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Teachers' and Principals' Perception of Organizational Climate in Preschool: A Case of the Czech Republic

Adriana Wiegerová
Peter Gavora
Comenius University, Bratislava, Slovakia

ABSTRACT

Organizational climate refers to the shared perceptions of behavior, the work environment, and daily life within an organization. This study is based on the assumption that, due to their differing roles and responsibilities in preschools, teachers and principals have significantly different perceptions of the organizational climate. The sample included 354 teachers and 410 principals from the Czech Republic. Data were collected using the Organizational Climate Description Questionnaire-P, a tool adapted and validated for the preschool setting. Overall, both teachers and principals viewed the preschool climate positively, with item averages above the midpoint of the scale. However, principals perceived their support for teaching staff significantly more positively than teachers did, and they also rated teacher involvement more favorably than the teachers themselves. Teachers reported encountering inappropriate behavior from colleagues infrequently and rated the level of directiveness from principals relatively low, suggesting they perceive their principals' leadership style positively. Additionally, a significant positive correlation was found between teachers' education levels and their perception of principal directiveness, as well as with school size.

***Keywords*:** organizational climate, preschool teacher, preschool principal, preschool management

The Concept of Organizational Climate

The concept of organizational climate was originally developed in business settings and has been defined in various ways, though most definitions share a common element. Organizational climate refers to the overall atmosphere of a workplace as perceived by both employees and leaders (Burton et al., 2004; Klinker et al., 2005; McLean et al., 2023; Parker et al., 2003; Schulte et al., 2006). It is a relatively stable characteristic that predominates within an organization over an extended period, changing only gradually. Rather than being an objective assessment made by an external observer, organizational climate is a subjective interpretation of the work environment. Research indicates that individual employees both shape and perceive the organizational climate based on their personal workplace experiences (Hewit & La Paro, 2019). The quality of this climate varies and is influenced by both objective and subjective factors. A positive organizational climate is typically associated with collegiality among staff and leaders, which correlates with lower levels of occupational burnout and a reduced likelihood of employees intending to leave the organization (Hur et al., 2023). Furthermore, a favorable organizational climate is positively linked to employees' occupational commitment (Berberoglu, 2018; Sugiarto, 2018).

The School Climate

In a school environment, the concept of school climate shares similar attributes with organizational climate in business settings. It is a relatively stable characteristic of the school, shaped and perceived by both teachers and administrators, based on their collective perceptions of behavior within the school (Hao et al., 2024; Tableman, 2003; The Aspen Institute, 2021).

Key elements of school climate include the quality of relationships among school members, teaching and learning practices, and the organizational structures in place (Bull et al., 2024). A positive school climate plays a crucial role in preventing teacher stress and other emotional challenges (Jeon & Ardeleanu, 2020). Examining the school climate provides valuable insight into how teachers and administrators feel within the school, while also shedding light on the broader dynamics and interactions that shape the daily life of the school (Welsh, 2000).

In the view of Bradshaw et al. (2014), school climate refers to beliefs, values, and attitudes that establish the interaction among teachers and administrators. School climate both creates and regulates acceptable behavioral parameters and norms that exist in schools. Organizational climate is a product of social interaction between teachers and administrators, and it is influenced by perceived values of education and social values preferred in school. School climate constitutes a crucial factor in fostering teaching, supporting teachers' and children´s development and promoting healthy relationships, which are essential for successful education and care (Grazia & Molinari, 2020). Thus, by establishing and maintaining positive school climate and a healthy working environment, the school leadership shapes teacher and student outcomes (Özdemir et al., 2024). Admiraal and Røberg (2023) and Bömeke et al. (2021) note that the school climate is associated with the school culture. School culture and climate and work-related wellbeing support early childhood professionals' decisions to stay in or leave the profession.

School climate is not a separate perception of principals and teacher but rather their shared view of behaviors, work environment, and organizational life (Veletić et al., 2023). The literature emphasizes a tight connection between school climate and school leadership (Bömeke et al., 2021). Examining the perspectives of teachers and principals on the shared aspects of school climate is one of the key variables of effective leadership in school (Brezicha et al., 2020) and in fostering its innovative culture (Admiraal & Røberg, 2023).

Several studies captured the contrasting roles of principals and teachers, but they did not examine the climate perception itself. For instance, Sebastian et al. (2016) explored how principals' leadership affects instructional quality and school climate, including how different perceptions between teachers' and principals' impact overall school effectiveness. Tschannen-Moran and Gareis (2015) described how trust between principals and teachers impacts the school climate and overall school effectiveness, emphasizing how leadership practices influence teachers' perceptions. However, they concentrated only on a specific area of "climate of trust" and not on broader areas of the school climate.

The literature shows that preschool climate is heavily under investigated. To our knowledge, there are only a few studies that examined preschool climate, doing so in differing complexity and validity. For instance, Dennis (2010) and Dennis and O'Connor (2013) used two of five subscales of the Organisation Climate Description Questionnaire (OCDQ-RE) to investigate preschools. In another study, Hewitt and La Paro (2019) inspected only two variables, teachers' collegiality and principals' support, in a small sample of 48 teachers. Somewhat wider lenses were employed in the study of Veziroglu-Celik and Yildiz (2018). They used the Turkish adaptation of Early Childhood Work Environment Scale, consisting of 10 subscales. However, they did not perform a factor analysis with the Turkish version nor a calculation of internal reliability of the instrument. The same instrument was used in Britain by Saunders (2018). Zinsser et al. (2016) investigated emotional climate in U.S. preschools; however, their sample was too small (12 preschool principals) to provide a thorough picture of preschool administration.

One significant gap in the research on preschool climate is the lack of distinction between the perceptions of teachers and principals. Apart from Hewitt and La Paro's (2019) study and the somewhat outdated work by Jorde-Bloom (1988), this distinction has only been explored at the K-12 educational level. This is paradoxical, as differences in preschool climate perception stem from the varying roles teachers and principals play within the preschool setting. Teachers often view the climate through their interactions with children, while principals have a broader perspective, encompassing not just classrooms but also administrative tasks and interactions with staff, children, and parents.

The current study focuses on the underexplored issue of differences in how teachers and principals perceive the preschool climate. Additionally, it expands our understanding of how preschool climate is associated with both individual factors—such as the role within the preschool, highest level of education, years of teaching experience, and age—and school-level factors, including the number of classes and teachers in the preschool. Data were collected using a rigorously validated research instrument, with participants drawn from a large sample of preschools in the Czech Republic. This study, therefore, contributes to the broader understanding of preschool climate, complementing findings from studies conducted in North America, Britain, and Turkey.

The Context of Preschools in the Czech Republic

To better understand the aims of this study, study participants' characteristics and findings, we present a short description of the Czech preschool. In the Czech Republic, preschools offer education for children from age two to six. By the state legislature, attendance in preschool is obligatory for children from age five until six. In state-run preschools, parents pay for education and food provided for their child. For children, preschool is the first environment outside of their families in which they spend a portion of the day. Therefore, teaching children to understand and acquire preschool rules and principles poses significant demands on teachers. The other challenging task of teachers is to align the developmental differences among children, as some of them live in families providing less stimulating developmental conditions. Preschool teachers are in daily contact with the child's parents; thus, forming partnerships with them is one of the most important tasks of preschool teachers.

Preschool teachers plan and organize children's activities with varying teacher involvement. They provide guidance, support, and scaffolding to children's learning, but they also enable children's choice play. Teachers employ a range of educational strategies in both large and small group instruction. Preschools provide a variety of materials and resources for children to manipulate and use, both in learning and play activities. The preschool physical environment is usually segmented into circles or corners to enable learning in a specific domain, e.g., science, pre-literacy, visual arts, or music. Instructional activities are managed by teachers, with emphasis on the needs of individual children

Preschools are managed by principals who are responsible for implementing the state preschool curriculum, as well as managing financial and personnel matters. Preschools are organized into classes, each with two teachers. The qualifications required to become a preschool teacher vary. The minimum qualification is graduation from a secondary vocational school specializing in preschool education, while the highest qualification is a master's degree in preschool pedagogy. Preschool teaching staff tend to be small compared to primary or secondary schools, which fosters close relationships among staff members. This close-knit environment contributes to the effective functioning of the institution. Preschools predominantly employ female teachers; in fact, it is uncommon to see a male teacher on staff.

Study Aims

This study has four aims. Three aims are exploratory, one is methodological:

- Aim 1 is to explore how teachers and principals differ in their perceptions of the climate in their preschool.
- Aim 2 is to examine how the preschool organizational climate is related to teachers' and principals' variables (the working position in preschool, highest education completed, years of teaching practice and age of participants).
- Aim 3 is to examine how preschool size (number of classes and teachers) is associated with teachers' and principals' perceptions of the preschool climate.
- Aim 4 is to validate an instrument for measuring organizational climate in preschools and apply it to achieve research aims 1 through 3.

The demographic and contextual variables in aims 2 and 3 were examined because the literature shows that these variables play a strong role in how the preschool staff perceives the organizational climate in their preschools (cf., Early et al., 2006; Ho et al., 2016; Nasiopoulou et al., 2017).

METHOD

Study Participants

The participants of the study were 769 preschool educators, of which 359 (46.7%) were teachers and 410 (53.3%) were principals. They worked in preschools throughout the Czech Republic. The sampling strategy was judgmental. Preschools from Prague, along with all regions and districts of the Czech Republic, were represented. The sample of teachers consisted mainly of women (99.2%), which also applies to principals (98.5%). The average age of teachers was 42.5 years (SD = 12.6). The average age of principals was higher, at 52 years (SD = 8). The length of experience in teaching was higher for principals (28.9 years, SD = 11.1) than for teachers (23.5 years; SD = 11.6) and teachers (16.6 years, SD = 13.4). Most of the teachers completed secondary vocational school (28.4%), earned a bachelor's degree (18.1%), or a master´s degree (19.5%). Principals completed a secondary vocational school (30.2%), earned a bachelor's degree (12,4%), or earned a master's degree (34,4%). A rather large proportion of data on completed education were missing (32.9% of teachers and 22.4 % of principals). The size of preschools in which the participants were employed varied. Approximately 90% of preschools employed 2 to 12 teachers, while the remaining 10% of preschools had 13 to 41 teachers.

The Instrument

This study used a questionnaire called the Organisational Climate Description-P (OCDQ-P). Because it is costly and time consuming to construct an entirely new instrument, we opted to use items from two questionnaires measuring organizational climate of schools, i.e., OCDQ-RE and OCDQ-RS (Hoy, et al., 1991), and adapt them for measuring organizational climate in preschools in the Czech Republic. These questionnaires assess how teachers' and principals' behavior contribute to school climate. Each behavior constitutes several dimensions, thus providing a well-structured description of the institution's climate. Another reason for choosing these questionnaires was that we have had positive experience using these questionnaires in a previous study (Gavora & Braunová, 2010).

The OCDQ-RE comprises 42 items, while the OCDQ-RS contains 34 items, some of which overlap. In the process of adaptation, we checked the meaning of each original questionnaire item and decided on its relevance to the preschool teacher staff. Many items were reworded, and some were eliminated. Also, new items were constructed to make the instrument tailored to preschool. Together, we used 48 questionnaire items, al, of which we validated, as described below. The questionnaire uses a four-point Likert-type scale, from "rarely occurs" (1) to "very frequently occurs" (4).

The administration of the questionnaire took place separately in each preschool and was accomplished by STEM/MARK, an agency specializing in survey administration. The survey was administered in electronic form. Anonymity was ensured by assigning a code to each participant. Informed consent was signed by participants before they completed the questionnaire. To distinguish this new questionnaire from its predecessors, we named it OCDQ-P.

Because it was not clear how the questionnaire would behave in a preschool environment, we first assessed its construct validity and reliability, using the research sample described above. We first conducted exploratory factor analysis, followed by confirmatory factor analysis. In exploratory factor analysis, we used the maximum likelihood factoring. The number of factors was determined by parallel analysis (Hayton et al., 2004), and the factor load was set at 0.40, as recommended by Hair et al. (2010). Promax factor rotations were used to improve interpretability of results. In addition, we checked the intercorrelations of the questionnaire dimensions. Reliability (internal consistency) was determined using Cronbach's alpha coefficients. In confirmatory factor analysis we calculated the following fit indices: RMSEA, CFI, TLI and NNFI. In general, CFI, TLI, and NNFI statistics greater than 0.90 are considered as an "adequate" model fit, whereas values greater than 0.95 are deemed as a "good" model fit. Fit indexes for RMSEA values less than 0.08 are considered "good" and values between 0.08 and 0.10 "mediocre" (Hu & Bentler, 1999). The calculations were performed in JASP 0.14.1 and SPSS Amos 25 software. Because we assumed different results for teachers and principals, we conducted separate analyses for these samples.

OCDQ-P Validation with Teacher Sample

For teachers, the exploratory factor analysis offered five factors (dimensions) that correspond to (1) supporting behavior of principal, (2) directive behavior of principal, (3) engaged teacher behavior, (4) frustrated teacher behavior, and (5) friendly teacher behavior. Examples of items (translation from Czech):

- **Supporting behavior of principal (SUPP):**
  The principal sets an example by working hard herself.
  The principal goes out of their way to help teachers.

- **Directive behavior of principal (DIR):**
  The principal monitors everything teachers do.
  The principal supervises teachers closely.

- **Engaged teacher behavior (ENG):**
  Teachers help and assist each other.
  The morale of teachers at our preschool is high.

- **Frustrated teacher behavior (FRUS):**
  The mannerism of some teachers at our preschool is annoying.
  Some teachers have evasive behavior.

- **Friendly teacher behavior (FRIEND):**
  Teachers' closest friends are other teachers at this preschool.
  Teachers socialize with each other on a regular basis.

Table 1 presents the number of items in each questionnaire dimension and its reliability. The number of items in the dimension ranged from six to eight, but only three items were obtained in the FRUS dimension, a critically low number. However, given the satisfactory reliability (α = 0.77), we decided to retain this dimension. ENG and SUPP dimensions demonstrate excellent reliability, while FRUS and DIR show satisfactory reliability (Field, 2018). An important element of instrument validation is the detection of correlations between individual dimensions. According to authors of the OCDQ-RE and OCDQ-RS (Hoy, et al., 1991), the intercorrelations among the dimensions pointing to a favorable climate (SUPP, ENG and FRIEND) should be positive, and these dimensions should be negatively or low correlated with the dimensions revealing unfavorable climate (FRUS and DIR). Table 2 shows that, in principle, these conditions have been met. SUPP, ENG and FRIEND correlated with each other from 0.25 to 0.54 and with DIR and FRUS from 0 to -0.51. As expected, the DIR and FRUS dimensions were positively correlated. Overall, we can summarize that the exploratory factor analysis for the teachers sample confirmed the reasonable structure of the instrument. In a final step in the questionnaire validation, we performed the confirmatory factor analysis. Indices with five latent variables (i.e., SUPP, ENG, FRIEND, DIR, and FRUS) indicated that the model adequately fit the data: RMSEA = 0.06, CFI = 0.92, TLI = 0.90, and NNFI = 0.90. We can therefore summarize that the OCDQ-P demonstrated good construct validity for the teacher sample.

Table 1

Number of Items, Dimension Reliability, and Explained Variance of the OCDQ-P

Dimension	ENG		SUPP		FRIEND		FRUS		DIR		Variance
	Items	Alpha	Items	Alpha	Items	Alpha	Items	Alpha	Items	Alpha	%
Teachers	8	0.89	6	0.90	7	0.79	3	0.77	6	0.72	44
Principals	8	0.85	8	0.75	6	0.84	-	-	-	-	31

Note. ENG = teachers' engagement, SUPP = supportive principal behavior, FRIEND = friendly teacher behavior, FRUS = frustrated teacher behavior, DIR = directive principal behavior. Alpha = Cronbach's coefficient of internal consistency. Scale: "rarely occurs" (1) to "very frequently occurs" (4).

Table 2

Intercorrelations among the OCDQ-P Dimensions in the Teacher Sample

	SUPP	ENG	FRIEND	DIR
ENG	0.54	-		
FRIEND	0.25	0.49	-	
DIR	-0.06	0.00	-0.06	-
FRUS	-0.31	-0.51	-0.26	0.30

Note. Spearman correlation. ENG = teachers' engagement, SUPP = supportive principal behavior, FRIEND = friendly teacher behavior, FRUS = frustrated teacher behavior, DIR = directive principal behavior.

