Attendance Without Presence: Measuring Cognitive Class Avoidance Among Students

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Abstract

While the term "school absenteeism" refers to a student's withdrawal from the reach of classroom instruction, we explicitly opt for the term "class avoidance." Existing studies on this phenomenon have primarily dealt with unauthorized physical absence from class. However, in our contribution, we extend the scope to cognitive absence. The behavior of students who are physically present but cognitively disengaged has largely been neglected in educational research thus far. This deficit stands in contrast to the widely accepted importance of cognitive activation in the classroom. The core of our contribution consists in the presentation and the construct validation of a newly developed scale for measuring cognitive class avoidance (inattention in class). We evaluated this measurement instrument in a cross-sectional study with a sample of 166 seventh- to ninth-grade students (M = 14.3 years, SD = .94). Our data confirmed a theoretically founded g-factor model. The results of the analysis point to a limited prevalence of cognitive class avoidance. Such forms of behavior were significantly more frequently reported by boys than by girls, however.

Keywords: cognitive class avoidance; school absenteeism; scale description; g-factor model

Introduction: Theoretical Background and Current State of Research

Although classroom instruction has long been the centerpiece of the educational system (Applebee et al., 2003), new avenues of reform such as education technology have caused some schools to shift their focus away from teachers. However, taking account of the results of international large-scale assessments such as PISA, TIMSS, IGLU, or PIRLS, Helmke (2014) considers a shift in focus back to classroom instruction to be essential for the optimization of teaching and learning. Underlying this postulate is the assumption that teaching is, ultimately, at the core of the teaching profession (Farmer et al., 2011; Jimerson et al., 2015; Kunter et al., 2013).

Indeed, in the current discussion of empirical research on teaching, there is a broad consensus that teacher quality has the greatest positive effect of any factor on student outcomes. Core dimensions of teacher quality are constructive support, classroom management, and cognitive activation (Hattie, 2014; Connor et al., 2011; Sutton et al., 2009). These three dimensions are closely related to facets of a teacher's professional competence, such as content knowledge, resilience, and ability to respond to student needs (Allen et al., 2013; Herring et al., 2015). Biedermann and Oser (2011) express the conviction that it is teachers who keep the system of teaching and learning running and are capable – or, at times, incapable – of motivating their students cognitively.

By organizing instructional settings with clearly defined contents and goals, teachers provide students with opportunities to learn that foster their (individual) learning processes. Whether these settings are effective depends, first, on how the students interpret the teacher's expectations and the learning opportunities they are offered and, second, on what motivational, emotional, and volitional processes they initiate (Cooper et al., 2014; Helmke, 2014). Against this background, Baumert et al. (2011) refer to the concept of "double contingency," which means that successful learning is determined by both the quality of the learning environment and students' mental involvement. Thus, the role of an effective teacher involves specifically engaging and sustaining students' attention.

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For this reason, student attention has become the central topic of educational research (Baumert et al., 2001; Helmke et al., 1992; Reh et al., 2015). It is regarded as a crucial predictor of student achievement (Baumert et al., 2001; Helmke, 2014). Attention can thus be considered to be a fundamental precursor to academic success. This insight had already been stated by Gagné (1973, cited in Hommel, 2011: 117) who was convinced that teachers' ability to cultivate student attention is fundamental to the creation of an effective learning environment. Teachers must be able to respond to the typical classroom demands of disturbances, unexpected effects, interrupted processes of understanding, and other typical classroom demands, which occur unexpectedly and in rapid succession (Doyle, 2006). In other words, a teacher's most crucial skill is her or his ability to guide students continuously and successfully through learning processes and to reactivate them cognitively after interruptions of any kind.

In essence, cognitive activation refers to the provision of cognitively challenging tasks and to the initiation of interactions between teachers and students that stimulate the students' thinking (see the overview in Baumert et al., 2011; Helmke, 2014). The body of literature that deals with this central feature of professional teaching is extensive (Leuders et al., 2011; Rakoczy et al., 2010; Reusser et al., 2010). For effective cognitive activation, the instructional setting that is arranged by the teacher should lead the students to active mental engagement with the subject matter. Such instruction pursues the aim of meaningful learning (Baumert et al., 2011) and intends to change and extend the students' knowledge structures.

There are students, however, who – even if the teacher makes a concerted effort – cannot be reached because they are cognitively absent from the ongoing class and let their thoughts wander. In our contribution, we focus on these students. More precisely, we are interested in the extent to which unexploited student potential might be a consequence of cognitive class avoidance. In order to learn more about this issue on an empirically sound basis, we pursue the technical question as to how student self-assessments of cognitive class avoidance can be operationalized and measured. For this purpose, we propose a newly developed scale and evaluate its statistical characteristics. Before we present our results, we explain the concept of cognitive class avoidance in more detail and provide a concise review of central findings from empirical research on school absenteeism and class avoidance.

Cognitive class avoidance: Conceptual clarification

In the discussion about school avoidance, the focus is mostly on unauthorized physical absence of students and only seldom on their cognitive absence (Szpunzar et al., 2013). Yet it is plausible to assume that such student behavior will be characteristic of school as long as this pedagogical institution exists (Stamm et al., 2009).

At present, school and class avoidance of adolescents is an intensely discussed issue both in public and scientific discourse and has received increasing media coverage (Dube et al., 2009; Szpunzar et al., 2013). In the scientific debate, the usual term for referring to this phenomenon is "school absenteeism," which acts as a superordinate term for absence from school and subsumes all heterogeneous explications of this overall phenomenon (Kearney et al., 2014; Ricking, 2011; Sälzer et al., 2016; Sälzer et al., 2012; Simons et al., 2010; Vaughn et al., 2013; Veenstra et al., 2010). The term has repeatedly been criticized, however, for instance by Schulze (2003), who noted that the term "absenteeism" refers to the phenomenon of physical absence within the context of school but does not account for forms of cognitive absence that precede an eventual school drop-out. According to Schulze (2003), the principal problem is that the terms that are used in the discussion about the phenomenon are not descriptive but mainly negatively connoted. Therefore, she prefers the term "class avoidance," which refers to diverse forms of absence from class that range from sporadic class absenteeism to chronic truancy (Schulze et al., 2004). Within "class avoidance" are the three subcategories of "school absenteeism," "class absenteeism," and "class refusal." For the purpose of establishing a basic typology of forms of unauthorized absence, Schulze (2003: 51; 2009) proposes the following categories:
1. school absenteeism (absence from school);
2. class absenteeism (presence at school but [partial] absence from class);
3. class refusal (presence in class without participation or only limited participation).

