curriculum (*Lehrplan 21*).

On the one hand, there are similarities between the value-orientation in *Lehrplan 21* and the teachers' perception of their school environment (Higher Order Value *Self-Enhancement*), but on the other, there are also differences (Higher Order Values *Conservation* and *Openness to Change*) indicating that teachers do not perceive their school environments as being similar to the value-orientation represented in the curriculum. Possible reasons for these differences are discussed in the following section.

5. Discussion

The aim of this study was to analyze the value-oriented curricular content of a national primary school curriculum and to develop an appropriate measurement tool to collect data on the teachers' perceptions of their value-oriented school environment. This study is thus the first to examine the content of a national curriculum in terms of its value orientation and to compare this with the perceptions of teachers in the school environment, highlighting how the value-related content of a national curriculum is "translated" (Fend, 1990) at the school level. All of the ten basic values according to Schwartz's model of basic human values (except for *Power*) could be found in our curricular analysis and there is a preponderance of humanistic (*Benevolence*, *Universalism*) and self-determining (*Self-Direction*, *Stimulation*) value orientation. For specific higher order values according to Schwartz there are, however, differences between the curriculum's value-oriented direction and its perception by teachers in their school environment. In this section we interpret the results and embed them in the existing state of research on value education in the school environment and in the current European discourse on education and educational science.

Humanistic and self-determining value orientation of the curriculum

According to Fend (2006) school systems are instruments of social integration. Fend (1988) underpins this as follows: "What applies to an entire school system, for example, is whether it is designed in such a way that individual life perspectives, [...] are brought into balance, whether it enables social participation in culture regardless of origin, race, and gender, and whether it contributes to securing humane living conditions. [S]ocial justice and humanity are quality criteria to be applied to education systems as a whole" (p. 542, own translation).

Within the framework of the education system, the creation of a cultural and social identity is made possible, which helps to determine the internal cohesion of a society. The focus is on the reproduction of norms, values, and behavior and the content requirements are derived from the educationally legitimized mandate of society as a formulated educational mandate via the curriculum.

Our results show that with a total of 421 *explicit* and *implicit* passages in the analyzed section of our chosen curriculum, all ten basic values according to Schwartz's model of basic human values can be found. The visible promotion of humanistic values such as *Universalism* and *Benevolence* leads to a future-oriented direction concerning the socialization task of the school, which can support the next generation in successfully mastering future challenges of a democratic, pluralistic society. This

reflects alignment to the *Reference Framework of Competences for Democratic Culture* (RFCDC, 2016) of the *Council of Europe*, in which *Values* and *Attitudes* are two of the four sub-areas in the competency model that describe what humanistic competencies learners should acquire in order to participate effectively in a democratic culture and to live peacefully with others in culturally diverse democratic societies (CoE, 2016) or the learning compass from the *Organization for Economic Co-operation and Development* (OECD), which also describes a collection of humanistic competences that, according to the OECD, learners need in today's world in order to be able to find their way in society in the future and shape it successfully and responsibly (OECD, 2019).

What is striking in the section analyzed is the high number of passages that can be assigned to the basic values *Stimulation* and *Self-Direction*. It is noticeable that many of the competence levels in the analyzed curriculum contain expressions such as "perceive", "discover", "explore" or "experience" which, according to Schwartz, points to the basic value *Stimulation*. Furthermore, some competency levels contain expressions such as "to stand up for one's own interests", "to express oneself on something" or "to report on experiences", which is assigned to the basic value *Self-Direction*.

It may be surprising at first glance to find these among the expected characteristics of a competency description aiming at identifiable growth in competency (Herzog, 2018). But it seems justifiable for a curriculum that, due to its guided learning and teaching understanding of competency orientation, aims at making competencies, knowledge, and skills visible via independent, self-directed actions of the children. The two basic values *Stimulation* and *Self-Determination* are of particular importance in the context of self-determination theory proposed by Ryan & Deci (2000), as both these values represent the prerequisites for intrinsically motivated learning and an autonomy-supportive school learning environment contributes positively to children's (intrinsic) interest in learning (Grolnick & Ryan, 1987; Ryan & Powelson, 1991). At the same time, in the context of school the value type *Achievement* as "a private case of group values" (Daniel et al., 2016) is also associated with successful learning outcomes. However, in the curriculum analyzed *Achievement* is less desirable as a value to be promoted than the values of *Stimulation* and *Self-Determination*, which are highly desirable educational principles (see Table 2).

Teachers' perception of value-oriented curricular contents in their school environment

The results of the teachers' survey on their perception of value orientations in the school environment was above all surprising for three basic values that came to light most strongly. Of the three basic values that teachers actually perceived most in their school environment, *Security* and *Conformity* are assigned to the higher order value of *Conservation*, which according to Schwartz emphasizes order and stability. Daniel et al. (2021) report changes in personal values occurring in this direction in pandemic times. A reason for this could be the considerable organizational and psychological stress on actors in the school environment in connection with the pandemic (Huber et al., 2020), which could also result in a perception of security, harmony, and stability in society, in the immediate environment (cf. Schwartz, 1992) and in the teacher's school environment.

The frequent perception of the basic value *Benevolence* can be explained by the fact that for the age group of 5–7-year-olds the preservation and promotion of well-being or processes that take place between people who are close to them (classroom) are more in the teacher's focus than *Universalism*, which is described through understanding, recognition, tolerance and protection for the well-being of all people and nature (cf. Schwartz, 1992). This would also correspond to stage 4 of Erikson's stage model of psychosocial development (1959) in which the children's field of reference expands from the family context to include neighbors and other school children.