OCDQ-P Validation with Principals' Sample

With preschool principals, exploratory factor analysis extracted five factors. These were ENG, SUPP, and FRIEND. They had six to eight items and satisfactory to excellent reliability (Table 1). FRUS had only four items and demonstrated rather low reliability (α = 0.59), DIR had only two items. Because of low reliability, these two factors were removed from further consideration. As expected, the intercorrelations between these dimensions were positive. The SUPP dimension correlated with ENG 0.57 and with FRIEND 0.32. ENG correlated with FRIEND 0.47. The confirmatory factor analysis indicated that the model with the three dimensions fit the data adequately: RMSEA = 0.04, CFI = 0.93, TLI = 0.93, and NNFI = 0.93.

RESULTS

First, we will compare the averages of the climate dimensions, then we will interpret the differences between teachers and principals, and finally we will show the relationships between the dimension averages and characteristics of the participants

and preschools. Because the OCDQ-P instrument measured dimensions on a 4-point scale, the higher the average score, the higher the frequency of the behavior.

The basic results are shown in Table 3. Teachers and principals had rather high averages in the SUPP and ENG dimensions—from 3.18 to 3.51 points. The averages are above the midpoint of the four-point scale, so we can assert that both teachers and principals perceive these aspects of the climate of their preschool favorably. The results show that principals are good models of hardworking employees, they appreciate teachers' work, often advise them on professional matters, accept their good ideas, understand their personal situation, and care about the well-being of preschool (SUPP dimension). As for the teachers, they often help each other, have a relatively high work ethic, quite enjoy working in preschool, are quite proud of it, have a sense of collegiality, value the expertise of their colleagues, and are usually able to get excited about new ideas (ENG dimension).

The averages of the FRIEND dimension are surprisingly low, both in teachers' and principals' perceptions. Both teachers and principals rated this dimension below the midpoint of the scale (2.04). Since preschool collectives are rather small, we expected them to be more close-knit, which would bring higher averages in this dimension. However, this did not happen. It may be because the FRIEND dimension items concentrated on socializing of the staff members rather than on work cooperation and collaboration of the staff.

The FRUS dimension in the teachers' sample had a rather low average (1.55). This indicates that the behavior of the teaching staff is not a major source of friction. Teachers encounter inappropriate behavior of their colleagues infrequently; they are not irritated by their behavior and do not hear excuses on their part. It should be noted that the FRUS dimension evaluated the behavior of colleagues, not the behavior of their principals.

The DIR dimension measured the teachers' perceptions of managerial behavior of their principals. The average of the dimension is 2.17, which is below the midpoint of the scale. We can therefore state that teachers perceive the management behavior of their principals rather positively, e.g., teachers are rarely or only occasionally dissatisfied with the behavior of the principal. Teachers rated the principal's consistency favorably in checking teachers' activities with children or their strictness in requiring teachers' duties.

The comparison of teachers' and principals' ratings can be accomplished only in the SUPP, ENG, and FRIEND dimensions. At first glance, the differences are slight but are statistically significant. In the SUPP and ENG dimensions, the averages of principals are somewhat higher than those of teachers. The items in the SUPP dimension, which emerged from the factor analyses, are not identical for teachers and principals, so we could only compare the same items (six out of eight). Using the Kruskal-Wallis test, all items showed a difference at the 0.1% level in favor of principals. Therefore, principals rate their support of the staff significantly better than teachers perceive this support. Principals appreciate and praise the teachers, they help them professionally and in personal matters, they are inclined to accept their ideas, they set examples of working hard and have a clear vision of the preschool. In all these items, principals scored significantly higher than teachers. In the ENG dimension, where the items were identical for teachers and principals, it was possible to calculate the difference for all items of the dimension. Here, too, a significantly higher rating was shown for principals (Kruskal-Wallis test, $H(1) = 4.31$, $p = 0.04$). Therefore, principals rated the commitment of teachers higher than the teachers rated it. Principals value their support, work ethic, dedication, and collegiality; they also appreciate their expertise and ability to become inspired about new ideas. The FRIEND dimension was rated identically by both teachers and principals and below the midpoint of the four-point scale.

Table 3

Descriptive Data from the OCDQ-P

	SUPP		ENG		FRIEND		FRUS	DIR
	Teachers	Principals	Teachers	Principals	Teachers	Principals	Teachers	Teachers
M	3.18	3.51	3.22	3.34	2.04	2.04	1.55	2.17
SD	0.71	0.35	0.59	0.44	0.56	0.62	0.60	0.57
Min	1	2.13	1.25	2	1	1	1	1
Max	4	4	4	4	3.71	4	3.7	4

Note. SUPP = supportive principal behavior, ENG = teachers' engagement, FRIEND = friendly teacher behavior, FRUS = frustrated teacher behavior, DIR = directive principal behavior. Scale: "rarely occurs" (1) to "very frequently occurs" (4).

Variables Associated with the Organizational Climate in Preschool

The age and length of experience of teachers and principals can be a significant factor that affected the rating of the preschool organizational climate. Older and more experienced teaching staff may be more committed (Urbánek, 2006), but it can show a higher level of frustration. Therefore, we expected different relationships between participants' age and length of practice with ratings in the questionnaire dimensions. As shown in Table 4, our assumption was not true for teachers. All correlation coefficients are low and statistically insignificant; however, the results are different for principals. There are statistically significant correlations between length of experience and age with ratings in the ENG and FRIEND dimensions. The correlations are negative, indicating that older and longer-practicing principals rated the commitment of teachers and social relations among them rather unfavorably. In this study, principals were older than teachers (52 versus 42.5 years, on average) and had longer experience (28.9 versus 16.6 years, on average). It is therefore likely that because of their many years of experience, principals have a stricter view of their subordinates and expect a higher work commitment, dedication, and professional competence. They also expected a higher degree of collegiality and teamwork in the preschool staff. The principals went through different professional trajectories than teachers, and their ideas about children and preschool had different frames. They had longer experience, worked with more teachers during their careers, and often served as principals in different preschools. These factors might have affected the principals' ratings.

Another demographic variable that we correlated measured dimensions was participants' highest level of education. Only one significant correlation was found: education in relation to teachers' DIR dimension rating. The higher the teachers' education, the higher the tendency to rate the behavior of their principals as more directive. Teachers were more critical of principals and, given their level of professional competence, considered their management to be unnecessarily strict and even authoritarian.

The size of the preschool, i.e., the number of teachers and children, is a variable that can significantly determine the organizational climate. This is because the size of preschool affects the division of labor, interaction, and social relations of the staff (Ho et al., 2016). According to Urbánek (2005), in large schools, teachers prevent the development of closer, integrated, and less anonymous professional relationships, and they hamper cooperation of teachers. However, Urbánek's data from elementary schools showed only modest differences between small and large schools in all climate dimensions examined. Sizes of preschools must be judged differently to that of elementary schools. A preschool with 10 classes is large, but an elementary school with this number of classes is small. In this study, the average number of teachers in a preschool was 7. Approximately 90% of preschools in the current sample had from 2 to 12 teachers, and the rest had 13 to 41 teachers. Table 4 shows significant but negative correlations between preschool size and ENG and FRIEND dimensions in teachers' ratings. The negative correlations indicate that the larger the school, the lower the perception of teachers' commitment and less favorable the relations in the teaching staff. For the FRUS and DIR dimensions, the relationship is reverse for teachers. The larger the preschool, the more likely teachers are to experience frustration and perceive the principal's behavior as directive. For preschool principals, only one statistically significant relationship with preschool size was identified, which pertains to the ENG dimension. The negative correlation indicates that from the principal's perspective, the larger the staff, the lower the teachers´ commitment. Teachers help each other less frequently, support each other less often, have little joy in their work and are less often able to get excited about the innovative plans of preschool.

Table 4

Correlations between the OCDQ-P Dimensions, the Characteristics of Participants, and the Size of Preschool

	Teachers				Principals			
	Experience	Age	Education	Size of preschool	Experience	Age	Education	Size of preschool
SUPP	-0.06	-0.03	0.05	-0.17	-0.05	-0.08	0.02	-0.04
ENG	0.02	0.04	0.19	-0.20***	-0.10*	-0.15**	0.01	-0.20***
FRIEND	0.00	-0.06	-0.09	-0.13*	-0.13**	-0.17***	-0.09	0.00
FRUS	-0.03	0.07	-0.15	0.17**	-	-	-	-
DIR	0.04	0.03	0.19**	0.14**	-	-	-	-

Note. Spearman´s correlation; *$p < 0,05$; ** $p < 0,01$; ***$p < 0,001$. SUPP = supportive principal behavior, ENG = teachers' engagement, FRIEND = friendly teacher behavior, FRUS = frustrated teacher behavior, DIR = directive principal behavior.

DISCUSSION

This study aimed to explore the organizational climate of preschools from the perspective of both teachers and principals. To obtain data, we developed a questionnaire, the OCDQ-P, which we then validated independently with a sample of teachers and principals. For teachers, the factor analysis yielded five dimensions: SUPP, ENG, FRIEND, FRUS and DIR. For principals, only the SUPP, ENG, and FRIEND dimensions were extracted. The FRUS and DIR dimensions were not supported by factor analysis among principals. Using this multidimensional approach, and presenting data on each dimension, this study is in contrast with authors who dichotomized school climate as strictly open/closed (Hoy et al., 1991) or high/low (Saunders, 2018).

The data show that principals indicated a relatively favorable rating of support (SUPP) of teachers, and teachers indicated favorable ratings of work commitment (ENG). This positive perception is a good indicator of cohesion in the preschool staff. However, principals rated their support by teachers statistically significantly higher than teachers. Principals therefore perceive their own supportive management style more strongly than teachers do. Principals also rated the commitment of teachers statistically significantly higher than the teachers' own ratings.

The principals' positive perception of organizational climate may be attributed to several circumstances. In general, leaders have a tendency to overestimate their performance (Atwater & Yammarino, 1992). Principals tend "to paint a nice picture" of the workplace they are responsible for. Jorde-Bloom (1988) explained this phenomenon by differences in principals' and teachers' locus of control. Their control orientation is related to their perceptions of organizational climate. In general, it can be stated that principals' and teachers' perception is strongly determined by their different roles and hierarchical positions in the workplace (Ramsey et al., 2016).

Another circumstance that can be attributed to perceptual differences between principals and teachers is gender. Urbánek (2006) suggests that female principals exert more friendliness towards employees than male principals. Females are more emotional in creating a preschool environment (Zinsser et al., 2016) and, as such, they judge the environment in milder terms. In the current sample, females constituted 98.5% of the principal sample, which could have shaped the findings, particularly those related to interpersonal dynamics, emotional climate, and overall environmental assessment. However, testing the assumption of the gender effect in preschool organizational climate would need an empirical comparison of the perception of climate by both female and male principals. But because the number of male principals in preschools in the Czech Republic is considerably small, this test would be difficult to administer. Needless to say, not only male principals but also male teachers affect the preschool education. Male teachers bring children a different learning experience, e.g., the positive male model of behavior or different learning style. Therefore, many administrators aim to change the gender imbalance in staff by hiring more male teachers. This task is difficult because males are reluctant to enter the job in preschool because of low salaries, low social prestige, and the negative stigma associated with men working at this level of education (Alharahsheh et al., 2021; Majerčíková & Urbaniecová, 2020).

Additional interpretation of the relatively favorable organizational climate can be attributed to the small size of preschools. Size is an important characteristic of institutions (Ho et al., 2015; Leithwood & Jantzi, 2009; Urbánek, 2005). Small schools tend to have more favorable characteristics than large schools. However, not only the size matters but also its composition. In the Czech Republic, the staff of a preschool consists of a principal, a senior teacher and a small team of teachers. A small and simple organizational structure has the advantage of providing support in straightforward supervision, communication, and work coordination (Ho, 2010). Previous studies found that a smaller staff promoted greater group cohesion, collegiality, and generally a more positive perception of the workplace (McGinty et al., 2008; Saunders, 2018). Ho et al. (2016) found that in small preschools, teachers reported significantly higher support than their counterparts in medium and large schools in aspects including teacher participation in decision making, school management support, and school performance. On the other hand, large schools often have highly formal relationships, less flexibility, and individuals feel less valued (Dekker & Barling, 1995). In the Czech Republic, the majority of preschools have a small teaching staff. In the current study, about 90% of preschools had from 2 to 12 teachers. These circumstances created a specific climate that was favorably perceived by both teachers and principals.

In regard to the demographics of the teacher sample, the length of experience and age of teachers did not show statistically significant relationships with perception of organizational climate. Only the level of education correlated significantly with the DIR dimension, indicating that higher educated teachers tend to consider their principal's management rather directive. Since the DIR and SUPP dimensions correlate negatively, one might expect a significantly positive correlation between lower teacher education levels and perceived support. This assumption, however, was not confirmed. This finding is in contrast with the study of Hewett and La Paro (2019), who documented that teachers with lower education reported a higher frequency of positive principal support in preschool. Similarly, Dennis (2010) and Dennis and O'Connor

(2013) revealed a strong negative relationship between the professional experience of teachers and organizational climate. According to the authors, teachers with longer professional experience make more comparisons between the current and previous work environments, becoming more critical. Conversely, new teachers lack the experience to compare their current work environment, focusing instead on their own professional competence and classroom dynamics rather than the overall conditions of the work environment (Dennis & O'Connor, 2013). Regarding the principals, both age and years of experience showed significant correlations with the ENG and FRIEND dimensions. This can be attributed to the fact that principals tend to be older than teachers, have more years of experience, have often worked in various preschools, and generally possess higher levels of professional education and training.

Overall, the findings have several important implications. They demonstrate that examining preschool climate provides valuable insight into how teachers and administrators perceive their workplace. The study also highlights that teachers and principals differ in their perceptions of the preschool climate. Furthermore, the research supports the theory that preschool climate consists of several distinct dimensions, each with varying characteristics. Specifically, it provides evidence for five dimensions of climate — supportive principal behavior, directive principal behavior, engaged teacher behavior, frustrated teacher behavior, and friendly teacher behavior — as validated by the OCDQ-P instrument, confirming their theoretical and empirical relevance. The results of this study offer a significant source of information for researchers, educators, and policymakers at both national and local levels who aim to improve preschool functioning. While the data are based on a sample from Czech preschools and reflect specific Czech educational traditions, they present valuable opportunities for comparison with preschools in other countries.

Limitations and Implications

The present study has two key limitations. First, the unit of analysis was limited to individual teachers and principals, rather than the preschool as an organizational unit. As a result, the study does not capture how the climate is perceived collectively by the entire preschool staff. This broader perspective could have been obtained if the entire preschool staff had been the unit of analysis. The second limitation is the exclusive focus on state-run preschools. Including private or church-run preschools would have provided more comprehensive and valuable results.

Future research should focus on at least two important areas. First, it should explore the factors and circumstances that shape the specific climate within preschools. This could be best identified through qualitative methods, such as individual or focus group interviews with preschool teachers and principals. Another important objective for future research would be to examine how parents, children, and the broader community perceive the climate of a particular preschool. One key area for further investigation is the relationship between preschool climate and its overall functioning. This includes how teachers and principals engage with the curriculum, their interactions with children, the type of learning environment they create, and the nature of their relationships with the children's parents. Longitudinal studies should be conducted to examine how the preschool climate evolves over time and to identify the factors driving these changes.

Conclusion

The organizational climate of preschools in the Czech Republic is a relatively little-studied phenomenon. Although this topic is generally considered essential for understanding the functioning of this institution, with a noticeable impact on children entering preschool, there is a lack of data that would reveal more deeply how teachers and management perceive their relationships, environment, and cooperation. Investigating the climate of individual types of preschools (specifically combined preschools, small-class preschools, etc.) seems to be a potential for research. In order to deepen our knowledge, it is also important to determine not only how these actors perceive the current state, but also the desired climate and how they explain the path to this goal.