In comparison to the description of school absenteeism, the phenomenon of class avoidance is characterized by a certain conceptual independence. This is why it is important to draw a clear-cut distinction between forms of class-avoidance behavior and forms of behavior that relate to school absenteeism. Only a clarified conceptual basis provides a solid starting point for a scientific description and explanation of the phenomena.

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In what follows, we focus on cognitive class avoidance. This facet has only rarely been dealt with so far and can thus be seen as a research gap. Schulze and Wittrock (2004) criticize that the phenomenon has largely been neglected in the literature and in the scientific discourse, since it manifests itself in several forms and plays an essential role in the everyday reality of school. Opting for this perspective, we explicitly center on students who withdraw from the learning environment without exiting it, which includes the cognitive class avoidance of students who are physically present. Schulze (2009) draws attention to the fact that the number of students who are physically present but cognitively withdraw from the current classroom activities has considerably increased in recent years and is likely to increase even more in the future. According to Schulze (2003), class-avoidance patterns of behavior can be defined as forms of behavior that turn away from or are averse to instruction or other elements of the system "school" and deviate from the specific norms of a school in a negative way. These forms of behavior can manifest themselves in the development of behavioral patterns that threaten, impede, or hinder participation in society. Moreover, the forms of class-avoidance behavior are exceedingly multifaceted (Schulze, 2009).

A central category of class avoidance includes students who are physically present but disconnect themselves cognitively from what is going on in the classroom. They let their mind wander for extended intervals and do not follow the classroom activities, which reduces their learning gains. In this form of class avoidance, which usually remains undetected, students withdraw from the activities in the classroom or avoid active participation (Schulze, 2009). In order to describe this form of behavior, Schulze (2003) coined the expression "mental absence". This neologism covers behavior such as silently dealing with other activities (e.g. drawing), daydreaming, "switching off," or falling asleep, as well as non-participation while maintaining a façade of participation. Such forms of behavior often result in a decrease in academic performance and/or a process of social exclusion, which poses a risk to both the students' school-related and their overall psychosocial development. Students often fail to catch up in performance because it is impossible to compensate for the classroom instruction they have missed while disengaged. Because these students, overall, do not usually display behavioral problems, the teachers either do not notice or notice too late this form of refusal (Schreiber-Kittl et al., 2002).

According to Schulze (2009), physically present students who do not participate in instructional processes are typically listless, cease to show initiative, withdraw in class and during the breaks, which leads to "mental immigration" and, very likely, to avoidance of social contacts in the context of school ("inner withdrawal"). The relevance of a scientific and empirical investigation of this phenomenon becomes apparent in the conclusion drawn by Schulze and Wittrock (2004) who emphasize that the students in question run the risk of gradually disconnecting themselves first from the processes in the classroom. As time goes by and with increasing spatial distance, they then cease to be present at and involved with school altogether if the signals go unnoticed or are not deemed serious. Thus, the facets of cognitive class avoidance can be regarded as first indications of impending class absenteeism or even school absenteeism, because such student behavior in class is a manifestation of alienation and refusal to participate in classroom learning.

Current state of research on (physical) class avoidance

As already mentioned, the definitions within the terminology of school and class avoidance vary considerably. The reason for this is that the terms refer to diverse forms of behavior, including the skipping of the first or the last class of the day, occasional or prolonged truancy, or parents withdrawing their child intentionally from school (Stamm et al., 2009). In view of this variety, Oehme and Franzke (2002) conclude that there is terminological confusion in the field of class-avoidance research. Owing to differing definitions and forms of operationalization, it is difficult to draw consistent conclusions concerning the extent of school- and class-avoidance behavior in childhood and adolescence.

In Germany, there are some empirical studies available, especially in criminology, that have identified several factors that are associated with unauthorized absence from class (Wagner, 2012). With respect to the pedagogical context, Stamm et al. (2009) concludes that, on the one hand, educational research has only marginally dealt with non-attendance at school and that, on the other hand, this phenomenon has hardly ever been openly discussed or practically dealt with in the education system. Furthermore, she notes that the scientific study of class avoidance should form part of contemporary educational research. Overall, the phenomenon is largely unresearched from a pedagogical perspective and solid empirical studies are still lacking (Szpunzar et al., 2013). In national as well as international research on class avoidance, we can distinguish two major research perspectives: an individual perspective and an institutional perspective. Baier (2012) concludes that at present

there are diverse desiderata in research on class avoidance. Stamm et al. (2009) too notes that the number of European studies on potential interactions between individual and institutional factors is relatively small although several studies are available.

With respect to sex, the existing findings provide no consistent picture (Ricking et al, 2017). A clear sex-related difference in the proportions of girls and boys has been found neither in German nor in Anglo-American research (Balgg, 1987). There are studies that point to a higher prevalence in boys (Hibbet et al., 1990; Schultz, 1987) and, at the same time, studies that point to a higher prevalence in girls (see Reid, 1985). According to Stamm et al. (2009), girls tend to refuse to go to school altogether while boys skip classes more frequently than girls do. Schreiber-Kittl and Schröpfer (2002) could show that boys mainly boycott classes actively, whereas girls often withdraw from the classroom activities in passive ways, for instance, by daydreaming or directing their cognitive attention to subjects other than instructional content.

The findings concerning the relationship between the intensity of class avoidance and the students' age are heterogeneous too (Stamm et al., 2009). Some studies indicate that the frequency of class-avoidance behavior tends to increase with age (Baker et al., 2001). Stamm (2008) was able to show that ninth-grade students more frequently stay away from school without authorization than sixth-grade and seventh-grade students do. Ricking (2011) found that the highest rate of class-avoidance behavior occurs in the eighth and ninth grade. There are other studies, however, whose results do not point to a relationship between age and the extent of class-avoidance behavior (Stamm et al., 2009). Moreover, there is empirical evidence suggesting that physical class avoidance is related to academic underachievement. Poor performance and grade repetition have proven to be important factors that have an effect on class avoidance in adolescence (Dunkake, 2010).