The ranking of the three basic values which were least perceived (i.

e., prioritized) by the teachers are *Tradition*, *Achievement* and *Stimulation*. A possible reason for the low perception of traditional influences in the school environment could be that the two items on the basic value *Tradition* probably differ too much in terms of content in their culturally and religiously influenced orientation (Item *TR_1*: "My school environment places value on knowledge and understanding of one's own cultural affiliation"; Item *TR_2*: "My school environment is based on Christian values"). This can be validated by comparing the individual means of these two items. Item *TR_2* with a mean of $M = 3.11$ not only shows a remarkable difference to Item *TR_1* ($M = 4.19$) but also shows the lowest mean value of all 20 items from the scale. Item *TR_1* describes the goal of giving children with a migration background the opportunity to know and understand their own cultural affiliation. Item *TR_2*, on the other hand, provides for an orientation toward Christian values. This duality thus represents an innovative and liberal approach, in order to further define the concept of tradition and to take social development into account. However, because of this contradiction, it may also lead teachers to perceive their curriculum not only as innovative and liberal, but to equate it with a culture of permanence and resistance to change.

Regarding the four higher-order values, the most striking deviation is between the teachers' perception of the school environment for the higher order value *Conservation*. A possible reason could be the fact that the content design of the curriculum took place sometime before the pandemic. The pandemic situation which took place during the teachers' survey now shows that - depending on the situation - the perception of values such as *Security* and *Conformity* through experienced and prescribed measures in the school environment moves to the center. Another explanation could be that conservation values are higher among teachers than curricular values, and the perceived school environment may be more traditional, conservative, behavioral, governed by routines and discipline compared to the idealized curriculum.

The most likely agreement for the higher order value *Openness to Change* can be explained with the justifiable relationship between the competence orientation of the curriculum analyzed and the teachers' emancipatory understanding of education, which has prevailed in schools from the beginning of the Enlightenment until today (Frühhauf, 1996, p. 301).

6. Conclusion

Our study included the specific analysis of a national curriculum (*Lehrplan 21*) in terms of its value orientation and involved the development of a questionnaire scale to measure how value-oriented teachers perceive their own school environment and in what way these teacher perceptions differ from the value-oriented contents in educational curricula. This is the first study to examine teachers' perceptions of the school environment using Schwartz's ten basic values.

The teachers in our sample do not perceive value orientations in their school environment in the same way as their curriculum suggests. This is the most important finding of our study. Why this is so raises a few questions. At some points in everyday school life, it is the macro-structural framework that defines or (should) limit freedom at the lower level (*microlevel*). However, it is a misunderstanding to assume that these curricular conditions are more powerful than other systemic and structural conditions. A setting at the *macrolevel* first needs to be implemented down to the *microlevel* in everyday teaching. It is one of the major challenges of hierarchical administrative control of education based on *macrolevel* educational policy. The fact that a teacher implements curricular elements in his or her daily teaching (*microlevel*) depends not only on (1) whether teachers consider these contents to be meaningful, and (2) whether they have the ability to implement them, but also on (3) whether the teacher is familiar with/can perceive these contents at all. Of course, this not only applies to values (which were the focus of our study), but also to all other curricular contents. The reasons for the first two requirements above (1 and 2) have been the subject of previous research (e.g., Lim & Ernest, 1997).

However, our study shows that this is not the case for value orientation. One reason for this may be that the curriculum analyzed has only been compulsorily introduced in all German- and multilingual cantons of Switzerland since the summer of 2021. Part of the teacher sample surveyed was from cantons that are only in the introductory phase and whose teachers had only been teaching with this curriculum for half a year. The schools and the teachers are therefore still in the process of adapting their school environment and their teaching activities to the requirements of the curriculum. From this point of view, our research took place at an extremely appropriate time, because when it comes to the required teaching and processing of (value-oriented) competencies, it would be quite advantageous if the teachers' perception of their value-oriented school environment and the value-oriented orientation of the curriculum were more similar. Thus, like a missing piece of a puzzle, the results of the study will enable teachers in the future to further sensitize themselves in the field of value education of primary school pupils and also show them ways to promote children's value-oriented competences in the school context.

7. Limitations and outlook

In our study, we focused on the curricular influences at the *macrolevel* and their perception at the *mesolevel* in the school context. Other influences, such as the role of a values-oriented school climate (*mesolevel*) or the proximal processes as part of value education in the context of classroom activities (*microlevel*), were not part of our research.

Especially value education as "[...] the pedagogically initiated confrontation with and reflection on values" (Schubarth, 2010, p. 28, own translation) plays an important role as a pedagogical process that aims at developing, strengthening, or changing the value-oriented behavior of students in the school context. It includes, on the one hand, the explicit examination of curricular, value-oriented teaching goals in classroom activities and, on the other, implicit individual value-oriented educational goals of teachers (comparable to the educational goals of parents), which in turn may differ from the personal value attitudes of teachers that implicitly underlie (classroom) actions and behavior.

The examination of these processes as well as the replication of our study for a cross-sectional comparison in the United Kingdom are the subject of further research projects in connection with the VALISE project.

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Conference presentation

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Declaration of Competing Interest

There are no perceived conflicts of interest relating to this article.

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Appendix A

Table A1

Appendix B

Table B1

Appendix C

Table C1

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