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ADRIANA WIEGEROVÁ, PhD., is head of Department of Pedagogy at Arts Faculty, Comenius University in Bratislava, Slovakia. Her major research interests lie in organisational behavior and dual vocational education and training. Email: adriana.wiegerova@uniba.sk

PETER GAVORA, CSc., is at Department of Pedagogy at Arts Faculty, Comenius University in Bratislava, Slovakia. His major professional interest lies in research methodology and construction of research instruments. Email: peter.gavora@uniba.sk

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RIGOR Walk: Development and Initial Validation of a Framework to Support Rigorous Learning Environments

James Marshall
Douglas Fisher
Nancy Frey
San Diego State University, CA, USA

ABSTRACT

The term *rigor* in education often evokes resistance due to its inconsistent definitions and widespread misconceptions. This study introduces and validates the RIGOR Walk framework, a research- and practitioner-informed tool designed to define, observe, and enhance rigorous learning environments across classrooms. The framework is grounded in five core components—*Relationships, Instruction, Goals, Organization,* and *Relevance*—each supported by observable indicators aimed at promoting deep thinking, academic risk-taking, and meaningful engagement. Following iterative rounds of expert feedback, the framework was refined and validated in three phases: (1) establishing face validity through crowdsourced expert critique, (2) analyzing internal consistency and construct validity via 84 classroom observations, and (3) examining concurrent validity through correlations with student reading growth data. Results indicate high internal consistency (Cronbach's $\alpha \geq .81$) and moderate, statistically significant correlations between framework implementation and the percentage of students demonstrating one year or more of reading growth ($r = .42–.68$, $p < .001$). These findings suggest the RIGOR Walk framework is a reliable and valid tool for identifying and fostering rigorous, equitable, and high-impact instructional practices. Implications for broader content-area applications and longitudinal consistency of implementation are discussed.

***Keywords*:** rigor, teaching and learning, instructional frameworks

In education, *rigor* refers to the level of cognitive challenge and academic demand placed on students in their learning experiences (Hess, 2023). It involves teaching, learning, and assessment processes that encourage students to understand deeply, think critically, and apply knowledge in complex, novel, and meaningful ways. As education leaders, we are charged with creating learning environments that yield predictable results. Rigorous learning environments hold significant promise for contributing to such outcomes. Yet, the term suffers from the lack of a shared definition coupled with a range of misconceptions as to exactly what rigor looks like in practice. Addressing this shortcoming is critical to instructional leaders effectively embracing, facilitating, and overseeing rigorous learning environments and classroom educators creating rigorous learning experiences for their students. It is this type of instructional leadership that can lead to high-performing schools (Sanchez & Watson, 2021).

Rigor in education is characterized by instruction that pushes students to explore complex ideas and solve problems that require more than just memorization or basic understanding. It's about promoting higher-order thinking skills such as analysis, synthesis, and evaluation. For instance, Bloom's Taxonomy—a framework developed by educational psychologist Benjamin Bloom and others—categorizes different levels of cognitive skills that reflect increasing complexity and depth, suggesting that higher levels of this taxonomy reflect more rigorous educational demands (Bloom et al., 1956). Webb's Depth of Knowledge (2002) also frames our understanding of cognitive depth with four levels that range from *recall* and *reproduction* through *strategic thinking* to *extended thinking.*

Rigor also involves applying knowledge in different contexts and integrating various learning experiences to develop skills and insights. This can be seen in project-based learning or solving authentic problems where students apply their knowledge and skills across various disciplines to find solutions. This approach serves to reinforce the material learned while also preparing students for real-life challenges by making learning relevant and engaging (Wiggins & McTighe, 2005).

Contrary to common assumptions that have resulted in the term being passionately disliked by scores of educators, rigor is *not* about making learning harder or more difficult. Rather, it is about setting high expectations while also providing the necessary support to help students meet these challenges. Educational theorists like Lev Vygotsky have emphasized the importance of the Zone of Proximal Development (ZPD), which is the difference between what learners can do without help and what they can achieve with guidance and encouragement from a skilled partner (Vygotsky, 1978). Effective rigorous education practices scaffold learning experiences to stretch the student's capabilities within their ZPD.

Common Misconceptions about Rigor

Misconceptions about rigor in education often stem from misunderstandings about what true rigor involves. Here are some common misconceptions:

1. **Rigor means more homework and harder tests**: A prevalent misconception is that increasing the volume of homework or the difficulty of tests automatically makes an educational experience more rigorous. However, true rigor isn't about sheer quantity of work or the level of difficulty alone, but rather the depth of understanding and the cognitive challenge involved. Rigor should push students to think deeply rather than simply complete more assignments or face more difficult questions without context or purpose (Wiggins & McTighe, 2005).
2. **Rigor is only for "gifted" students**: Another common misunderstanding is that rigor is only appropriate for advanced or gifted students. This misconception can lead to lower expectations for the majority of students. In reality, all students benefit from rigorous educational experiences. Rigorous learning involves appropriately challenging all students, regardless of their starting level, and supporting them to reach higher levels of understanding and skill (Tomlinson, 2014).
3. **Rigor is just about academic content**: While rigor involves challenging academic content, it's also about the application of skills in new and complex ways. Some might think of rigor as limited to traditional academic subjects like math and science. However, true rigor incorporates critical thinking, problem-solving, creativity, and application across all subjects, including the arts and humanities (Wiggins & McTighe, 2005).
4. **Rigor means traditional and strict teaching methods**: There's a belief that rigorous education requires a traditional, lecture-based approach where the teacher is the sole authority and students are passive recipients of knowledge. This view neglects the effectiveness of interactive and student-centered teaching methods in promoting deep learning. Students engage more deeply when they are active participants in their learning process, utilizing discussions, group work, and hands-on projects, which can all be rigorous if well-designed (Metzger & Langley, 2020; Radef, 2021
5. **Rigor eliminates creativity and enjoyment**: Some think that a rigorous curriculum is dry, joyless, and void of creative expression, focusing solely on stern standards and continuous assessment. However, true rigor should engage students' interests and passions, integrating creativity and enjoyment with challenging content to motivate and enhance learning experiences (Csikszentmihalyi, 1990).

In his book *Flow,* Csikszentmihalyi describes a state of total openness to learning and performance he terms "flow," which involves complete absorption, focus, and enjoyment in an activity. Rigorous learning experiences, when well-designed and supported, can result in states of flow where there is optimal balance between the challenge of the task and the skill level of the individual performing it. Being in a state of flow is intrinsically rewarding, making the activity itself enjoyable and satisfying (Csikszentmihalyi, 1990).

Understanding rigor correctly is foundational to educators designing and implementing educational experiences that truly enhance learning. This is especially important for effective educational leaders, who Marshall and Fisher (2019) suggest come to the task with a *learnership* thinking, rather than *leadership* thinking, perspective: "A learnership thinker first creates the conditions and opportunities for all adults and students to learn and perform at ambitious, academic levels to achieve in school and life" (p. 77). When rigorous learning environments result, they challenge students constructively and effectively, thus preparing them for the future academic and life challenges they will undoubtedly face.

GENESIS OF THE RIGOR WALK FRAMEWORK

We set out to disrupt the long-standing stigma attached to educational uses of the term "rigor." Our intent was to develop a framework that defined elements of rigorous learning environments and offer indicators by which educators could acknowledge their current rigor-related practices while building upon them to expand their rigor repertoire. Based on the existing research into the positive impact of learning walks, including affirming learning walks (Ross, et al., 2023), we envisioned a rigor-focused set of criteria that could be used to observe and affirm practice where it already exists while encouraging the continued expansion, development, and evolution of rigor-aligned best practice. Our initial review of the literature around effective, rigorous instruction was synthesized into an initial framework comprised of five components on which rigorous learning environments rely: (1) Relationships; (2) Instruction; (3) Goals; (4) Organization; and (5) Relevance. The eventual framework that emerged also included indicators in support of each component that instantiate the application of the framework to practice. The following sections share key research and evidence-based practice elements that contributed to the conceptualization of the five components and the initial set of indicators we tested with education experts and practitioners as the next step of the RIGOR Walk framework's development.

Relationships

Positive relationships between teachers and students, and among students themselves, are crucial for effective learning. Child psychiatrist James Comer highlighted the importance of significant relationships in the educational process, noting that no substantial learning can occur without them (Comer, 1995). Such relationships foster a supportive and trusting atmosphere where students feel safe to engage, inquire, and learn from their errors. This environment not only boosts student engagement and motivation but also nurtures a sense of belonging and community, thereby enhancing both academic and social-emotional development.

The practice of using students' names positively is a key component of building these relationships. Properly recognizing and pronouncing students' names affirms their identity and importance, which can lead to increased engagement and decreased behavioral issues. Studies such as those by Cook et al. (2018) and O'Brien et al. (2014) have shown that greeting students by name at the classroom door can increase engagement significantly and reduce problematic behaviors, thereby contributing to a more inclusive and supportive learning atmosphere.

Furthermore, the physical proximity of teachers to their students during class sessions, referred to simply as "proximity," plays a significant role in enhancing engagement and ensuring effective learning. This strategy involves teachers moving around the classroom, staying close to students to better observe and respond to their needs, particularly those who might disengage. Historically endorsed by educators like Good and Brophy (1987) and based on studies by Etscheidt et al. (1984), this approach helps in managing the classroom dynamics and maintaining high levels of student involvement. Proximity, coupled with the respect and productive interactions among peers, sets a foundation for a safe, engaging, and rigorous learning environment where academic risk-taking is encouraged and valued.

Instruction

The instructional techniques adopted by teachers play a crucial role in shaping the learning outcomes of students. The relationship between teaching decisions and student learning is fundamental, emphasizing the importance of not just focusing on the act of teaching but also on its impact on learning. Some instructional moves are designed to enhance access to rigorous learning experiences, while others might inadvertently reduce the learning intensity by overburdening the teacher and diluting the students' engagement in meaningful tasks. Notably, effective instruction involves selecting from various evidence-based strategies that align with improving student learning outcomes.

A vital aspect of responsive teaching involves using evidence of student learning to inform instructional practices. The concept of formative assessment, introduced by scholars like Cronbach (1963) and Scriven (1967), underlines the importance of using assessment data to refine teaching strategies continuously. Teachers who integrate real-time feedback about student understanding into their lessons can adjust their teaching approaches to better meet the students' needs, either by accelerating the lesson pace or by providing additional clarifications to ensure comprehension. This dynamic adjustment ensures that instruction remains challenging and supportive, maintaining high expectations for all students.

Additionally, the use of scaffolding in instruction is critical to support learning while promoting productive struggle. Originating from the educational adaptations of scaffolding by Wood et al. in 1976, this strategy involves providing appropriate levels of support to students as they develop new skills and strategies. Effective scaffolding ensures that students are challenged within their zone of proximal development, facilitating a balance between too much and too little help. This

approach not only maintains the rigor of the learning experience but also empowers students to take increased responsibility for their learning, fostering independence and confidence in their abilities to meet academic expectations.

Goals

Learning goals serve as essential components of both teaching and learning processes, providing a clear direction for instructional activities and helping teachers ensure that their efforts align with desired educational outcomes. They function as a roadmap for teachers, guiding lesson planning and the delivery of educational content to meet specific objectives. For students, clear learning goals offer a concrete understanding of the expectations set for them, which enhances motivation and engagement by demonstrating the relevance and purpose of their educational activities. Furthermore, these goals are integral to students' ability to conduct self-assessments and seek feedback, allowing them to monitor their progress and identify areas needing improvement, thereby fostering a sense of ownership over their learning journey.

The concept of aligning learning goals with grade-level expectations is crucial for maintaining educational rigor and ensuring that students are meeting appropriate benchmarks for their age and subject area. These goals, articulated through various terms like *learning intentions* or *objectives*, must be accessible and well-communicated to students to keep them focused throughout their educational activities. The historical context provided by Tyler (1949) and Bloom et al. (1956) underscores the longstanding importance of clear, well-structured learning goals in education, supporting the idea that when students understand what is expected of them, their likelihood of successful learning increases significantly.

Moreover, the implementation of success criteria and the practice of regular self-assessment by students are pivotal in translating learning goals into tangible outcomes. Success criteria help students visualize what successful attainment of learning goals looks like, thereby enabling them to assess their progress and adjust their learning strategies accordingly. This practice is supported by educational theories on metacognition and self-regulation, suggesting that students who actively engage in self-assessment are better able to take control of their learning and improve their educational outcomes. Overall, the integration of clear learning goals, success criteria, and self-assessment practices form a foundational framework that supports rigorous, effective, and student-centered education.

Organization

Organization within the classroom setting is crucial for effective learning, as it directly influences students' ability to engage with and benefit from educational activities. A well-organized classroom environment provides students with predictable structures and routines, which can significantly enhance their learning experience by reducing distractions and confusion. Ensuring that students can easily access necessary materials and accommodations further supports this organized learning environment. Moreover, creating a physical space that is accessible to all students, regardless of their abilities, is essential for inclusivity and equity in education, as mandated by legal frameworks like the ADA and Section 504 (U.S. Department of Education, 2020). Embracing principles from Universal Design for Learning (UDL) helps to cater to diverse learning needs by offering multiple means of content representation, engagement, and expression (Meyer et al., 2014).

The physical setup of the classroom also plays a significant role in facilitating learning. An environment that is both content-rich and frequently updated can stimulate students' engagement and curiosity. According to Malaguzzi (1984), the physical environment acts as a "third teacher," alongside adults and peers, influencing learning through its design and the resources it offers. This approach underlines the importance of surrounding students with a variety of learning materials, such as books, visual aids, and interactive technologies, which not only support literacy development but also encourage a deeper interaction with learning content. Ensuring that these materials are current and relevant further enhances their effectiveness as educational tools.

Flexible grouping within classroom organization is another effective strategy for addressing individual learning needs. By forming groups based on students' specific educational requirements rather than standardized assessments, teachers can provide targeted instruction that is more likely to resonate with and benefit each student (Colón et al., 2022). Such flexibility in grouping allows for the adaptation of teaching methods and materials to suit different learning styles and paces, thereby optimizing educational outcomes. Additionally, effective management of student behavior through thoughtful procedures and interventions ensures that the learning environment remains conducive to education, focusing on constructive behavior support rather than punitive measures (Jung & Smith, 2018). This comprehensive approach to organization supports a dynamic and responsive learning environment where all students can thrive.

Relevance

Relevance in education is a crucial component that drives student engagement and learning efficacy. When students perceive their learning as relevant, they are more likely to engage actively and regulate their behavior positively (Stuart, 2023). This concept of relevance extends beyond merely informing students about the future utility of their education. It encompasses the creation of learning experiences that are responsive to students' backgrounds and lived experiences, making the learning process personally significant. Tasks within the educational setting must therefore be meaningful, integrating real-life contexts that resonate with the students' own experiences. This approach aligns with theories of situated learning and cognition, which suggest that knowledge and learning are deeply embedded in the contextual realities of the learner (Brown et al., 1989; Lave & Wegner, 1991). Consequently, when learning tasks are designed to connect with students' lives both inside and outside the classroom, the relevance is heightened, and so is students' motivation to learn (Keller, 2010).

Moreover, relevance is further emphasized when students can articulate the value of their learning experiences. This ability not only supports deeper content understanding but also fosters metacognitive skills, allowing students to reflect on and optimize their learning strategies (Flavell, 1979). According to constructivist theories by Piaget (1952) and Vygotsky (1978), knowledge is constructed through personal experiences and reflections, which underscores the importance of students expressing the value and process of their learning. Such expressions not only aid in formative assessment by providing insights into students' thought processes but also enhance learning autonomy, contributing to more tailored and effective educational approaches (Zimmerman, 2002).

Lastly, the incorporation of students' lived experiences and cultural backgrounds into learning experiences contributes to teaching and learning that is culturally relevant and inclusive. This method fosters a sense of belonging and respect within the learning environment, encouraging students to engage with content more meaningfully (Gay, 2000; Villegas & Lucas, 2002). It also helps students to critically analyze their own perspectives and appreciate diverse viewpoints, enhancing their overall educational experience and preparing them for a more interconnected world (Ladson-Billings, 1995). By linking learning materials to the unique identities and backgrounds of students, educators not only promote inclusivity but also drive deeper engagement and understanding, making learning a more comprehensive and transformative experience.

VALIDATING THE RIGOR WALK FRAMEWORK

Our earliest conceptualization of the framework was organized around the rigor components and between six and ten indicators under each of the five components. We intentionally over-allocated indicators as an early step in the process that established face validity.