According to Ricking (2011), a review of the current status of research shows that truancy is no longer considered to be an intraindividual characteristic with a genesis in the students' families. A further important factor as regards absence from class is the students' parental home. Class avoidance in adolescence is a complex phenomenon that occurs in all social strata and family structures (Ready, 2010; Stamm et al., 2009). Adolescents who grow up in a home in which they are frequently exposed to arguments with their parents and whose parents do largely not control their behavior avoid school or class more often than peers (Baier, 2012). If the relationship between the parents and the child is conflictual and characterized by parental or domestic violence, the risk of physical non-attendance in class increases significantly (Baier, 2018).

The second major approach to school and class avoidance takes an institutional perspective and focuses on factors that relate to school and peer culture and to their potential effects on forms of behavior that are characteristic of physical class avoidance. Research in this field has shown that, apart from the family climate at home, peers can be a decisive factor in the genesis of class-avoidance behavior. As Ricking (2011) and Nomi and Raudenbush (2016) have noted, recent studies have demonstrated that the influence of peers on the behavior of the individual is stronger than it was thought at first. There are, however, only few studies on the significance of peers with respect to class-avoidance behavior (Stamm, 2008). As for migrant status, there are not many results available either. Although Baier, Pfeiffer, Windzio and Rabold (2006) were able to show that all migrant groups that participated in his study stayed away from class without authorization more frequently than the comparison group with German students, the question concerning the factors and their influence has not been conclusively answered yet.

Given that class avoidance is a multi-factorial complex of contingencies (Stamm et al., 2009), the structural characteristics of pedagogical institutions seem to be more relevant to the analysis of the problem than research has assumed in the past. As a consequence, Stamm et al. (2009) call for a "synoptic-integrative" view on the phenomenon. In connection with the immediate context of school, factors such as problems with teachers, contents that are remote from everyday life, school anxiety, and a bad social climate among the students have been taken into consideration and discussed (see Kearney, 2008). As regards the type of school, research findings have shown that the higher the academic level is, the lower the absenteeism rates are (see, e.g., Dunkake, 2010). In the German state of Schleswig-Holstein, for instance, a study among secondary-school teachers that was conducted in the school year 2004/2005 found that 13.2% of the students had more than ten authorized and unauthorized absences. Concerning the eighth and the ninth grade, the teachers reported that 7% of the eighth-grade students and 6.3% of the ninth-grade students had been absent from school without permission for at least one day (Rat für Kriminalitätsverhütung Schleswig-Holstein, 2007).

Although our review of research on the phenomenon of class avoidance indicates that schools, owing to their organization and specific structure, can be assumed to have a considerable influence on school absenteeism (Stamm et al., 2009), we have to conclude that the problem has not been comprehensively discussed and investigated so far.

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Research design and Methods

Existing studies on class avoidance have mainly centered on unauthorized physical absence from class, and they have primarily focused on social factors that relate to family, school, and peers. An accurate description of the phenomenon is still lacking, and the question as to whether and how frequently students who are physically present in class disconnect themselves mentally from the teaching and "switch off," let their mind wander, or daydream is still in need of empirical clarification. A central desideratum in this regard is the lack of suitable measurement instruments that make it possible to quantitatively analyze cognitive class avoidance of physically present students. Against this background, the major objective of our contribution consists in presenting such an instrument. We evaluate 1) the reliability and 2) the factorial structure of the instrument and address the question as to 3) the frequency of cognitive class avoidance in students in general and specifically with respect to the sexes.

For the first testing of the newly developed instrument, we surveyed a total of 166 seventh-, eighth-, and ninth-grade students from eight classes that belonged to a comprehensive school in the German state of Schleswig-Holstein. Because there were missing values in the data, the statistical analyses included 166 students. On average, the participants were 14.3 years old (*SD* = .94), and 52.4% of them were female. The study had a cross-sectional design, and the survey took place during a regular class. The students were asked to complete standardized paper-pencil questionnaires. Besides the scale that measured facets of cognitive class avoidance, the questionnaire encompassed items that concerned physical class avoidance such as truancy (single hours and all day) and further aspects such as their use of media. The results that we present below relate exclusively to the data concerning cognitive class avoidance. The survey took approximately 45 minutes and was conducted by trained supervisors. A regular teacher was present as well.

In order to evaluate the factorial structure of the instrument, we analyzed the data by means of exploratory (EFA) and confirmatory factor analysis (CFA; see, e.g., Byrne, 2012). With the help of an independent-samples t-test, we investigated whether there was a sex-specific difference in cognitive class avoidance. All statistical analyses were conducted with the statistics software SPSS (Version 23, descriptive analysis) and M*plus* (Version 7.2, Muthén et al., 2012, latent-variable measurement models).

Results

Scale development – Exploratory factor analysis

The scale for measuring cognitive class avoidance included four items, which had to be rated on a four-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree; example: "I'm so frequently absent-minded that I don't keep up with the subject matter that is being dealt with in class").

With the aim of evaluating the factorial structure of the individual items, we first carried out a principal component analysis on the four items. We rotated the items by means of oblique Promax rotation in the direction of a single-loading pattern of the manifest variables. Factor loadings > .50 were considered to be significant. As the statistical criterion for the number of the factors to be extracted, we used the "eigenvalues greater than one" criterion (Kaiser-Guttmann criterion). The analysis extracted the theoretically postulated one-factorial solution with an eigenvalue of 2.83 (explained variance of 70.8%) and satisfying goodness criteria (sampling adequacy according to Kaiser-Meyer-Olkin = .814; Bartlett's test of sphericity: χ^2_6 = 304,012, p < .001). Furthermore, EFA showed that all items loaded on a factor with loadings > .78 (CCA1 = .86, h^2 = .74; CCA2 = .87, h^2 = .76; CCA3 = .84, h^2 = .71; CCA4 = .78, h^2 = .62). Reliability analysis confirmed that the construct "Cognitive Class Avoidance" was well represented by the four items. Internal consistency of the scale (goodness of measurement) proved to be high with Cronbach's Alpha = .86. Item discrimination was high in all four cases ($r_{i(t-i)} \geq$ .63). Table 1 provides an overview of selected statistical values.