Validation Phase 1

With an initial version of the RIGOR Walk framework in hand, Validation Phase 1 employed crowdsourcing as the means for pursuing face validity. As the developers and using our own social networks of experts and practitioners (collectively termed “experts”), we solicited individuals who were willing to review and critique the earliest versions of the framework. Using an iterative review approach, we conducted four rounds of expert review. At the conclusion of each round, the author team received and analyzed the expert feedback, perspective, and revision suggestions. Feedback was typically constructive, often critical, and always thought provoking. Examples of typical comments include the following:

- “When students seek feedback, it’s also important that they act based on that feedback. We want them to use the feedback. Maybe revise accordingly?”
- “I think that students’ names should be used in productive ways not just positive ways, but I think that the whole relationship component is critical. I am pleased to see risk-taking framed as a positive.”
- “The whole relevance aspect is over-looked. Thank you for including that. Would you consider adding unique to identities and having a clearer statement about the way that prior knowledge could be used?”

We applied the same deliberation process following each round. We debated modifications based on feedback, reconciled potential revisions with our existing review of the literature for alignment, and then made modifications to the framework that were supported by at least two of the three authors as well as validated by the literature. Another round of crowdsourcing and expert feedback followed each of the first three validation rounds. While some experts persisted to provide input across multiple review rounds, others limited their contributions to a single round. Table 1 summarizes the quantity of expert feedback and resulting evolution of the framework during the face validity phase of the framework validation, including the reduction statistics by framework component.

Table 1

Face Validity Crowdsourcing Effort Statistics across Four Feedback Rounds

Feedback Round	Number of Experts Consulted	Number of Comments Received*	Number of Revisions Made
1	8	58	43
2	10	55	24
3	16	41	17
4	12	27	8

Component	Number of Indicators at Start	Number of Indicators at Conclusion
Relationships	7	5
Instruction	9	5
Goals	6	5
Organization	7	5
Relevance	10	5

Note. *Comment count includes only constructive critiques; count omits expert comments that indicated the framework, or a component of the framework, was successful as presented.

It is important to note that the range of comments, as well as the number of comments, decreased with each of the latter rounds of expert review. This was an important evolution of the validation effort that we interpreted to signal an increasing consensus around the framework's components and indicators. Following the fourth round, we finalized the framework and moved forward to the next phases of validation that involved assessing both reliability (Phase 2) and concurrent validity (Phase 3). The resulting RIGOR Walk framework, which was tested in future validation phases, is presented in Figure 1.

Figure 1

The RIGOR Walk Framework

R	I	G	O	R
Relationships	**Instruction**	**Goals**	**Organization**	**Relevance**
Students' names are used in positive and productive ways.	Evidence of student learning is used to inform instruction.	Learning goals are aligned with grade-level expectations.	The physical environment is accessible for all students.	The learning process incorporates meaningful tasks that embed learning inside and outside the classroom.
Proximity is used to foster connections with students and ensure their learning.	Students interact with peers in meaningful discussions using academic language to complete tasks.	The level of knowledge expected of the learning goal aligns with the standard.	The physical environment is rich and recent.	Students describe the value of what they are learning and how they are learning it.
Students' interactions with peers are respectful and productive.	Scaffolds are strategically used to support learning, invite productive struggle, and ensure productive success.	Students can describe or demonstrate what successful learning looks like.	Grouping patterns are used flexibly to promote learning.	Students' lived experiences, as well as those from backgrounds different from their own, are incorporated into learning experiences, making lessons culturally relevant and inclusive.
Academic risk-taking is encouraged and celebrated.	Lessons include input based on student learning needs.	Students regularly self-assess their learning and revise their actions based on the results.	Student behavior is proactively managed, monitored, and addressed through productive procedures and interventions.	Artifacts and materials reflect the unique identities and interests of students.
Student ideas are valued and explored as bridges to learning.	Students practice and apply what they have learned to familiar and new situations.	Students seek feedback, are provided with actionable ideas, and follow through with next steps.	The flow and pace of the lesson is aligned with the learning goals.	Learning activates students' prior knowledge and experiences and fosters connections to new or more complex content.

In addition to defining language for each of the 25 indicators, the authors also developed observation criteria for each indicator using four-point scales. Table 2 provides examples of these four-point scales for 3 of the 25 indicators included in the framework. These scales were used in the observations conducted in Phase 2.

One important contextual factor to note is the breadth of the RIGOR Walk framework components. The indicators, at times, necessarily contained multiple, yet related, constructs. As intended, the initial framework was exacted by expert review, reflection, and revision in Phase 1 to influence the reliability of the resulting scales. This was also part of the effort to establish face validity and, as such, Phase 1 reviewers reached agreement on the indicators in terms of their content and observability based on the final language of each.

Table 2

Example Observation Scales

Observation Scale Points	Students' names are used in positive and productive ways.	Students can describe or demonstrate what successful learning looks like.	Artifacts and materials reflect the unique identities and interests of students.
1	Students are not greeted when they arrive. Student names are not used during the lesson. Names are used to address problematic behavior.	There are no success criteria.	Artifacts and materials hold little or no connection to the identities and interests of students.
2	Students are greeted at the beginning of class, but not by name. A small group of students have their names used during the lesson.	Few students can describe the success criteria or demonstrate what successful learning looks like.	Some artifacts or materials appear to connect to an identity or interest of a student. The connections are typically cursory or not fully developed.
3	All students are greeted by name upon arrival. Many students hear their names in positive ways throughout the lesson. Students generally report that the teacher knows their names.	Most students are able to describe the success criteria, and some can explain how these align with their demonstrations of success.	Most artifacts and materials hold some connection to the identity or interests of the students who use them. Connections vary in depth to include examples of both cursory and deep connections.
4	All students are greeted by name upon arrival and most of their names are used throughout the lesson. The reactions of students when they hear their names suggests the teacher has a strong relationship with students.	Most students can describe success criteria, can explain how these align with their demonstrations of success, and can express how they are using them to determine the next steps in their learning.	Artifacts and materials clearly reflect the identity or interests of the students who use them or produce them. Connections are typically deep and meaningful, reflecting well-developed and critical thinking being employed.

Validation Phases 2 and 3

The next validation phases involved the application of the framework in support of classroom observation. Here, we analyzed 84 rigor-focused observation records collected in 84 unique classrooms. These observations included teachers from 14 schools in 10 school districts from 4 different states. The schools were suburban and rural, with a range of students qualifying for free lunch from 37–100% and the range of students qualifying for special education services from 14–18%. In terms of teacher demographics, 62 (74%) were female, 22 were Latinx (26%), 12 were black (14%), 9 were Asian-Pacific Islander (11%), and 41 (49%) were white.

The data analysis protocol was reviewed by the author's Institutional Review Board and determined not to be subject to review. This is because the observation data analyzed was deidentified prior to being shared with the authors, ensuring there was no way to connect the records back to the 84 individuals who were observed (author institution IRB #IRB-25-0041).

We purposely included classrooms across the grade spectrum, with a minimum of 3 classrooms and a maximum of 11 observed at each grade level from grades K–11. The secondary classrooms were all English language arts classrooms. Using the RIGOR Walk framework as a scaffold, an observer conducted an observation of instruction lasting from 25–40 minutes in each classroom. The observer tabulated the following data for each observation:

- *Grade Level*: Grade level of students observed
- *Classroom Size*: Number of students in classroom observed
- *Indicator Rating*: For each of the 25 indicators (five per component), the observer assigned a rating using the specific, four-point scale-defined criteria developed by the authors and specific to each indicator (see Table 2 for example scales).
- *Classroom Reading Growth*: Percentage of students in each observed classroom who made the equivalent of one year of growth in reading/literacy performance at the time of observation.

Further description of the Classroom Reading Growth diagnostic is merited. Existing iReady reading diagnostic data (Curriculum Associates, 2024) was collected at the beginning, and throughout the school year in classrooms in which rigor observations took place. The iReady reading diagnostic assesses in the areas of foundational skills—phonological awareness, phonics, high frequency words; vocabulary; comprehension of informational text; and comprehension of literary text. The reading performance data in this validation effort represent the aggregated student performance within a classroom and were provided to researchers following each observation to mitigate chances of rater bias. The data is limited to composite class-level performance by teacher, rather than student-by-student performance data.

For purposes of consistency and research scope, each of the 84 observations was conducted by the same individual who was familiar with the original RIGOR Walk framework. We used a single rater for this initial study, but we acknowledge and expect this framework may be used by multiple individuals who undergo training to ensure valid observational interpretations and implementation ratings. A follow-up study employing multiple raters is currently in process.

Tabulated results were entered into a spreadsheet (with data intentionally deidentified to make connections between the records and human subjects impossible), which was then provided to the authors for analysis using IBM SPSS Statistics (Version 29). The intentional diversity of observed grade levels (grades K–11) was based on the rationale that the characteristics of a rigorous learning environment should be consistent across ages; it is the specific content and scaffolding implemented by the classroom teacher that results in the age-appropriate application of the rigor components. However, attending to relationships, instruction, goals, organization, and relevance remain constant regardless of age.

The initial dataset was used to compute scales for the five RIGOR Walk components. Each component (relationships, instruction, goals, organization, relevance) was comprised of 5 indicators rated on a scale of 1–4. Thus, the total rating for each component ranged from 5–20, and a total rigor rating across all 5 components ranged from 25–100.

Validation Phase 2: Assessing Internal Consistency Reliability and Construct Validity

In Phase 2 of the validation effort, we conducted analysis to determine internal consistency reliability and construct validity for each of the five rigor components using the scales described in Figure 1.

Internal Consistency Reliability

Phase 2 analysis involved investigating reliability using Cronbach's alpha for each of the five scales developed to represent the five RIGOR Walk components. Table 3 presents coefficient alpha figures for each element. Overall, results were strong and suggest moderate to strong reliability (internal consistency) for each of the rigor scales.

Construct Validity

Factor analyses were conducted to test construct validity for each of the five rigor components, augmenting Cronbach's alpha analysis. Five separate factor analyses were conducted—one for each rigor component—to assess whether all factors within each component loaded onto a single factor. Each of the five rigor components demonstrated unidimensionality, with a single factor accounting for 60%–85% of the variance and item loadings ranging from .41–.97 Specifically, *Relationships* demonstrated 85.81% of variance with factor loadings from .87–.97; *Instruction* demonstrated 72.11% of variance with factor loadings from .51–.82; *Goals* demonstrated 71.67% of variance with factor loadings from .79–.88; *Organization* demonstrated 60.43% of variance with factor loadings from .76–.95; and *Relevance* demonstrated 61.94% of variance with factor loadings from .41–.93.

Table 3

RIGOR Walk Scale Reliability (Cronbach's α) by Component

Component/Indicators	Cronbach's α	Cronbach's α if Item Deleted
1. Relationships	**.95**	
1.1 Students' names are used in positive and productive ways.		.95
1.2 Proximity is used to foster connections with students and ensure their learning.		.93
1.3 Students' interactions with peers are respectful and productive.		.93
1.4 Academic risk-taking is encouraged and celebrated.		.96
1.5 Student ideas are valued and explored as bridges to learning.		.93
2. Instruction	**.90**	
2.1 Evidence of student learning is used to inform instruction.		.88
2.2 Students interact with peers in meaningful discussions using academic language to complete tasks.		.90
2.3 Scaffolds are strategically used to support learning, invite productive struggle, and ensure productive success.		.88
2.4 Lessons include input based on student learning needs.		.86
2.5 Students practice and apply what they have learned to familiar and new situations.		.86
3. Goals	**.90**	
3.1 Learning goals are aligned with grade-level expectations.		.89
3.2 The level of knowledge expected of the learning goal aligns with the standard.		.87
3.3 Students can describe or demonstrate what successful learning looks like.		.89
3.4 Students regularly self-assess their learning and revise their actions based on the results.		.87
3.5 Students seek feedback, are provided with actionable ideas, and follow through with next steps.		.86
4. Organization	**.81**	
4.1 The physical environment is accessible for all students.		.88
4.2 The physical environment is rich and recent.		.72
4.3 Grouping patterns are used flexibly to promote learning.		.73
4.4 Student behavior is proactively managed, monitored, and addressed through productive procedures and interventions.		.76
4.5 The flow and pace of the lesson is aligned with the learning goals.		.77

Component/Indicators	Cronbach's α	Cronbach's α if Item Deleted
5. Relevance	**.82**	
5.1 The learning process incorporates meaningful tasks that embed learning inside and outside the classroom.		.74
5.2 Students describe the value of what they are learning and how they are learning it.		.75
5.3 Students' lived experiences, as well as those from backgrounds different from their own, are incorporated into learning experiences, making lessons culturally relevant and inclusive.		.74
5.4 Artifacts and materials reflect the unique identities and interests of students.		.88
5.5 Learning activates students' prior knowledge and experiences and fosters connections to new or more complex content.		.80

Validation Phase 3: Concurrent Validity

While the RIGOR Walk framework (and rigorous learning environments more generally) is content agnostic, we acknowledge that the ultimate measure of the framework's efficacy lies in student learning, as indicated by an objective assessment of content knowledge. Therefore, in the final phase of this initial validation effort, we calculated the concurrent validity of the framework by investigating the correlation between each of the five RIGOR Walk framework components and the percentage of the observed teacher's students who were determined to have made at the equivalent of one year's reading/literacy growth (or greater). The underlying hypothesis was framed around a direct relationship between the presence of rigor components and reading/literacy performance. In other words, higher levels of rigor implementation led to greater percentages of students demonstrating one year's growth.

We analyzed the observation data using Pearson's *r* procedure. Table 4 presents a summary of the resulting correlation coefficients and significance levels for each of the five RIGOR Walk components and the overall RIGOR Walk framework (represented as the total number of rating points assigned to the observation, which would range from 25–100). Findings confirmed the underlying hypothesis, with direct and moderate correlations across the RIGOR Walk framework, which suggests that the greater the rigor rating, the greater the percentage of students demonstrating the equivalent of one year's reading growth.

Table 4

RIGOR Walk Components Correlated to Percentage of Students Achieving ≥ One Year Reading Growth

RIGOR Component	df	Correlation (Pearson's *r*): Students (%) w/ ≥ One Year of Reading Growth	*p*
Relationships	82	.64	<.001
Instruction	82	.66	<.001
Goals	82	.61	<.001
Organization	82	.47	<.001
Relevance	82	.42	<.001
Overall RIGOR Framework	82	.68	<.001

Finally, we chose to split the sample into two groups by rigor level, named high and low rigor. Participants in the high rigor group had ratings of three or four (using the four-point rating scale designed for each indicator) for each indicator across four or all five rigor components (n = 60); low rigor group members comprised the remaining group (n = 24) with scores of one or two for each indicator across four or all five rigor components. With the percentage of students achieving

the equivalent of one year's growth as the dependent variable, we compared low (M = 30.79, SD = 13.52) and high (M = 56.35, SD = 21.40) groups using a t-test for independent groups. The difference between groups proved reliable and statistically significant ($t(82) = -5.42$, $p < .001$).

DISCUSSION

The term rigor, when used in education, continues to be an inconsistently defined construct and one to which many educators object, given the lack of definition and the many misconceptions about the components of a rigorous learning environment. We developed the RIGOR Walk framework in support of a shared definition that includes tangible and specific indicators that leaders and educators can use to identify existing rigor-aligned practice while also working to increase rigor-related instructional elements in their schools and classrooms.

RIGOR Walk Framework: Validity

Our initial effort to validate the RIGOR Walk framework benefitted from the perspectives of 46 education expert practitioners. We exacted a framework for latter phase pilot testing through iterative cycles of review and revision. These cycles converged until minimal revisions were made and comments evolved from being considerable (e.g., removal, addition, or significant language revision) to limited (typically, word choice) in the fourth and final round. Throughout this face validation process, we balanced expert insight with the established and reviewed literature base to arrive at a draft framework that was informed by both research and practice.

An initial investigation of the concurrent validity of the RIGOR Walk framework was conducted using existing teacher-level reading performance scores. While the framework is designed as content agnostic, we employed aggregated reading performance data to determine the level of correlation, if any, between the observed educator's rigor ratings and the percentage of their students who had achieved one year or greater reading growth.

Findings suggest a moderate level of concurrent validity with Pearson r correlations ranging from .42–.66 for the 5 individual components and .68 for the full framework, which is based on a total RIGOR Walk framework rating comprised of the sum of all 25 indicators. All correlations proved statistically significant ($p \leq .001$). Of the five components, *Relationships* (.64) and *Instruction* (.66) returned the highest levels of correlation, with *Relevance* possessing the lowest (.42). Additionally, the t-test for independent groups analysis revealed significant differences in the percentage of students demonstrating one year or greater reading growth, when groups based on low- and high-rigor scores were compared.

We concluded that the concurrent validity of the RIGOR Walk framework, specific to the percentage of students making one year's reading growth, was moderate and acceptable. However, we also acknowledge the limited scope of this investigation. With a framework that was created to be broad in its subject matter application, further validation efforts must pursue (1) multiple dimensions of reading/literacy performance and (2) content areas beyond reading/literacy. By examining the correlation between RIGOR Walk ratings and student performance across multiple subject areas, we will more broadly understand the concurrent validity of the framework used universally in support of creating and optimizing rigorous learning environments. We have acknowledged future opportunities for validation using student-level data.

RIGOR Walk Framework: Reliability

The internal consistency analysis of each of the five RIGOR Walk scales (one per component) returned Cronbach alpha levels that we concluded as very good. We applied the guidance of Cronbach (1951) who suggested a value of .7 as the minimally acceptable level in social sciences research, as well as Ursachi et al. (2015), among others, to make these determinations. This includes the specific classification guidelines that suggest the "general accepted rule is that an alpha of 0.6–0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level" (Ursachi et al., 2015, p. 681).

Cronbach's alpha values for each of the five RIGOR Walk components exceeded .8, which indicates a very good level of internal consistency among the five involved indicators which comprise each of the five scales: Relationships = .95; Instruction = .90; Goals = 90; Organization = .81; and Relevance = .82. These findings did include two components with potential opportunities to raise scale reliability: Organization and Relevance.

In the case of Organization, analysis suggested that the Cronbach's alpha coefficient would rise by .07 with the elimination of the indicator "The physical environment is accessible for all students." Interestingly, no such gain was seen for the other item related to physical environment: "The physical environment is rich and recent." In conceptualizing the Framework, we acknowledge the complexity of the five components and the inherent challenges in reducing each to five indicators. In the case of Organization, we concluded that the initial coefficient value of .81 was of sufficient strength to

retain all five items, including the accessibility indicator. We observed that this item may simply diverge in construct, to a degree, from the other four indicators while still contributing to the consistency of the scale and completeness of the Organization component. This was further supported by the fact that the item had the lowest mean (M = 2.83) relative to the other four items, where the means ranged from 3.01–3.36.

A similar finding was observed with Relevance (coefficient α = .82). In this case, the single item that would raise the coefficient level by .06 was as follows: "Artifacts and materials reflect the unique identities and interests of students." Again, we weighed the limited gain in Cronbach's alpha level against both the necessary reduction involved in summarizing the Relevance component into five indicators, as well as the criticality of identity and interest as they relate to relevant learning experiences. The item returned the greatest variance of those on the Relevance scale with a standard deviation of 1.26 relative to the other four items (*SD* ranged .96–1.16). As with Organization, we decided to accept the .82 alpha level and retain the five existing indicators as tested.

Lastly, a confirmatory factor analysis produced intra-component factor loading and variance figures that further illustrated the contributions of each set of five indicators to their related rigor components.

Overall, we concluded that the RIGOR Walk framework scales for each of the five components reflected high levels of internal consistency as measured by Cronbach's alpha. Two opportunities for limited coefficient improvement were identified through our analysis. Upon consideration and given the already established high degree of internal consistency for each scale, we retained the existing items. Future validation efforts, described below, will allow for continued analysis of these initial decisions.

OPPORTUNITIES FOR FURTHER RESEARCH AND VALIDATION

This study has described the development and initial validation of the RIGOR Walk framework, which was created to define elements of rigorous learning environments. With a goal of reclaiming one of the most disliked words in education through an emergent, shared definition of rigor, we engaged in an iterative, research- and expert-informed development process to arrive at the draft RIGOR Walk framework. We then conducted 84 classroom observations and analyzed the resulting data for internal consistency (reliability) and concurrent validity using student reading growth figures. The findings from this initial study suggest high levels of internal consistency and moderate levels of concurrent validity within the context of student reading growth.

While the preliminary validation findings presented in this article are encouraging, we have identified, and already acknowledged, additional opportunities to strengthen the body of evidence in support of framework validation. Some of these opportunities, such as an analysis of student-level data, have already been noted. Additional opportunities are described below.

Validity by Content Area

As noted, our initial analysis of concurrent validity involved the correlation of RIGOR Walk ratings to the percentage of students in a given classroom that had demonstrated one year or greater of reading growth. The correlation results for both the individual RIGOR Walk components and the overall composite RIGOR Walk score suggested a moderate correlation that can be further investigated in multiple ways. First, we recommend a more nuanced investigation of reading/literacy performance. This could include student-level, rather than aggregated, reading performance metrics that include domain-specific performance data (e.g., vocabulary, reading comprehension, etc.).

Beyond measures related to reading/literacy, future validation of the RIGOR Walk framework should incorporate diverse content areas that include mathematics, science, social sciences, and even physical education. Our premise in creating the RIGOR Walk framework is that rigorous learning environments are realized through strategies that can be applied to any content or learning outcome. Studying the relationship between the framework-defined elements of rigorous learning environments and student performance measures across multiple disciplines will determine the extent to which the framework is successful in this design intent. Additionally, findings of such efforts will inform the applicability of the framework specific to instructional focus and content.

Effects of Consistency over Time

An additional validation effort should focus on consistency of instruction. Another hypothesis we made in the framework's construction was that an educator's practice specific to the RIGOR Walk indicators would persist over time. We posited that these practices, when they occur, integrate into an educator's regular performance. As such, we would

expect some reasonable level of consistency in practice over time. The current validation effort prioritized single observations, occurring with 84 educators across a wide range of grade levels. To complement this initial study, we envision a future validation effort that focuses on a limited number of educators with multiple observations taken over time. The data would then be analyzed to understand both (1) consistency in implementing rigorous learning environment elements over time and (2) the relationship between the presence of those elements and various outcome variables (thus also attending to concurrent validity). Such an investigation would compare data based on the level of consistency observed in implementing the RIGOR Walk components, assuming a dataset with varying levels of consistency to support data-based definition of implementation consistency levels.

CONCLUSION

The lack of a shared definition for rigor, coupled with wide-ranging misconceptions, has resulted in a misunderstood and often disliked term for educational leaders and classroom educators alike. The RIGOR Walk framework was developed to address these concerns while also supporting an increase in the number and quality of rigorous learning environments. This study described an initial validation effort for the RIGOR Walk framework, which was designed to investigate the framework's internal consistency and provide some estimate of concurrent validity.

Results of 84 classroom observations suggest the five-component framework has achieved a high degree of internal consistency, suggesting the reliability of the piloted framework's indicator scales. An additional element of this effort investigated the correlation between the RIGOR Walk framework ratings and student growth in reading performance. A moderate, reliable correlation was observed between each of the five rigor components with the composite rigor rating and the percentage of students in each classroom who made the equivalent of at least one year's reading growth.

When considered together, and in combination with face validity that was iteratively established through multiple rounds of expert review and revision, the RIGOR Walk framework provides an initially validated framework that can be used to envision, identify, and strengthen rigorous learning environments that support student learning.

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JAMES MARSHALL, Ph.D., is Professor and Senior Director of the Doctoral Program in Educational Leadership at San Diego State University in the United States. His major research interests lie in the area of optimizing human and organizational performance through the design and leadership of learning programs that yield predictable results. Email: marshall@sdsu.edu

DOUGLAS FISHER, Ph.D., is Professor and Chair in the Department of Educational Leadership at San Diego State University in the United States. His research interests lie in the areas of reading and literacy, differentiated instruction, school leadership, and curriculum design. Email: dfisher@sdsu.edu

NANCY FREY, Ph.D., is a Professor in the Department of Educational Leadership at San Diego State University in the United States. Her research interests lie in the areas of reading and literacy, special education, and school leadership. Email: nfrey@sdsu.edu

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Workplace Spirituality and Happiness at Work Among School Teachers with Mediating Effect of Job Stress

Sana Hussain
SZABIST University, Karachi, Pakistan

Zareen Hussain
Ziauddin University, Karachi, Pakistan

ABSTRACT

The present study incorporates the emerging concept of workplace spirituality into the domains of job stress and happiness at work. These constructs have received limited attention in the context of the educational sector. Therefore, the aim of this study was to fill this research gap by examining the associations between workplace spirituality, job stress, and happiness at work. Moreover, the study investigated whether job stress plays a mediating role in the relationship between workplace spirituality and happiness at work. A cross-sectional research design was employed, and data were gathered from a sample of 300 school teachers. Three scales were utilized to measure workplace spirituality, job stress, and happiness at work. The data analysis revealed a positive correlation between workplace spirituality and happiness at work. However, the mediation analysis indicated that job stress does not serve as a mediator in the relationship between workplace spirituality and happiness at work. Moreover, to reduce job stress, compassion plays a great role, which is one of the components of workplace spirituality. Based on these findings, it is recommended that educational institutions adopt workplace spirituality practices to foster a conducive work environment that promotes the well-being and happiness of teachers, thereby positively impacting the teaching process.

***Keywords*:** workplace spirituality, happiness at work, job stress, school teachers, educational sector

Teachers play a pivotal role in education (Wahyu, 2020), significantly impacting the quality of education, either positively or negatively (Terry et al., 2020). Successful countries in education emphasize the importance of skilled and qualified teachers who contribute to the overall well-being of the nation (Nurabadi et al., 2021; Tezer et al., 2019). The quality of teachers directly shapes the future trajectory of a country (Rachmah & Putrawan, 2018; Warren, 2021). Nurturing and developing students' potential rests on the shoulders of teachers, who bear the great responsibility of shaping young minds (Pillay et al., 2005). Teachers help students thrive (Evers et al., 2004), and for this they must prioritize their own physical and mental well-being (Smith, 1992). In this context, workplace spirituality emerges as a crucial factor that has the potential to enhance teachers' professional well-being (Paul & Jena, 2022).

The acknowledgement of an inner existence that is fostered by meaningful work is referred to as workplace spirituality. It has been shown to lessen teachers' perceived stress and enhance psychological well-being (Ahmed et al., 2022; Mahipalan & Sheena, 2019). Many facets of workers' well-being are positively impacted by increased workplace spirituality. Studies have shown that it enhances job satisfaction (Ghayas et al., 2023), increases work performance (Ghayas et al., 2022), lowers stress levels, improves psychological health of employees (Upadhyay et al., 2019), and decreases inclinations to leave the organization (Hussain & Hussain, 2020). Consequently, encouraging spirituality in the workplace helps workers overcome daily challenges, and when their needs are met, it leads to increased happiness.

Happiness at work, a vital component of teachers' overall well-being, is impacted by a variety of factors including dispositional qualities, self-esteem, and the working environment (Benevene et al., 2019). A healthy spiritual atmosphere at work can significantly boost teachers' happiness, which in turn enhances their well-being and productivity (Benevene et al., 2019; Garg et al., 2022). Happiness at work, which includes satisfaction, engagement, and positive emotional experiences, is critical for long-term teaching effectiveness, and self-determination theory (SDT) provides a solid theoretical framework for comprehending the relationship between workplace spirituality and happiness. SDT holds that intrinsic motivation and well-being depend on satisfying the three fundamental psychological needs of relatedness, competence, and autonomy (Ryan & Deci, 2017), and when these objectives are met by workplace spirituality, teachers can feel more purposeful and fulfilled.

However, stress at work frequently disrupts this positive dynamic by undermining the advantages of spirituality and failing to meet psychological demands. School teachers that experience job stress frequently have poor work performance, high turnover, and absenteeism (Oteer, 2015). Furthermore, poor student behavior (Sass et al., 2011), an overwhelming workload (Timperley & Robinson, 2000), a lack of supervisory assistance (Spector, 1997), and strained relationships between new and old teachers (Rieg et al., 2007) are other factors that contribute to teachers' stress levels. Nevertheless, the presence of spirituality in the workplace can serve as a buffer and lower stress levels (Akhondi et al., 2017).

With an emphasis on job stress as a mediator, the aim of this study is to examine the relationship between workplace spirituality and happiness. Developing solutions to enhance teacher well-being and performance requires an understanding of how job stress mediates the relationship between workplace spirituality and happiness. Additionally, it examines how job stress impacts this dynamic and how workplace spirituality satisfies fundamental psychological needs, utilizing self-determination theory as a theoretical framework. The results of study are meant to contribute organizational procedures that foster a friendly and spiritually enlightening work environment for teachers, hence improving their well-being and productivity.

LITERATURE REVIEW & THEORETICAL BACKGROUND

Workplace Spirituality

A sense of work motivation enables employees to reach their full potential (Dehler & Welsh 1994). It represents a spiritual connection between individuals and their work environment (Pawar, 2009), thereby encompassing self-awareness (Guillory, 2000). Nonetheless, this concept is a unique and personal philosophical construct that represents integrity, values, and a feeling of connection with the organization (Gibbons, 2000). It involves a dedicated effort towards self-discovery and understanding one's purpose in life, fostering connections, and establishing a consistent alignment between colleagues and the organization's internal belief system (Mitroff & Denton, 1999). In essence, it can be defined as the perception that employees have regarding the enhancement of their personal lives through meaningful work (Ashmos & Duchon, 2000). Further, it is a multi-faceted and complicated construct that is both abstract and personal (Milliman et al., 2003), and it has no universally accepted acknowledged definition (Freshman, 1999). According to Brown and Ryan (2003), different authors defined workplace spirituality using other words that reflect the same phenomenon: business, workplace spirituality, and organizational spirituality.

The current study incorporates and builds upon the four aspects of workplace spirituality put forth by Pradhan et al., (2017), which serves as a conceptual foundation for further research. Understanding the nature of spirituality within the organization is based on these four dimensions. The ability of employees to gain personal meaning from their work, and find purpose and fulfilment in their professional endeavors, is the first dimension of workplace spirituality, i.e., spiritual orientation. Second, meaningful work investigates how much employees believe their work is intrinsically connected to their life's purpose or destiny, fostering a strong sense of fulfilment and meaning. Thirdly, compassion demonstrates a person's ability to show empathy, care, and consideration for others, which promotes a productive workplace. Finally, the alignment of values dimension considers employees' professional goal to harmonize their private values with the values upheld by their organization, thereby fostering a sense of belonging and congruence. In the context of this study, these dimensions offer a thorough framework for understanding the subtleties of workplace spirituality.

Job Stress

Work stress is a negative mental state resulting from the connection between the worker and his work environment. It is an employee’s reaction to a frightening work environment (Jamal, 1990). According to Karasek and Theorell (1990), when employees have a higher workload, they experience job stress because they cannot make decisions on their own and

lack social support from their coworkers and employer. Furthermore, the potential stressors described by Siegrist (1996), such as not receiving adequate recognition, remuneration, or promotion, result in high job stress, which ultimately demotivates employees, reduces productivity, and makes them feel unsafe at work.

Spirituality and Job Stress

Literature shows a reverse relationship between workplace spirituality and job stress (Akhondi, 2017). Spirituality enables a person to attract the best out of the adverse conditions, reducing stress and increasing adaptive behaviors during hardships. Meaningful work reduces physical, mental, and emotional stress (Knoop, 1994), which is negatively correlated to job stress (Daniel, 2015). Engagement in meaningful work results in long-term benefits from stressful occasions (Britt et al., 2001) Cooperation and support from the organizations reduce stress (Zeffane & McLoughlin, 2006). Workplace spirituality is positively correlated with health and reduces the adversative effects of stress on wellbeing (Kumar & Kumar, 2014).

Therefore, the researchers hypothesize the following:

H1. There will be a negative relationship between workplace spirituality and job stress.

Happiness at Work

The concept of "happiness at work" is complex and includes many aspects of an individual's experience and contentment with their workplace. Happiness at work involves a high level of life satisfaction and the presence of positive emotions. This state is marked by a general sense of well-being and contentment with one's job and work environment, which is why it is often synonymous with well-being and is characterized by high levels of life satisfaction, positive emotions, and reduced negative emotions (Fitriana et al., 2022).