Table 1. Item statistics, internal consistency, and descriptive statistics of the scale "Cognitive Class Avoidance" (cognCA)

Variable	Scale statistics					
	M	*SD*	*MD*	$r_{i(t\text{-}i)}$	*Min*	*Max*
CCA1	2.04	.88	2	.74	1	4
CCA2	2.03	.86	2	.76	1	4
CCA3	2.46	.92	2.5	.71	1	4
CCA4	2.04	.88	2	.63	1	4
Scale: cognCA						
α = .86						
M = 2.21						
SD = .73						
SE = .06						
N = 166						

Notes: M = mean, *SD* = standard deviation, *MD* = median, $r_{i(t\text{-}i)}$ = discrimination according to item-rest correlation, *Min* = minimum, *Max* = maximum, *SE* = standard error, *N* = total number of cases, α = Cronbach's Alpha; CCA1= "I'm so frequently absent-minded that I don't keep up with the subject matter that is being dealt with in class"; CCA2: "I sense that I'm frequently thinking of something else in class"; CCA3: "I'm aware that I'm frequently listening with only half an ear while I'm thinking of completely other things"; CCA4: "When I'm in class, my mind wanders quite frequently".

Confirmatory factor analysis: the measurement model "cognCA"

In the next step, we evaluated the scale by means of CFA with maximum-likelihood estimation, which confirmed the theoretically postulated one-dimensionality of the construct "Cognitive Class-Avoidance" (see, e.g. Byrne, 2003, 2012; Kline, 2011; Wang & Wang, 2012). The statistical analyses were conducted with the statistics software Mplus (Muthén et al., 2012) and the full-information-maximum-likelihood (FIML) method in order to compensate for missing values (see Lüdtke et al., 2010). The resulting g-factor model is displayed in Figure 1. The model has high factor loadings with respect to the four indicators (λ = .65 to λ = .84), and the standard errors vary between .04 and .06 – we can thus conclude that all item intercorrelations can be explained through the influence of a shared ability dimension.

Figure 1. One-factorial model of the scale "cognCA".
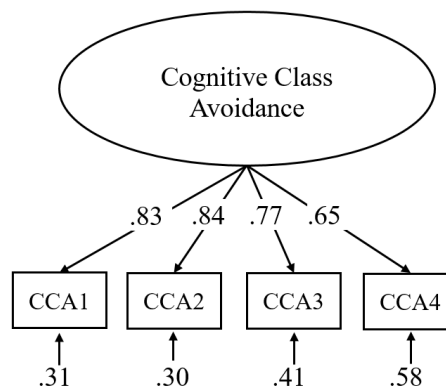
Furthermore, all indicators contribute significantly (p < .001) to explaining variance in cognitive class avoidance, which can be inferred from Table 2. The table also includes information on standardized intercepts, residual variance, and R^2 values of the general factorial model.

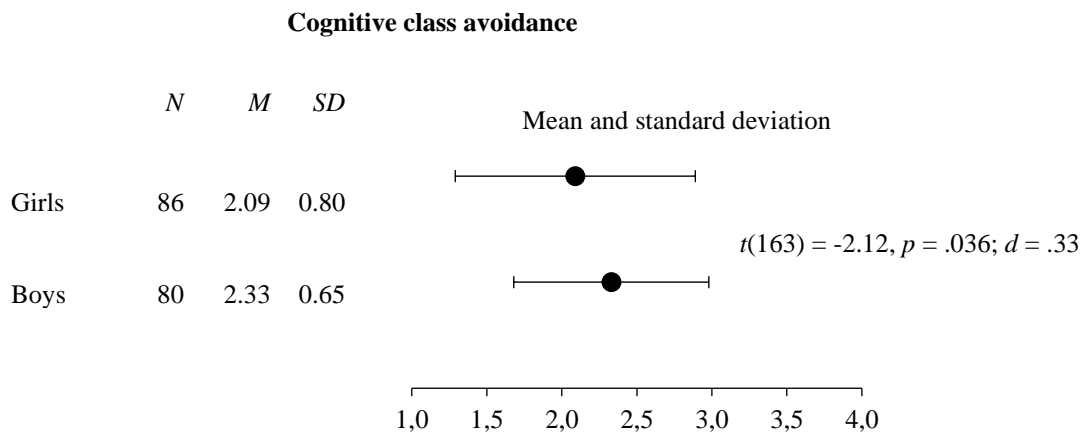**Table 2.** Standardized intercepts, residual variances, and R^2 values for the g-model "cognCA"

	Intercept (*SE*)	Residual Variance (*SE*)	R^2 (*SE*)
CCA1	2.33*** (.11)	.31*** (.06)	.69*** (.06)
CCA2	2.70*** (.14)	.30*** (.06)	.70*** (.06)
CCA3	2.70*** (.14)	.41*** (.07)	.59*** (.07)
CCA4	2.34*** (.11)	.58*** (.09)	.42*** (.09)

Note: * p < .05, ** p < .01, *** p < .001; SE = standard error

In order to quantify the fit of the data, we included fit indices, which are also applied in regular structural equation modelling. Besides conducting a χ^2-test, we tested the goodness of fit on the basis of the model-fit indices CFI, RMSEA, and SRMR. The cutoff criteria for the evaluation of the model were those recommended by Hu and Bentler (1999)[3]. Overall, the fit indices pointed to a good model fit with the data. After the inspection of the fit indices, the model showed a very good model fit ($\chi^2 = 1.76$; df = 2; p = .42; CFI = 1.000; RMSEA = .000; SRMR = .013).[4]

Cognitive class avoidance – descriptive results

With a mean of 2.21 (SD = .73), the students did not consider (frequent) cognitive class avoidance to be a common phenomenon. A comparison of the sexes indicates (see Figure 2) that, on average, boys reported a significantly higher mean rate of cognitive class avoidance than girls ($t(163) = -2.12$, $p < .05$; $M_{Girls} = 2.09$, $SD = .80$; $M_{Boys} = 2.33$, $SD = .65$; $d = .33$). Cohen's $d = .33$ can be interpreted as a small effect size.

Figure 2. Cognitive class avoidance – comparison of the sexes

Cognitive class avoidance

	N	*M*	*SD*
Girls	86	2.09	0.80
Boys	80	2.33	0.65

Mean and standard deviation

$t(163) = -2.12$, $p = .036$; $d = .33$

1,0   1,5   2,0   2,5   3,0   3,5   4,0

Summary, Limitations and Outlook

Class avoidance, especially in the form of unauthorized physical absence from class, has become a popular subject of discussion, research, and reform efforts in recent years. Although the educational and social sciences have increasingly been dealing with school- and class-refusing student behavior, there are only few empirical studies on the phenomenon of class avoidance available (Schulze, 2003). School as a pedagogical and educational institution may have temporarily lost its significance and attraction for students who display such behavior, but it still fulfills a crucial function as a site of social interaction. The students remain in the context of school and thus participate—to a limited extent—in school life (Schulze, 2003).

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[3] These analyses were based on the following values for good model fit: CFI ≥ .96, RMSEA ≤ .05, SRMR ≤ .08 (see Hu & Bentler, 1999).

[4] Beauducel and Wittmann (2005) recommend reporting χ^2-values, *p*-values, RMSEA (root mean square error of approximation), CFI (comparative fit index), and SRMR (standardized root mean residual) as fit indices.

In line with Schulze and Wittrock's (2001) definition of class refusal[5] and in contrast to class absenteeism, the term "cognitive class avoidance" refers to behavioral patterns and facets that are characteristic of students who attend class physically but cease or refuse to participate cognitively in learning activities. The term thus means that students are cognitively absent while they are physically present in the classroom. Furthermore, these students can often be characterized by a certain disinterest in particular subjects. Owing to this lack of interest, they disconnect themselves from the subject matter and the instructional setting, allowing their mind to wander. In other cases, the students cannot be reached anymore because the pedagogical or social competence of their teacher is insufficient or because they consider the classroom content to be too remote from or irrelevant to their everyday lives. Instead, they prefer to withdraw and stop following the class (Schulze et al., 2004). Irrespective of the reasons behind their behavior, students who refuse cognitive participation in the classroom do not engage with the demands of the instructional setting and thus put their academic success systematically at risk.

From an empirical point of view, there is a lack of suitable instruments for quantitative measurements of forms of student behavior that are associated with cognitive class avoidance. In our contribution, we have presented such an instrument. The newly developed scales were first tested in a student survey ($N = 166$, $M = 14.3$, $SD = .94$).

The method of written student surveys proves to be suitable for the underlying research design because, first, the construct of interest can only be found out on the basis of students' self-reports and, second, the anonymity of the participants – in this case, the students surveyed – can also be optimally guaranteed. Even though the method of self-report in the form of written surveys can be viewed critically with regard to the validity of the data, it has been shown that if anonymity is guaranteed, it can be assumed that the students' answers are more truthful than with other survey methods. In addition, this method of data collection also guaranteed an economic advantage, which was that 20 and more young people can be reached at the same time per interview appointment (Baier et al., 2010). In addition, student interviews were used to address the complexity of the research subject, as it can be assumed that surveys based solely on external information (especially from teachers) are likely to severely underestimate the phenomenon of classroom avoidance (with its various forms and facets) by students.

The psychometrical data confirmed the theoretically postulated one-factorial structure, both in EFA and CFA by means of the maximum-likelihood method. The CFA measurement model proved to have a very good model fit ($\chi^2 = 1.76$; $df = 2$; $p = .42$; CFI = 1.000; RMSEA = .000; SRMR = .013). Our first results indicate that the scale is suitable for measuring and investigating the phenomenon of cognitive class avoidance. The analyses show that, overall, the prevalence of cognitive class avoidance seems to be limited. If this form of behavior occurs, however, it is significantly more frequent in boys than in girls (effect size $d = .33$).

With the development of this instrument, our study responded to a desideratum in research on class avoidance. Although passive forms of refusal are usually mentioned in descriptive literature, most empirical studies on the phenomenon of school refusal do not include the group of those students who passively refuse to participate in class (Schreiber-Kittl et al., 2002).

In order to increase knowledge about the conditions and causes of the phenomenon, both pedagogical practice and research must make a determined effort. To prevent school absenteeism effectively, pedagogical interventions have to be initiated while the students in question are still involved in the institutional context of school, taking an interest in school life, and can be reached by their teachers (Schulze et al., 2004). A scientific investigation of the phenomenon requires a differential-diagnostic analysis of the students' behavior. In contrast to school absenteeism, it is vital to bear in mind that the phenomenon of class avoidance essentially implies presence at school and in the classroom as well as participation in class (Schulze, 2003). According to Schulze (2009), the increasing number of children and adolescents with class-avoidance behavior who are in danger of withdrawing from the pedagogical setting and who have already been affected by processes of social and educational exclusion calls for specific concepts of analysis, prevention, and support.

With respect to practice, Hintz and Grosche (2012) note that teachers and their professional pedagogical actions play a pivotal role in the prevention of class avoidance and in the timely initiation of appropriate interventions. In sum, this means that teacher preparation programs should sensitize pre-service teachers to the phenomenon of cognitive and physical class avoidance. If pre-service teachers know about the conditions and causes of class avoidance, they can react to such behavior in an adequate and preventative way. Additionally,

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[5] Nissen (1977, as cited in Schulze, 2003: 53) uses the term "learning protest".

cognitive lesson avoidance might reflect some deeper systematic flaws of our current educational practice at large—an overemphasis on standardization in classroom teaching that fails to engage individual learners through a more personized educational approach (Gao, 2014a, 2014b), although there is a lack of empirical research to study the link. The question as to whether cognitive absence can be regarded as a preliminary stage of physical class avoidance, has not been answered conclusively yet and remains open. It is plausible to assume, however, that this hypothesis applies at least to some cases.

After we have succeeded in demonstrating that it is possible to measure cognitive class avoidance empirically, our next objective is to search for explanations for this form of student behavior. In order to address this question systematically, we intend to focus on a variety of factors such as the use of new technology, peer cultures, and teaching processes in the classroom.