Workplace Spirituality and happiness at work

Happiness is also essential for employees to perform well. Happy workers are more productive than unhappy employees (DiMaria et al., 2020). Studies have shown that a healthy spiritual environment at work can considerably increase teachers' happiness (Benevene et al., 2019; Garg et al., 2022; Paul & Jena, 2022).

Therefore, the researchers present a second hypothesis:

H2. There will be a significant positive relationship between workplace spirituality and happiness at work.

Job Stress and Happiness at work

Most studies focus on well-being, but there is limited literature available on the influence of job stress on happiness at work. High job demands and limited job control have a detrimental effect on workers' well-being (Karasek, 1979). Stressors significantly impact psychological well-being (Daniels & Guppy, 1994), and they can have adverse effects on mental well-being (Fujishiro & Heaney, 2009; Ganster & Rosen, 2013). Conversely, experiencing happiness at work is associated with improved health and enhanced abilities to deal with stress (Stasio et al., 2017). Furthermore, higher levels of happiness at work act as a protective factor against occupational stress (Ros, 1999).

Therefore, the researchers present a third hypothesis:

H3. There will be a significant negative relationship between job stress and happiness at work.

The present study assumes a direct relationship among all three variables and postulates that when workplace spirituality is great, a person will perceive less job stress, which leads to happiness at work. The study also assumes that job stress would play the mediating role between workplace spirituality and job happiness. Hence, the following hypothesis is formulated:

H4. Job stress will mediate the relationship between workplace spirituality and happiness at work.

METHODOLOGY

Study Design and Sample

The current study used a cross-sectional quantitative methodology to investigate workplace spirituality, happiness at work, and job stress among schoolteachers. Data collection was facilitated by non-governmental organizations (NGOs) in charge of teacher training programs, allowing the researchers to reach a diverse sample of teachers from all types of schools (private, government, and community). This strategy resulted in efficient data collecting, which was completed within three to six months. Initially, 350-400 teachers were recruited, and their involvement was entirely voluntary. A total of 300 fully completed questionnaires were kept for processing, while around 60 incomplete questionnaires were removed to ensure data integrity. The overall refusal rate was low because of the indirect technique to reaching participants, in which teachers were invited through professional NGO networks rather than directly through their schools. Pakistan has three common types of schools. Public (government-funded) schools cater to a variety of socioeconomic classes and usually have higher class sizes. Private schools, which are fee-based, serve moderate and upper-income families by providing superior resources and lower class sizes. Community schools, which are often run by NGOs or local organizations, serve impoverished populations with limited resources.

Data Collection

A questionnaire was developed using Google forms. The NGOs responsible for teacher training were requested to share the Google Forms link with teachers in their contact lists. This approach aimed to minimize social desirability bias by ensuring that teachers were not approached directly through their school principals or within their own school settings. Further, prior to participation, teachers were provided with detailed information about the research's purpose, assured that their participation would remain anonymous, and informed that in case of any queries, they could connect with the researchers via email.

Data were collected through three questionnaires and a demographic sheet, including gender, age, qualification, marital status, and number of years spent in the same school. A scale created by Pradhan et al. (2017) that includes four dimensions—meaningful work, spiritual orientation, compassion, and alignment of values—was used to evaluate workplace spirituality. This scale has strong internal consistency and positive psychometric qualities, as seen by its Cronbach's alpha coefficient of 0.78. Furthermore, it has been shown that this scale is appropriate in the Pakistani setting as well (Hussain & Hussain, 2020).

The majority of the questionnaire used a 5-point rating scale, with 1 indicating "strongly disagree" and 5 representing "strongly agree." The statement "I experience a sense of personal fulfillment from my work" is an example of meaningful work component. Among the items pertaining to spiritual orientation is "My spiritual values guide my decision-making at work." Compassion items include "I am concerned about the needs and requirements of my colleagues," while items measuring alignment of values comprise "My personal values align with the value system of this organization."

The *happiness at work scale*, developed by Ramirez-Garcia et al. (2019), was also utilized in this study. Job factor and personal factors of the employees are the two aspects of workplace happiness that are measured by this eleven-item questionnaire, which exhibits good psychometric qualities including high Cronbach's $\alpha = 0.878$), and satisfactory construct, convergent, and discriminant validity. Further, confirmatory factor analysis supported a two-factor structure (job-related (extrinsic) and individual-related (intrinsic) factors), with acceptable model fit indices ($CFI > 0.90$, $RMSEA < 0.08$). It uses a 7-point Likert scale, with 1 indicating "strongly disagree" and 7 showing "strongly agree." "The organizational climate at my work unit is good" is a sample item that reflects the job environment dimension, and "I have internal stability" is a sample item that represents the worker factor dimension.

Finally, job stress was assessed using a scale developed by Tate et al. (1997). This eight-item questionnaire evaluates both psychological and physiological stress indicators, with a Cronbach's alpha reliability coefficient of 0.835. It employs a five-point Likert scale, with 1 indicating "strongly disagree" and 5 representing "strongly agree." Sample items from the psychological characteristics' domain include "I feel frustrated at my job," while sample items from the physiological features domain include "Job-related problems make my heart beat faster than usual."

Data Analysis

Descriptive statistics were utilized to analyze the demographic data, and Cronbach's alpha was employed to assess internal reliability. The Hayes process macro was applied through IBM SPSS statistics version 21 to examine the mediating

role of a variable. Additionally, correlation and multiple regressions were employed to ascertain the relationships between different variables. In the current study, two scales exhibited high alpha reliabilities: workplace spirituality (α = 0.90) and happiness at work (α = 0.81). The stress at work scale demonstrated acceptable reliability (α = 0.69). Generally, Cronbach's alpha values ranging from 0.6 to 0.7 indicate sufficient reliability, while higher values suggest good instrument reliability (De Vet et al., 2011). The alpha values obtained in this study indicate the appropriate measures were utilized.

RESULTS

Out of the 300 participants, 150 were males and 150 were females. Among the total respondents, 48.3% worked in private schools, 26.7% were employed in public sector schools, and the remaining 25% were affiliated with community schools. The majority of participants, 61.4%, fell between the ages of 31 and 40, while 50.7% were married and 46% held postgraduate degrees. Additionally, 88.7% of the total participants were associated with the same school for a period ranging from 1 to 10 years. Table 1 illustrates the full distribution of respondent demographic information.

Table 1

Participant Demographic Information

Demographics		Freq.	%
Gender	Male	150	50
	Female	150	50
Age	21-25	32	10.7
	26-30	57	19
	31-35	98	32.7
	36-40	86	28.7
	41-45	17	5.7
	46-50	10	3.3
Marital Status	Single	109	36.3
	Married	152	50.7
	Windowed/widower	14	4.7
	Divorcee	25	8.3
Currently Job Sector	Private School	145	48.3
	Government School	80	26.7
	Community School	75	25
Qualification	Intermediate	1	3
	Bachelors	110	36.7
	Masters	138	46
	M. Phil	51	17
Years Spent in Same School	1 to 10	266	88.7
	More than 10	34	11.3

Results indicate a significant positive relationship between workplace spirituality and happiness (r = 0.595**). However, the association between workplace spirituality and job stress is negative (r = -0.090), but not statistically

significant. Similarly, the relationship between happiness and job stress is negative (r = -0.076), but it also lacks statistical significance. Table 2 displays the correlation values among the variables examined in this study.

Table 2

Correlation Among Examined Variables

Variable	1	2	3
Workplace Spirituality		-0.090	0.595**
Job Stress			-0.076
Happiness at work			

Note. **Correlation is significant at the 0.01 level

The mediation analysis findings (Table 3) reveal that workplace spirituality has a significant direct effect on job stress (β = -0.1193, SE = 0.762, p < .05), indicating that higher levels of workplace spirituality are associated with lower levels of job stress. Moreover, workplace spirituality has a positive and significant direct effect on happiness at work (β = 1.0, SE = 0.0806, p < .05), suggesting that higher levels of workplace spirituality contribute to greater workplace happiness. However, the direct effect of job stress on happiness at work is negative but not significant (β = -0.0291, SE = 0.0610, p < .05).

Table 3

Mediation Analysis Findings

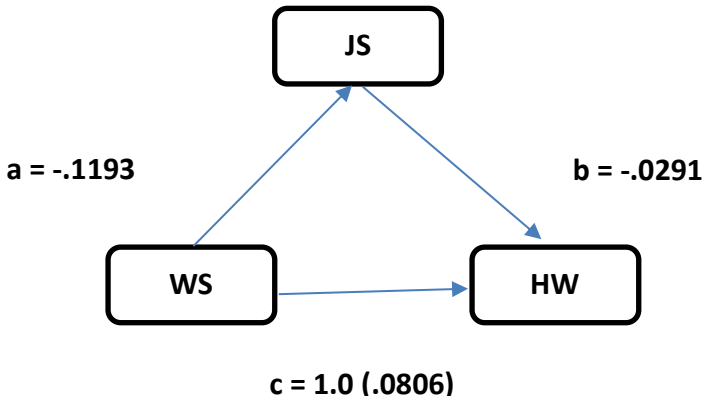
Direct Effect Variables	**Coeff**	**SE**	***t***	***p***	**LLCI**	**ULCI**
WPS-JS	-.1193	.0762	-1.5649	.1187	-.2693	.0307
WPS-HW	1.0	.0806	12.6546	.0000	.8618	1.1792
JS-HW	-.0291	.0610	-.4769	.6338	-.1492	.0910
Indirect Effect Variables	**Effect**	**Boot SE**	**Boot LLCL**	**Boot ULCL**		
WPS-JS-HW	.0035	.0102	-.0132	.0284		

Note: WPS = workplace spirituality, HW = happiness at work, JS = job stress, C.I = class interval, LLCI = lower limit class interval, ULCI = upper limit class interval.

Regarding the mediating role of job stress between workplace spirituality and happiness at work, the results indicate that it is statistically insignificant (β = 0.0035, SE = 0.0102, LLCL = -0.0132, ULCL = 0.0284). This implies that job stress does not mediate the relationship between workplace spirituality and happiness at work. Figure 1 displays a graphic representation of the mediation model, displaying the relationship between workplace spirituality, job stress, and happiness at work.

Figure 1

Mediation Model: Workplace Spirituality, Job Stress, and Happiness at Work



Note: WPS = workplace spirituality, HW = happiness at work, JS = job stress.

Table 4 displays the results of the multiple regression analysis, indicating that all the variables have variance inflation factor (VIF) values below 10, indicating the absence of multicollinearity issues in the data. Among all the dimensions of workplace spirituality, only compassion demonstrates a statistically significant inverse relationship with job stress ($p < .05$).

Table 4

Multiple Regression Analysis Findings

Model	Unstandardized coefficient *B*	SE	Standardized coefficient *B*	*t*	sig	VIF
(constant)	5.225	0.333		15.687	.000	
Alignment of Values	-.037	0.070	-.042	-.527	.5999	1.917
Spiritual Orientation	.081	0.092	.070	.882	.379	1.913
Compassion	-.137	0.080	-.120	-1.719	.087	1.462
Meaningful work	-.059	0.101	-.048	-.578	.563	2.109
Adjusted R^2 = .008	*F* ANOVA = 1.591		Sig = .177			

DISCUSSION

The primary objective of this study was to examine the relationship between workplace spirituality, happiness, and job stress. Among the four hypotheses proposed, only one hypothesis was supported, indicating a statistically significant positive correlation between workplace spirituality and happiness at work. Teaching is widely regarded as a noble profession, with teachers playing a significant role in shaping the lives of many individuals. The act of imparting knowledge and sharing with others gives teachers a sense of fulfillment and contributes to their overall happiness. Although research on the connection between job happiness and spirituality is still in its early stages, the findings of this study align with existing literature and support a positive relationship between workplace spirituality and job happiness (Benevene et al., 2019; Garg et al., 2022; Paul & Jena, 2022). Overall, spirituality is vital for a good life and eudemonic well-being. The present study's findings illustrate statistically positive significant relations between workplace spirituality and happiness.

This study also examined the potential mediating effect of job stress on the relationship between workplace spirituality and happiness at work. However, the results presented in Table 3 suggest that job stress does not act as a mediator in this relationship. This finding contradicts the study that shows job stress is a significant mediator between workplace spirituality and psychological well-being (Mahipalan and Sheena, 2019). Furthermore, although a negative relationship is observed between job stress and happiness in the present study, this result does not reach statistical significance. Similarly, the results indicate an inverse relationship between workplace spirituality and job stress, which is also found to be statistically insignificant. These findings suggest that while contributing to society may enhance workplace happiness among teachers, it does not eliminate the stress they experience in their work environment. In the present study, happiness at work is higher among teachers, which suggests spirituality helps minimize the harmful effect of job stress, improving physical and psychological well-being (Zellars & Perrewé, 2003). However, there are other factors, too, that need to understand, such as burnout, work overload, emotional intelligence, resilience, and organizational politics. Teaching is one of the most overburdened professions and people often undermine its importance. Further, lack of recognition, low pay scale, and limited promotion opportunities are potential stressors (Siegrist, 1996).

To further explore these findings, regression analysis was conducted. The results show that spirituality does not have a direct impact on job stress (Table 4). The current study's findings highlight compassion, a vital facet of workplace spirituality, as a key factor in managing job stress among schoolteachers. While spirituality as a whole did not directly lower occupational stress, compassion emerged as a strong predictor of stress reduction. This highlights the importance of cultivating compassion as a successful strategy in the challenging field of education. Beyond lowering stress, practicing compassion in the workplace fosters a positive work environment characterized by kindness, understanding, and mutual respect—all essential traits for teachers' overall well-being and the effectiveness of an organization. According to research by Barsade and O'Neill, 2016, compassionate workplaces have lower turnover rates, higher levels of engagement, and job satisfaction. Additionally, compassion fosters a sense of connectivity and thankfulness, which improves psychological health and lowers cortisol levels (Ozbay et al., 2007). The findings further extend to the idea of applying workplace

spirituality as an umbrella concept in stress management. For instance, spirituality practices such as mindfulness, meditation, and other reflective practices assist in managing stress, enhancing well-being, and increasing resilience (Csiernik & Adams, 2002). These practices empower people to find meaning in their work and to find purpose, which is crucial for teachers who bear one of the more emotionally exhausting professions.

In this context, leadership plays an essential role in cultivating a compassionate culture and lowering workplace stress. Effective leaders can set examples of compassionate behavior by fostering workplaces that value empathy, understanding, and support. Such compassionate leadership enhances employee well-being by improving trust, lowering perceptions of organizational pressures, and promoting emotional resilience (Boyatzis et al., 2006; Worline & Dutton, 2017).

Limitations and Future Research

According to expert recommendations (Sim et al., 2021), the sample size utilized in this study was deemed sufficient to explore the moderate to strong relationships among the variables. However, it is important to acknowledge that a larger sample size or the inclusion of participants from different cities could have yielded a more comprehensive understanding of the mediating effect. Responses varied significantly across school types due to differences in the number of teachers employed at each institution. As a result, conducting a robust school-level analysis was not feasible as unequal representation could have skewed the findings.

This study represents a foundational attempt to explore the relationships among workplace spirituality, happiness at work, and job stress specifically in the context of school teachers in Pakistan. Since no prior studies have examined these constructs collectively within this demographic, the analysis was intentionally exploratory in nature. While the inclusion of control variables such as leadership style, school-level policies, or other organizational factors could have added significance, the study prioritized establishing baseline relationships between the primary constructs. Future studies are encouraged to incorporate controls to build on the findings presented here. The decision to omit controls was also informed by the theoretical framework underpinning the study. Self-determination theory (Deci & Ryan, 1985) highlights people's psychological needs and intrinsic motivation, which can be usefully examined in exploratory research without the requirement for substantial environmental controls. This strategy lays the foundation for further, in-depth research by enabling the study to concentrate on comprehending how personal views of workplace spirituality affect job stress and happiness.

Conclusion

The findings of this study highlight the significant need for the educational sector to focus on compassion and spiritual practices to lessen teachers' stress and to develop a sense of purpose and fulfillment in their work. As by applying spirituality in the workplace, teachers can not only prioritize students' academic achievements and their comprehensive development, but they can also foster meaningful connections within the classroom (Lindholm & Astin, 2006; Jones, 2005).