Limitations: Representativeness and generalizability of the findings

This study is a cross-sectional investigation that attempts to shed empirical light on the measurement of students' cognitive class avoidance for the first time in the truancy discourse. A newly developed self-assessment instrument was used to assess cognitive class avoidance. However, with survey data in general and especially with self-assessments of adolescents in a school context, the aspect of social desirability has to be taken into account, which is why possible biases cannot be excluded. This aspect proves to be particularly significant when observing and interpreting mean values on the variables of interest, i.e., students' cognitive classroom avoidance. Less attention is paid to the aspect of social desirability in the context of analysis and interpretation of correlations as well as differential comparisons of specific subgroups. Another criterion that needs to be considered critically and reflectively is the fact that the results are based on data from a single state in Germany (Schleswig-Holstein). The results of the present study were obtained on the basis of a non-representative selection of students and schools (in the federal state of Schleswig-Holstein). With regard to the data basis, it is therefore a selective sample. Based on this selectivity, the results must be viewed critically, since initially the school administrators and also the teachers functioned as filters, which could not be controlled very much. The school principals were initially asked to participate in the study, which must be seen as a first filter regarding the basic willingness to participate. Furthermore, after the signaled willingness to participate in the study on the part of the school management, teachers in grades 7 to 9 volunteered to participate in the study on their own initiative. However, since this is the first study to empirically capture the concept of students' cognitive class avoidance the aspect of lack of representativeness can be characterized as negligible. In addition, this study was not intended to make any representative statements for a specific region, so that representativeness is not a decisive factor in answering the research questions. The data were obtained by means of written student surveys in the classroom context. Even though elaborate analytical methods were used in the statistical analysis, it must be taken into account that the results can only be regarded as generalizable to a limited extent.

The construct of cognitive class avoidance was operationalized only by means of four items and surveyed within the framework of a questionnaire study in order to obtain a retrospective global assessment on the part of the students. The method of questionnaire survey is a target-oriented and efficient form with regard to the recording of the construct of cognitive class avoidance, since several subjects provide information on the phenomenon of interest at the same time and thus a prevalence of the construct can be determined. Self-reporting by students is very significant and of great advantage in this thematic regard, as third-party information would introduce a greater bias and would not be able to capture the phenomenon empirically. The questionnaire survey method also proves to be functional, as other methods of data collection, such as videography or interviews, could not reveal students' own awareness regarding cognitive class avoidance. However, there are significant limitations associated with the form of questionnaire data collection: (a) one problem is the fact that the data collection took a total of 45 minutes and thus must be considered a challenge in terms of students' concentration during the processing of the completion, (b) another aspect is the methodological issue of item position effects, i.e. the problem of where the items for the construct of interest are included in the questionnaire, and (c) a risk of the presence of the phenomenon under study (lack of attention) during the completion of the questionnaires exists and this factor was not included in the calculation of the results. While the 45 minutes survey can be a problem measuring cognitive class avoidance, it is the best measuring tool because many students provide self-reported information on the same construct (on the same scale) and the information is anonymous and findings on descriptive statistics can be determined.   Even though participants may have experienced cognitive absence during the survey, the data is still legitimate since the (arithmetic) mean relatated to its standard deviation is the

industry standard in measuring empirical data since the mean value is a statistical parameter which is very robust to outliers.

From the point of view of validity, the self-perception of cognitive instructional avoidance is thus recorded. Cognitive lesson avoidance was assessed for the first time in the present study as a newly developed self-assessment instrument using four items. Confirmatory factor analysis was used to confirm the theoretically assumed structure of a general factor for a measurement point. The data on students' cognitive lesson avoidance were not collected subject-specifically, i.e., the findings and statements have cross-domain validity and do not focus only on a specific subject. In this regard, it is understandably important to point out that, in principle, assessments always incorporate long-term experiences with the lesson and the teacher, which are based on different situations. For the self-assessed recording of cognitive class avoidance, the present work provides a first suggestion as well as a possible approach that needs to be further optimized.

References

Allen, J. P., Gregory, A., Mikami, A., Lun, J., Hamre, B., & Pianta, R. (2013). Observations of Effective Teacher–Student Interactions in Secondary School Classrooms: Predicting Student Achievement with the Classroom Assessment Scoring System—Secondary. *School Psychology Review, 42*(1), 76–98.

Applebee, A. N., Langer, J. A., Nystrand, M., & Gamoran, A. (2003). Discussion-Based Approaches to Developing Understanding: Classroom Instruction and Student Performance in Middle and High School English. *American Educational Research Journal, 40*(3), 685–730.

Baier, D. (2012). Die Schulumwelt als Einflussfaktor des Schulschwänzens. In H. Ricking & G. Schulze (Hrsg.). *Schulabbruch – ohne Ticket in die Zukunft?* (pp. 37–62). Verlag Julius Klinkhardt.

Baier, D. (2018). Familienbezogene Einflussfaktoren des Schulschwänzens. Ergebnisse einer Längsschnittstudie in der 6. und 7. Jahrgangsstufe. In Ricking, H. & Speck, K. (Eds.), *Schulabsentismus und Elter (*pp. 97-112). Springer VS.

Baier, D., Pfeiffer, C., Rabold, S., Simonson, J. & Kappes, C. (2010). Kinder und Jugendliche in Deutschland: Gewalterfahrungen, Integration, Medienkonsum. Zweiter Bericht zum gemeinsamen Forschungsprojekt des Bundesministeriums des Innern und des KFN.

Baier, D., Pfeiffer, C., Windzio, M., & Rabold, S. (2006). *Schülerbefragung 2005: Gewalterfahrungen, Schulabsentismus und Medienkonsum von Kindern und Jugendlichen. Abschlussbericht über eine repräsentative Befragung von Schülerinnen und Schülern der 4. und 9. Jahrgangsstufe.* KFN.

Baker, M. L., Sigmon, J. N., & Nugent, E. M. (2001). Truancy Reduction: Keeping Students in School. *Juvenile Justice Bulletin*, 1–20.

Baumert, J. & Kunter, M. (2011). Das Kompetenzmodell von COACTIV. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss & M. Neubrand (Hrsg.), *Professionelle Kompetenz von Lehrkräften: Ergebnisse des Forschungsprogramms COACTIV* (pp. 30-53). Waxmann.