Recommendations

To successfully address teachers' stress and promote happiness in the workplace, the authors recommend six action steps for educational institutions:

1. Train school leaders to embrace compassionate leadership styles. Consequently, teachers can feel supported, valued, and heard, thus reducing stress and improving morale.
2. Promote formal and informal peer support networks where teachers can share experiences and provide mutual support.
3. Integrate spiritual practices such as mindfulness and meditation with other training programs that help teachers manage stress.
4. Recognize and praise compassionate behavior among teaching staff to further reinforce such behaviors.
5. Make policies that promote teachers' work-life balance such as flexible working hours and equitable workload distribution. Moreover, establish structured systems for recognizing and rewarding exceptional work.
6. Conduct more research studies on teachers' happiness and workplace spirituality, especially within the Pakistani context. Moreover, survey teachers on a regular basis to track their stress levels, job satisfaction, and the results of interventions that have been put in place.

Understanding the significance of teacher happiness in the educational process (Tadić et al., 2013), these recommendations are meant to create a sustainable and supportive work environment where teachers can thrive. Further, investing in the psychological, economic, and social well-being of teachers is not only an organizational responsibility but a societal necessity that can ultimately lead to better educational outcomes for students and society.

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SANA HUSSAIN, PhD, is an Associate Professor at the department of Social Sciences, SZABIST University Karachi, Pakistan. Her major research interest area lies in the public health, educational, organizational and forensic psychology. Email: sanpsychologist@gmail.com

ZAREEN HUSSAIN, M.Sc., LLB, & LLM, is a Deputy Director Quality Enhancement Cell (QEC) at Ziauddin University Karachi, Pakistan. Her major research interest area lies in the law and policy matters related to health, educational, and organizational setting. Email: zareenhussain.zee@gmail.com

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Navigating (Another) Reading Crisis as an Administrator: Rethinking the "Science of Reading" Movement

P. L. Thomas
Furman University, Greenville South Carolina, USA

ABSTRACT

The *Science of Reading* (SOR) movement puts administrators in a difficult position since they must navigate a wide range of educational stakeholders—students, teachers, parents, board members, political leaders, and the public. This discussion offers a broad but detailed overview of the problems created for administrators by the SOR movement (i.e., systematic phonics, teacher quality, reading programs, reading proficiency, and social justice/equity). This overview is followed by a series of new (and better) approaches for school administrators to become more effective instructional leaders of reading and advocates for addressing individual student needs and supporting teacher professionalism.

Keywords: Science of Reading, reading, leadership, reading legislation, education reform

The winter before the COVID-19 shutdown, I gave my first invited presentation on the *Science of Reading* (SOR) at a state literacy organization's annual conference. I was not yet certain how the audience of mostly teachers of beginning readers would react to my critical analysis of the SOR movement—a movement that is grounded in a misleading media story and that would eventually impact reading practice and legislation (Aydarova, 2023; Reinking et al., 2023; Thomas, 2022b).

That presentation proved to be enlightening for me because, even as the attendees positively received my critiques of SOR rhetoric and claims, I noticed an important *different* reaction when I confronted the misleading media attacks on Lucy Calkins's Units of Study reading program. I paused my presentation and discussed this with the attendees, who were quick to express displeasure with Units of Study. When I asked for fuller explanations, we arrived at an interesting and important clarification: Teachers were frustrated *not* with Units of Study but with administrators holding teachers accountable for teaching the program with *fidelity*.

In short, this experience clarified for me that reading programs are neither the problem *nor* the solution for any of our concerns about reading achievement. However, the reading program merry-go-round of adopting new programs, re-training teachers, and then focusing on *fidelity* to the program creates a teaching and learning environment that is often antagonistic and uncollaborative as needed for serving the individual needs of students and supporting the professionalism of teachers. Currently and historically, educators have been held accountable for implementing reading programs as a proxy for teaching children to read.

The crisis rhetoric about reading reform and schools being in a constant state of manufactured educational crisis and reform (Berliner & Biddle, 1996; Thomas, 2022a, 2022b) put administrators in a difficult position since they must navigate a wide range of educational stakeholders—students, teachers, parents, board members, political leaders, and the public. The discussion in this paper offers a broad but detailed overview of the core problems created for administrators by the SOR movement (i.e., systematic phonics, teacher quality, reading programs, reading proficiency, and social justice/equity). These problems are followed by a series of new (and better) approaches for school administrators to become more effective instructional leaders of reading and advocates for addressing individual student needs and supporting teacher professionalism.

Differentiating the SOR Movement and Reading Science

First, this discussion makes an important distinction between the SOR *movement* and *reading science*. The SOR movement has its roots in the 1960s with the work of Jeanne Chall and her challenges to whole language (Thomas, 2024; Tierney & Pearson, 2021) as well as the No Child Left Behind (NCLB) era with the influence of the National Reading Panel (NRP), which I examine below. But the more recent SOR movement is situated in reading legislation beginning around 2012 and then a media explosion around 2018 with the work of Emily Hanford (2018). Although the SOR movement has been compelling (notably the podcast *Sold a Story*) and has directly influenced reading legislation (Aydarova, 2023; Reinking et al., 2023; Thomas, 2022b), the key claims and the rhetoric of reading crisis are at best misrepresentations and oversimplifications—and at worst simply false (Aukerman, 2022a, 2022b, 2022c; Thomas, 2022a, 2022b; Tierney & Pearson, 2024).

Aukerman (2022a) offers an excellent outline of what constitutes the SOR movement as distinct from the more complex body of reading science, a body of research a century old:

> From how much of the media tells it, a war rages in the field of early literacy instruction. The story is frequently some version of a conflict narrative relying on the following problematic suppositions:
>
> a) science has proved that there is just one way of teaching reading effectively to all kids – using a systematic, highly structured approach to teaching phonics;
> b) most teachers rely instead on an approach called balanced literacy, spurred on by shoddy teacher education programs;
> c) therefore, teachers incorporate very little phonics and encourage kids to guess at words;
> d) balanced literacy and teacher education are thus at fault for large numbers of children not learning to read well (para. 2).

Critics of the SOR movement as a media and political movement (Aukerman, 2022a, 2022b, 2022c; Aydarova, 2023; Compton-Lily et al., 2023, 2024; Reinking et al., 2023; Tierney & Pearson, 2024) are not rejecting reading science, but in fact advocating for recognizing that reading science resists a simple story for understanding reading achievement, reading instruction, and reading reform. With that distinction in mind, I now consider core claims of the SOR movement against the fuller and richer body of reading science as a series of problems that offer new approaches to reading and for school leaders.

Understanding the Role of Systematic Phonics: The Balance Problem

"Newspapers do not just write about education, they also represent to their readers what education is 'about,'" explains Edling (2015, p. 401). And since the influential *A Nation at Risk* report released under Ronald Reagan, that "about" has been "crisis" (Thomas, 2024). Reading achievement by students, it seems, has also been in a constant state of crisis; for example, Nicholas Kristof (2023), writing in *The New York Times*, offers what has become one of the most misleading but uncritically embraced claims in education today: "Two-thirds of fourth graders in the United States are not proficient in reading."

While I explain why this statistic is misleading in detail in a later section, note that Kristof (2023) includes also a now-standard argument:

> One explanation gaining ground is that, with the best of intentions, we grown-ups have bungled the task of teaching kids to read. There is growing evidence from neuroscience and careful experiments that the United States has adopted reading strategies that just don't work very well and that we haven't relied enough on a simple starting point—helping kids learn to sound out words with phonics (para. 6).

Almost the exact same reading crisis blamed on a lack of phonics has been made for 80 years in the US (Thomas, 2022b; Tierney & Pearson, 2021), yet Reinking et al. (2023) clarify: "There is no indisputable evidence of a national crisis in reading, and even if there were a crisis, there is no evidence that the amount of phonics in classrooms is necessarily the cause or the solution." In fact, many scholars have shown that the overemphasis on phonics (usually calling for systematic phonics for all students and/or phonics-first instruction) by the SOR movement lacks evidence in the body of reading science (e.g., Tierney & Pearson, 2024).

Administrators must recognize the oversimplification of the crisis/rhetoric of the SOR movement and the misuse of the NRP in the media and among politicians as well. Just 20 years ago, in fact, the NRP was a key element of the mandate in NCLB that all reading instruction must be "scientifically based" (Wilde, 2004); however, many scholars noted then that the

NRP report was both a politically skewed and incomplete analysis of reading science/research (Garan, 2001; Yatvin, 2000, 2002, 2003). Nonetheless, the NRP report revealed that systematic phonics was effective for pronunciation in grade 1, but not for comprehension, and that it wasn't more effective than whole language approaches in later grades for comprehension (Stephens, 2008).

In short, despite the rhetoric of the SOR movement, American students have not been cheated in reading instruction due to a lack of systematic phonics (Reinking et al., 2023; Tierney & Pearson, 2024), and thus, reading reform should not be significantly or primarily centered on mandating systematic phonics for all beginning readers.

Further, the recurring reading war has never served individual schools or students well, and so reading reform should focus on the specifics of the students being served while avoiding oversimplification of test data. As well, reading reform should disentangle policy from reading programs and reading theory, both as sources of blame and solutions to concerns about reading achievement.

One example of how this has occurred is in the UK where systematic phonics instruction has been mandated and implemented since 2006. And yet, recently with the release of test data, another reading crisis has been declared. In fact, research has already shown that students would be better served by a balanced approach (Wyse & Bradbury, 2022, 2023). That conclusion in the UK is not about *balanced literacy* as a theory or program, but about what balance in instruction means—balancing instruction in terms of demonstrated student strengths and needs. In other words, balance is not about a program or a one-size-fits-all approach, but about identifying and serving individual student needs. This, then, leads to the next problem connecting the attacks on balanced literacy, teacher knowledge, and teacher education.

Understanding Balanced Literacy and Teacher Education: The Teacher Quality Problem

The SOR movement, whose popularity originated in the media (Hanford, 2018), claims the reading crisis was caused by a lack of systematic phonics instruction and balanced literacy-dominated reading instruction, all of which is rooted in teacher education failing to incorporate reading science (see Aukerman, 2022a). However, this is at once a complicated and a false series of claims. These misleading arguments are also linked to the SOR movement's attacks on a few reading programs (Units of Study by Calkins and materials by Fountas and Pinnell).

Here, it is important that administrators can distinguish between the *caricature* of balanced literacy repeated in the media and the accurate representation of the reading philosophy/theory. Consider this definition of balanced literacy from Spiegel (1999):

> This leads me to the following definition: A balanced approach to literacy development is a decision-making approach through which the teacher makes thoughtful choices each day about the best way to help each child become a better reader and writer. A balanced approach is not constrained by or reactive to a particular philosophy. It is responsive to new issues while maintaining what research has already shown to be effective. It is an approach that requires and frees a teacher to be a reflective decision maker and to fine tune and modify what he or she is doing each day in order to meet the needs of the child. (p. 116)

Administrators must recognize a few clarifications about SOR claims that balanced literacy has contributed to a reading crisis:

- There is no evidence (in other words, no empirical research) that any uniform theory/philosophy of reading has been implemented across the entire US or that balanced literacy (or any reading theory) has caused a reading crisis (Reinking et al., 2023; Tierney & Pearson, 2024).
- SOR attacks on balanced literacy are caricatures that do not represent what balanced literacy promotes, which is primarily serving the individual needs of students by honoring teacher autonomy and expertise (Siegel, 1999). Again, research addressing mandated systematic phonics for all students in the UK, in fact, has found a need for "balance" (Wyse & Bradbury, 2022).
- SOR attacks on balanced literacy are recycled versions of attacks on whole language in the 1990s that proved to be misleading and false blame (Krashen, 2002; Thomas, 2022a, 2022b).

The blame matrix among SOR advocates starts with the false premise of a reading crisis (Reinking et al., 2023), and it then places blame on teacher practice, asserting that teachers of reading do not know how to teach reading because teacher education has failed them (Hanford, 2018). However, once again, we have no research or scientific studies showing either that teacher practice is lacking or that teacher education is failing (Aukerman, 2022a; Hoffman et al., 2020; Reinking et al., 2023; Tierney & Pearson, 2024).

The irony of attacks on teacher practice and teacher education is that SOR advocates cite the National Council on Teacher Quality (NCTQ), a conservative think tank established by the Thomas B. Fordham Institute. For over two decades, NCTQ has released negative reports about teacher education that are not scientific; in fact, external reviews show these reports are primarily ideological and grounded in weak methodology and cherry-picked research (Thomas, 2023). Further, NCTQ's negative characterization of teacher education ignores the robust research base on teacher education (Hoffman et al., 2020; Thomas, 2023).

Here, I think, it is imperative that administrators challenge attacks on teacher expertise and teacher education because, as noted above, these attacks are not grounded in credible research, and the consequences of these claims have been states mandating and adopting structured literacy programs that are *scripted curriculum* (Aydarova, 2024; Carnine, 2024). These legislative moves are de-professionalizing teachers, imposing a one-size-fits-all mandate onto students, and decreasing the diversity of texts used with students (Compton-Lilly et al., 2020; Hoffman et al., 2020; Khan, et al., 2022; Rigell, et al., 2022; Thomas, 2022b).

Additionally, the outsized attack on teacher knowledge and practice further misrepresents the dominant causal sources of student achievement. One of the most complicated realities we face in public education is that measurable student learning is still overwhelmingly a reflection of out-of-school factors (Burrell & Harbatkin, 2024). The value-added methods era, in fact, revealed that teacher impact on test scores is as low as 1-14% (American Statistical Association, 2014).

Therefore, school leaders are forced into complicated positions whereby they need to better explain test data, further help the public and teachers understand the limits of instruction and programs, and effectively demonstrate teachers' and schools' positive impact on students appearing to perform well below expectations.

This nuanced and complex approach will prompt charges of making excuses; however, it is imperative that leaders resist the rhetoric of "failure," "crisis," "miracle," and "no excuses"—key elements in a reform process that hasn't worked over the last 40 years. Instead, educators must adopt language that is tempered, honest, and realistic to better serve students while also assuring parents and the public that the work of teaching and learning is a journey that is complicated and less predictable than we would like.

Understanding "Three Cueing and Guessing": The Reading Program Problem

Another target in the reading crisis for SOR advocates is claiming that a few reading programs—specifically Lucy Calkins's Units of Study and programs by Fountas and Pinnell—have been the primary mechanisms for imposing the so-called failed balanced literacy onto teachers and students. Part of the flaw in this attack is that these programs are not uniformly implemented across the US over the 30-year period when National Assessment of Educational Progress (NAEP) reading scores have been basically flat (Reinking et al., 2023), and yet, media coverage dramatically overstates the impact of only a few criticized programs. Units of Studies, for example, is used in only about 16–25% of schools, as reported by Schwartz (2022) in *Education Week* and Calkins (2024) herself. However, media stories have targeted Calkins and Units of Study in dozens of stories and podcasts that the program has failed at a scale that would contribute to a national reading crisis—all without scientific evidence. But as noted above, beyond that these claims simply lack research or scientific proof for claims of failure, the attacks are grounded in caricature. The entire practice of teaching reading has been reduced by the media to *three cueing and guessing*. Media and SOR advocates present a caricature of teachers encouraging students to use pictures when reading instead of implementing decoding strategies. For example, in a picture book with the word "horse," three cueing strategies are misrepresented as encouraging the student reader to look at the picture of the horse on the page instead of applying their letter and phonics skills to decode the word "horse" (see the clarification below, however).

Several problems with blaming and legislation banning three cueing and guessing, along with specific reading programs, confront administrators because of this misinformation. First, media and public caricatures of teachers and instruction erode the credibility of public education. Further, these excessive attacks on instruction and programs feed a cycle of dropping current reading programs and then adopting new ones. Legislation also drives new teacher professional development (currently LETRS, which lacks research showing the training is effective for improving student achievement [Research roundup, 2022]) and instructional materials that cost taxpayers and educators millions of dollars and time better spent on more substantive efforts.