Baumert, J., Kunter, M., Blum, W., Klusmann, U., Krauss, S., & Neubrand, M. (2011). Professionelle Kompetenz von Lehrkräften, kognitiv aktivierender Unterricht und die mathematische Kompetenz von Schülerinnen und Schülern (COACTIV) – Ein Forschungsprogramm. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, & M. Neubrand (Hrsg.), *Professionelle Kompetenz von Lehrkräften: Ergebnisse des Forschungsprogramms COACTIV (*pp. 7–26). Waxmann.

Baumert, J., Stanat, P., & Demmrich, A. (2001). PISA 2000: Untersuchungsgegenstand, theoretische Grundlagen und Durchführung der Studie. In Deutsches PISA-Konsortium (Hrsg.), *PISA 2000. Basiskompetenzen von Schülerinnen und Schülern im internationalen Vergleich* (pp. 15–68). Leske + Budrich.

Beauducel, A. & Wittmann, W. W. (2005). Simulation study on fit indices in confirmatory factor analysis based on data with slightly distorted simple structure. *Structural Equation Modeling, 12*, 41–75.

Biedermann, H. & Oser, F. (2011). Wirksame Lehrerausbildung: Globale Ausbildungskultur und/oder regionale Routinenschulung? TEDS-M – erste internationale Vergleichsstudie der IEA mit Fokus auf die Lehrerausbildung. *Beiträge zur Lehrerbildung, 29*(1), 66–81.

Byrne, B. M. (2003). Confirmatory factor analysis. In R. Fernandez-Ballesteros (Eds.), *Encyclopedia of psychological assessment* (Vol. 1, pp. 399-402). Thousand Oaks, CA: Sage.

Byrne, B. M. (2012). *Structural Equation Modeling with Mplus. Basic Concepts, Applications, and Programming*. Routledge.

Connor, C., Morrison, F. J., Schatschneider, C., Toste, J. R., Lundblom, E., Crowe, E. C., & Fishman, B. (2011). Effective Classroom Instruction: Implications of Child Characteristics by Reading Instruction Interactions on First Graders' Word Reading Achievement. *Journal of Research on Educational Effectiveness, 4*(3), 173–207.

Cooper, K. S. & Miness, A. (2014). The Co-Creation of Caring Student-Teacher Relationships: Does Teacher Understanding Matter? *The High School Journal, 97*(4), 264–290.

Doyle, W. (2006). Ecological Approaches to Classroom Management. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of Classroom Management.* pp. 97–125. Lawrence Erlbaum.

Dube, S. R. & Orpinas, P. (2009). Understanding Excessive School Absenteeism as School Refusal Behavior. *Children & Schools, 31*(2), 87–95.

Dunkake, I. (2010). *Der Einfluss der Familie auf das Schulschwänzen. Theoretische und empirische Analysen unter Anwendung der Theorien abweichenden Verhaltens.* VS Verlag für Sozialwissenschaften.

Farmer, T. W., Lines, M. & Hamm, J. V. (2011). Revealing the Invisible Hand: The Role of Teachers in Children's Peer Experiences. *Journal of Applied Developmental Psychology, 32*(5), 247–256.

Gao, P. P. (2014a). Using personalized education to take the place of standardized education. *Journal of Education and Training Studies*, *2*(2), 44–47.

Gao, P. P. (2014b). I love to learn, but I hate to be taught. *Journal of Education and Training Studies*, *2*(3), 104–107.

Hattie, J. (2014). *Visible Learning and the Science of How We Learn.* Routledge.

Helmke, A. (2014). *Unterrichtsqualität und Lehrerprofessionalität: Diagnose, Evaluation und Verbesserung des Unterrichts* (5. Aufl.) Klett–Kallmeyer.

Helmke, A. & Renkl, A. (1992). Das Münchener Aufmerksamkeitsinventar (MAI): Ein Instrument zur systematischen Verhaltensbeobachtung der Schüleraufmerksamkeit im Unterricht. *Diagnostica, 38*(2), 130–141.

Herring, M., Curran, C., Stone, J., Davidson, N., Ahrabi-Fard, I., & Zhbanova, K. (2015). Emerging Qualities of Effective Teaching: Embracing New Literacies. *The Educational Forum, 79*(2), 163–179.

Hibbett, A. & Fogelman, K. (1990). Future lives of truants: Family Formation and Health-Related Behaviour. *British Journal of Educational Psychology, 60,* 171–179.

Hintz, A.-M. & Grosche, M. (2012). Schulabsentismus und Dropout bei Kindern und Jugendlichen mit Migrationshintergrund. In H. Ricking & G. Schulze (Hrsg.), *Schulabbruch – ohne Ticket in die Zukunft?* (pp. 77–93). Verlag Julius Klinkhardt.

Hommel, M. (2011). Aufmerksamkeitsverlauf – Fremdbeobachtung und Eigeneinschätzung. In U. Faßhauer, B. Fürstenau & E. Wuttke (Hrsg.), *Grundlagenforschung zum Dualen System und Kompetenzentwicklung in der Lehrerbildung. Schriftenreihe der Sektion Berufs- und Wirtschaftspädagogik der Deutschen Gesellschaft für Erziehungswissenschaft (DGfE)* (pp. 117–130). Farmington Hills: Budrich.

Hu, L. T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55.

Jimerson, S. R. & Haddock, A. D. (2015). Understanding the Importance of Teachers in Facilitating Student Success: Contemporary Science, Practice, and Policy. *School Psychology Quarterly, 30*(4), 488–493.

Kearney, C. A. (2008). School Absenteeism and School Refusal Behavior in Youth: A Contemporary Review. *Clinical Psychology Review, 28*(3), 451–471.

Kearney, C. A. & Graczyk, P. (2014). A Response to Intervention Model to Promote School Attendance and Decrease School Absenteeism. *Child & Youth Care Forum, 43*(1), 1–25.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3. Auflage). Guilford Press.

Kunter, M., Baumert, J., Blum, W., Klusmann, U., Krauss, S., & Neubrand, M. (Hrsg.). (2011). *Professionelle Kompetenz von Lehrkräften – Ergebnisse des Forschungsprogramms COACTIV.* Waxmann.

Kunter, M. & Trautwein, U. (2013). *Psychologie des Unterrichts.* UTB.

Leuders, T. & Holzäpfel, L. (2011). Kognitive Aktivierung im Mathematikunterricht. *Unterrichtswissenschaft, 39,* 213-230.

Lipowsky, F. (2003). *Wege von der Hochschule in den Beruf – Eine empirische Studie zum beruflichen Erfolg von Lehramtsabsolventen in der Berufseinstiegsphase.* Klinkhardt.

Lüdtke, O. & Robitzsch, A. (2010). Missing-Data-Analyse. In H. Holling & B. Schmitz (Hrsg.*), Handbuch Statistik, Methoden und Evaluation* (pp 723–729). Hogrefe.

Muthén, L. K. & Muthén, B. O. (2012). *Mplus user's guide* (7th ed.). Muthén & Muthén.

Nomi, T. & Raudenbush, S. W. (2016). Making a Success of 'Algebra for All': The Impact of Extended Instructional Time and Classroom Peer Skill in Chicago. *Educational Evaluation and Policy Analysis, 38*(2), 431–451.

Oehme, A. & Franzke, M. (2002). Schulverweigerung – Wege aus der Begriffskonfusion. *Behindertenpädagogik, 41*, 67–80.

Rakoczy, K., Klieme, E., Lipowsky, F., & Drollinger-Vetter, B. (2010). Strukturierung, kognitive Aktivität und Leistungsentwicklung im Mathematikunterricht. *Unterrichtswissenschaft, 38*(3), 229–246.

Rat für Kriminalitätsverhütung Schleswig-Holstein (2007). *Konzept gegen Schulabsentismus – Jeder Schüler, jede Schülerin zählt*. Innenministerium des Landes Schleswig-Holstein.

Ready, D. D. (2010). Socioeconomic Disadvantage, School Attendance, and Early Cognitive Development: The Differential Effects of School Exposure. *Sociology of Education, 83*(4), 271–286.

Reh, S., Berdelmann, K., & Dinkelaker, J. (Eds.) (2015). *Aufmerksamkeit: Zur Geschichte, Theorie und Empirie eines pädagogischen Phänomens.* Springer VS.

Reid, K. (1985). *Truancy and School Absenteeism*. Hodder & Stoughton.

Reusser, K., Pauli, C., & Waldis, M. (Eds.) (2010). *Unterrichtsgestaltung und Unterrichtsqualität: Ergebnisse einer internationalen und schweizerischen Videostudie zum Mathematikunterricht.* Waxmann.

Ricking, H. (2011). Zentrale Aspekte im Umgang mit Schulbesuchsproblemen und Schulabsentismus. In J. Metelmann & S. Schwall (Eds.), *Bildungsbürgerrecht: Erziehung als soziales Unternehmen* (pp. 79-90). Waxmann.

Ricking, H. & Dunkake, I. (2017). *Wenn Schüler die Schule schwänzen oder meiden: Förderziele Anwesenheit und Lernen-wollen*. Schneider Verlag.

Sälzer, C. & Lenski, A. E. (2016). Mind the gap: How students differentially perceive their school's attendance policies in Germany. *Journal of Education for Students Placed at Risk, 21*(4), 246–260.

Sälzer, C., Trautwein, U., Lüdtke, O., & Stamm, M. (2012). Predicting adolescent truancy: The importance of distinguishing between different aspects of instructional quality. *Learning and Instruction*, *22*, 311–319.

Schreiber-Kittl, M. & Schröpfer, H. (2002). *Abgeschrieben? Ergebnisse einer empirischen Untersuchung über Schulverweigerer.* Verlag Deutsches Jugendinstitut.

Schultz, R. (1987). Truancy: Issues and Interventions. *Behavioral Disorders, 12*, 117–130.

Schulze, G. (2009). Die Feldtheorie als Erklärungs- und Handlungsansatz bei unterrichtsmeidendem Verhalten. In H. Ricking, M. Wittrock & G. Schulze (Hrsg.), *Schulabsentismus und Dropout. Erscheinungsformen Erklärungsansätze Intervention* (pp. 137-165). Schöningh (UTB).

Schulze, G. (2003). *Unterrichtsmeidende Verhaltensmuster. Formen, Ursachen, Interventionen.* Dr. Kovac.

Schulze, G. & Wittrock, M. (2004). Unterrichtsabsentismus als Signal – Unterrichtsabsentismus als Signal zum (sonder-)pädagogischen Handeln? In B. Herz, K. Puhr & H. Ricking (Eds.), *Problem Schulabsentismus – Wege zurück in die Schule* (pp. 31-43). Klinkhardt.

Schulze, G. & Wittrock, M. (2001). *Schulaversives Verhalten – Multifaktorielle Ansätze zur Erfassung und Bearbeitung des Phänomens im Rahmen einer systematisch orientierten Sonderpädagogik: Abschlussbericht zum Landesforschungsprojekt.* Universitätsdruckerei.

Simons, E., Hwang, S., Fitzgerald, E. F., Kielb, C., & Lin, S. (2010). The Impact of School Building Conditions on Student Absenteeism in Upstate New York. *American Journal of Public Health, 100*(9), 1679–1686.

Stamm, M. (2008). Schule schwänzen (k)ein Kavaliersdelikt*? Gehirn & Geist: Kindesentwicklung, 4,* 26–29.

Stamm, M., Ruckdäschel, C., Templer, F., & Niederhauser, M. (2009). *Schulabsentismus: Ein Phänomen, seine Bedingungen und Folgen.* VS Fachverlag für Sozialwissenschaften.

Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' Emotion Regulation and Classroom Management. *Theory Into Practice, 48*(2), 130–137.

Vaughn, M. G., Maynard, B. R, Salas-Wright, C., Perron, B. E., & Abdon, A. (2013). Prevalence and correlates of truancy in the United States: Results from a national sample. *Journal of Adolescence, 36*, 767–776.

Veenstra, R., Lindenberg, S., Tinga, F. & Ormel, J. (2010). Truancy in late elementary and early secondary education: the influence of social bonds and self-controld – The TRAILS study. *International Journal of Behavioral Development, 34*, 302–310.

Wagner, M. (2012). Schulabsentismus – seine Verbreitung und Ursachen. *Recht der Jugend und des Bildungswesens, 60*(1), 35–47.

Wang, J. & Wang, X. (2012). *Structural Equation Modeling: Applications Using Mplus*. John Wiley.