And then, more specifically, attacks on three cueing and guessing are misrepresenting both. Three cueing is better referred to as *meaning, structure, and visual* (MSV), which is not simply asking students to use pictures to guess at words:

> The letters MSV stand for meaning, structure, and visual, and recent discussions of early reading instruction refer to them as the 'three cueing systems.' Too often the descriptions of MSV are incorrect. Specifically, MSV is not

> using context, such as pictures and syntax, to guess words as an alternative to using the letters and words on the page. . . .
>
> MSV relates to information sources available to all readers irrespective of the method of instruction or the type of text read (e.g., decodable or authentic). Written language offers the reader multiple sources of information in print to support reading for meaning. Three of these sources are syntax, semantics, and grapho-phonic information. A fourth is the system of sounds (phonology). Effective reading involves the use and integration of all information sources available to the reader; no one information source takes priority over another. (The North American Trainers Group, 2022, paras. 1-2)

A pattern is emerging about SOR advocacy and the resulting legislation grounded in the blame—misrepresentation and a lack of credible research or evidence for those claims. Neither three cueing nor guessing is represented accurately in the SOR movement or in legislation banning the practices (Mora, 2023; Tierney & Pearson, 2024). The stories driving the SOR movement are often simple and thus compelling. Leadership, then, must find ways to ease the tensions between this simple messaging and the complex nature of the teaching and learning of reading. One way to do that is to step back from the misinformation and offer a counter message that, while complex, is accurate and lays the foundation for substantive reform that supports teachers and serving individual student needs.

Understanding the Manufactured Reading Crisis (Again): The Proficiency Problem

If anything represents the work of an education administrator over the past forty years, it would be data—specifically student test scores. As noted above, at the center of the SOR movement is a recurring claim about reading scores by students—2/3 of students are not proficient readers (Hanford, 2018; Kristof, 2023)—that is fundamentally misleading because it is a reference to NAEP data.

Administrators need to clearly and accurately explain all student test data to a wide range of stakeholders—students, teachers, parents, board members, politicians, and the public. Regretfully, NAEP makes that task incredibly difficult, especially since media routinely misrepresents the achievement levels of the test. First, NAEP uses achievement levels that are, frankly, confusing because the most cited level, "proficient," is *aspirational* and well above grade level achievement (and "basic" is approximately grade level) (Bourque, 2009; Loveless, 2016, 2023; National Center for Educational Statistics, 2021a, 2021b; Rosenberg, 2004).

Therefore, when the media claims 2/3 of students are not proficient, the reference is *misleading* since in the case of NAEP, "proficient" is well above what most students should achieve at any grade. To make this more confusing, we have no standard for "proficient" or "grade level" in the US, and the terminology across states is also not consistent. Note that state- level expectations for students tend to fall within NAEP's "basic" level (Figure 1).

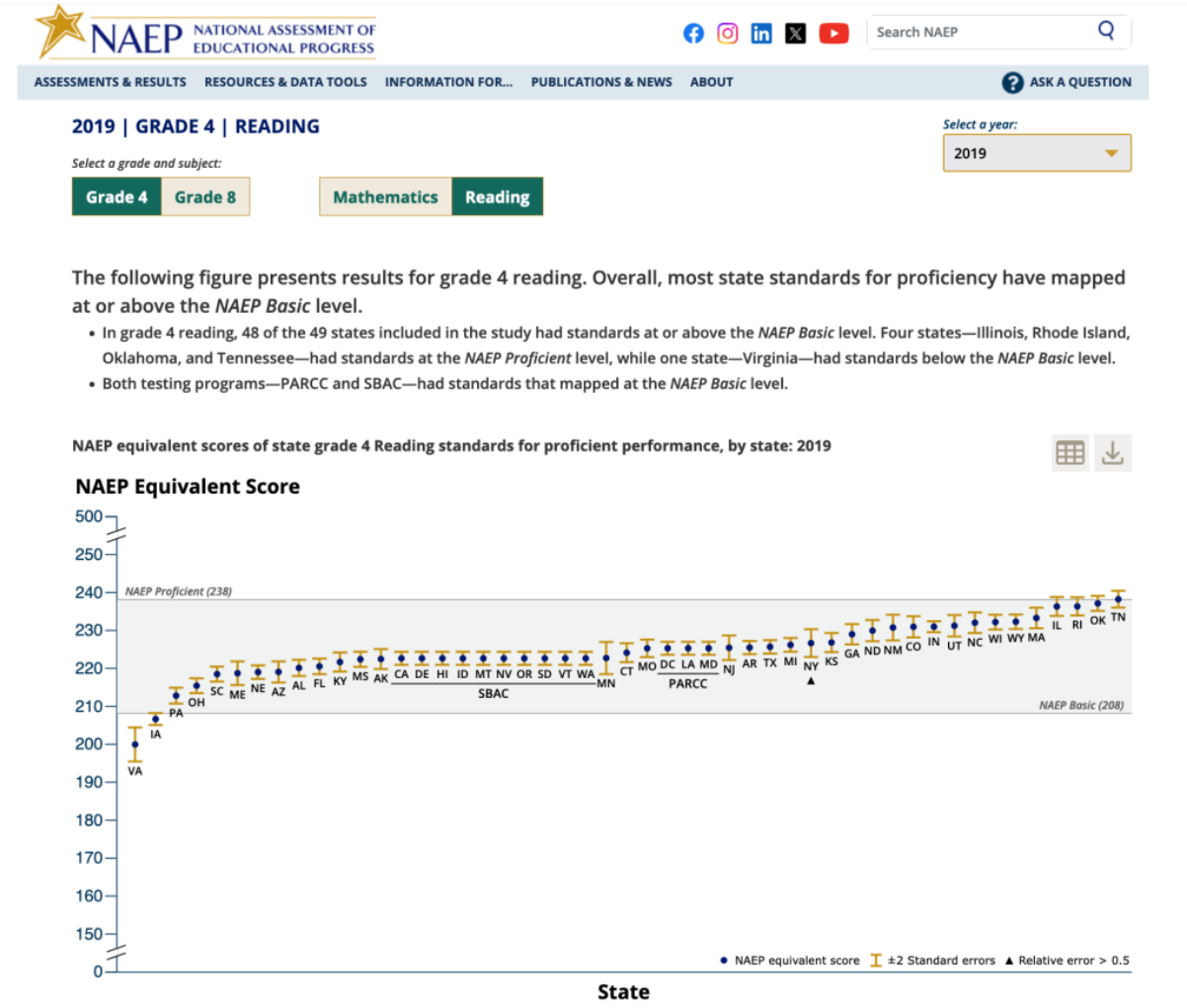
Administrators are caught between a misleading but compelling public narrative about low reading scores (students failing to learn to read because of teacher incompetence and tax dollars invested in failing reading programs) and a much more nuanced and complicated reality about that data: NAEP grade 4 reading scores have been flat for 30 years, and those scores have shown about 2/3 of students are reading at grade level or above (at NAEP "basic" and above) (Compton-Lilly, Spence, Thomas, & Decker, 2023; Reinking, 2023; Tierney & Pearson, 2024).

Here, I think, is the most important entry point for administrators during the SOR movement and the rise in new legislation. More nuanced and accurate messaging about test-based student achievement should include the following:

- While test data can be useful, test scores (especially standardized national test data) remain mostly a reflection of factors beyond the school walls. Again, recent research shows that out-of-school factors account for over 60% of test scores (Maroun & Tienken, 2024), and teacher impact on test scores are as low as 1-14% (ASA statement, 2014).
- Declaring a reading crisis is neither accurate nor helpful for addressing the observable needs of our students. While test scores in the US have been flat for decades, the evidence shows that marginalized groups of students (students of color, impoverished students, multilingual learners, and students with special needs) tend to be over-represented in low test scores. Reform and funding need to address these persistent inequities.
- Teacher assessments and state-level testing can provide more valuable evidence of how to teach and serve our students than national randomized testing such as NAEP.

Figure 1

State and NAEP Achievement Levels Correlation



Note. Reprinted from *Mapping state proficiency standards onto NAEP scales, 2007–2019*, by National Center for Education Statistics, 2021 (https://nces.ed.gov/nationsreportcard/studies/statemappingtool/#/subject-grade). Copyright 2021 by the U.S. Department of Education.

For educators, the irony is that "reading proficiency" is a *rhetoric* and *manufactured crisis* problem (Berliner & Biddle, 1996) that makes it nearly impossible to better and more equitably address student reading proficiency. School-based leadership must provide the counter-narrative about what test scores mean: how well students are learning to read and what role teachers and reading programs play in pursuit of higher reading proficiency. And although NAEP data does not show that the US is in the grips of a reading crisis, it doesn't mean we shouldn't be working to make learning and teaching reading more effective—especially for the students who have not been served well for decades despite round after round of education reform.

Understanding the Inequity of Reading Achievement: The Social Justice Problem

In the US, conservative education reform (e.g., Teach for America, charter schools, school of choice) sits behind a veneer of seeking ways to better serve marginalized students—Black and brown students, students in poverty, multilingual learners, and special needs students (Aydarova, 2024). This places administrators serving those marginalized populations in a challenging position because although the particular reforms are often not what is needed, action to address the failures of equity in education remains urgent.

Unfortunately, the SOR movement is proving once again to fit into the contradictory dynamic of claiming to serve equity while driving mandates that are counter to equity efforts. From a broad perspective, the main equity failure of SOR mandates is imposing a one-size-fits-all approach to reading instruction. For example, in California, multilingual scholars and teachers helped defeat SOR legislation because it is reductive and oversimplifies marginalized students' needs (Briceño, 2024). But the larger failure of SOR for diverse student populations is legislation banning some reading programs while mandating and endorsing others.

In an analysis for the NYU Metropolitan Center for Research on Equity and the Transformation of Schools, Khan, Peoples, and Foster (2022) evaluated McGraw Hill's *Wonders*, Houghton Mifflin Harcourt's *Into Reading*, and Savvas' (formerly known as Pearson) *myView*—three of the most SOR-endorsed programs—and concluded,

> We found that these three curricula, which collectively reach millions of students across the country, have deficits that are often not being raised in the current public debate about curriculum. Their texts, language, tone and guidance communicate harmful messages to students of all backgrounds, especially Black, Indigenous, students of color, LGBTQIA+ students, and students with disabilities.

Similar to the ideology driving the Common Cores standards in ELA, SOR programs and materials decontextualize language in ways that erase culture and context from texts.

Further, an examination by Rigell, et al. (2022) of *Wit and Wisdom*, a scripted SOR program, "indicate[s] that whiteness is centered at every level of the curriculum in text selection and thematic grouping of texts, as well as through discursive moves in teacher-facing materials (e.g. essential questions for learning modules)." While the anti-CRT movement banning diverse texts appears to be a separate phenomenon in US education, the reality is that the SOR movement is achieving indirectly what censors have sought to accomplish. Administrators, especially those serving diverse populations of students, must resist "whitewashing" the curriculum in the name of "science."

Leadership in Times of Crisis: A New (and Better) Approach to Reading

Since *A Nation at Risk*, the US has been in a series of education reform cycles grounded in new standards and high stakes testing. This accountability era is in its fifth decade, yet none of the reform cycles have ever resulted in success—only another pronouncement of "crisis," with most of the blame of failure leveled at students, teachers, administrators, and schools. Education reform has also remained almost entirely a top-down hierarchy, mandated by state and federal legislation and implemented under accountability structures by educators. The SOR movement continues those patterns of top-down accountability reform and about 80 years of reading crisis as well.

As I have detailed above, the SOR story, driven by the media and the resulting reading reform legislation, is a deeply flawed oversimplification of reading science that has resulted in one-size-fits-all mandates. It has also led to scripted curricula that de-professionalizes teachers and superficial reading programs that whitewashes student texts. School leaders are thus restricted by their obligations to implement legislative mandates. That tension also includes their educational stewardship of teachers and students who represent unique strengths and needs that resist simple analysis or boxed programs as silver bullets.

Finally, below are suggestions for new (and better) approaches to school leadership related to five common reading problems.

- *The Balance Problem*. The SOR movement overstates two aspects of phonics instruction—first, making a false claim that a reading crisis has occurred because teachers do not include phonics in reading instruction; second, misrepresenting reading science by calling for systematic phonics for all students or imposing a "phonics-first" mandate on reading instruction. School leaders must not only correct these misrepresentations but also foster a culture of balance among teachers that recognizes the complexity of teaching reading while also centering comprehension (and not decoding) as the goal of reading instruction (Wyse & Hacking, 2024). This different approach must resist reducing reading instruction to simplistic commitments to theory; claiming to teach "structured literacy" is no better than claiming to teach "balanced literacy." The key is seeking ways to balance instruction against the needs of the students being served and rejecting one-size-fits-all approaches.
- *The Teacher Quality Problem*. After decades of phonics-centered reading mandates in the UK, some are beginning to address "broader questions of teacher professionalism, of government control and of academic freedom" (Yandell, 2024). For school leaders in the US, this is a distinct challenge since the public discourse for decades has centered teacher quality as the key to student achievement. As noted above, however, teacher quality and instruction have very small impact on measurable student outcomes, particularly when compared to out-of-school factors.

School leaders, then, must resist fatalism while not succumbing to unrealistic and aspirational claims about raising test scores. A new and better approach is helping parents, the public, and teachers understand the realities of test scores while establishing a much more complex set of data to reflect teacher and school impact on student achievement. But please note: Something worth repeating is that teacher and school quality matter, but in ways that resist standardized measurement of student achievement (see Gerald Coles (2019) in the recommended list below). Thus, administrators need to support teacher professionalism instead of centering test scores as the primary or sole evidence of teacher quality.

- *The Reading Program Problem*. "A child's individual differences, skills and experience matter a lot in the learning process, and learning to read is no exception," wrote Briceño (2024), adding, "That's why new legislation based on the erroneous assumption that there is only one way to teach reading is so dangerous for California's students." This should be the foundation of reading-focused instructional leadership in every school. And thus, a new and better approach to reading is to de-center reading programs, abandon holding teachers accountable for fidelity to programs, and re-imagine accountability around fidelity to teaching students to read. In short, schools should be committed to teaching students to read—not teaching reading programs (Afflerbach, 2022).
- *The Proficiency Problem*. The data shift needed by school leaders is resisting the centering of test scores, and instead, emphasizing the need for a wide range of evidence that supports purposeful teaching that addresses students' unique needs. Further, school leaders must help to communicate and clarify fair and accurate information about test data and achievement levels (notably the confusing terminology in tests such as NAEP when compared to terms used in state testing). Media jumbling terms such as "proficient" and "grade level" requires school leaders to be better teachers about what test scores do and don't prove about learning and teaching in their schools.
- *The Social Justice Problem*. The truth about reading achievement is not that the US is suffering a phonics-centered reading crisis but that historically and currently marginalized students (Black and brown students, students in poverty, multilingual learners, special needs students) are over-represented in populations of students scoring below grade level. And the complicated additional truth is that reading achievement is not unique among all achievement, but literacy is certainly essential for students' education and lives. School leaders must make that key distinction while also making a solid commitment to better serve marginalized student populations. The US has a long history of political negligence in terms of serving marginalized and minoritized populations; this isn't a crisis, but a regrettable norm that can and must be addressed. However, one-size-fits-all programs, reductive skills-based instruction (for example, nonsense word assessments such as DIBELS), and whitewashed texts are further cheating those students, not addressing their complex and urgent needs.

"Within each one of us there is some piece of humanness that knows we are not being served by the machine which orchestrates crisis after crisis and is grinding all our futures into dust," wrote Audre Lorde (2102) in 1982. Although Lourde was speaking at a Malcolm X celebration, she could just as easily have been describing what it has meant to be an educator for the last 40 years in the US. We teach in an extended era of perpetual crisis (Edling, 2015). But as I have detailed above, the claim that an education crisis, including a reading crisis, exists is mostly manufactured (Berliner & Biddle, 1996), and it in fact is unsupported by substantial scientific evidence.

Administrators as leaders are often the faces and names on school success and school failure. Media and political narratives tend to emphasize failure; therefore, administrators can find themselves trapped between their loyalty to students and teachers and the compelling claims of poor performance. The SOR movement is less about reading proficiency or reading reform and more about media, market, and political agendas that rely on perpetual crisis and permanent reform (Deleuze, 1992).

Successfully navigating the challenging and overwhelming landscape of crisis rhetoric and permanent reform requires informed leaders. And these leaders must be dedicated to what matters most—serving the unique needs of each student and supporting the professionalism and autonomy of their teachers.

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PAUL THOMAS, EdD, is a Professor in Education at Furman University. His major research interests lie in literacy, education policy, equity, and public activism. Email: paul.thomas@furman.edu

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