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The Relationship between Principals' Perception of their Leadership Style and Positive Attitudes towards Change in the Light of COVID-19 Pandemic

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Abstract

The global COVID-19 pandemic has caused one of the largest disruptions in world education systems ever in history. This situation has greatly affected the educational systems, causing unprecedented pressure “from above” and the need for strategically unpredictable changes in educational organisations. The COVID-19 pandemic is a recent example of a globally imposed change for nations across the globe. Unlike the organisational change research that has existed so far, school principals have simultaneously become change initiators and executors in their school in the context of this imposed change. In this case, school principals may hold negative attitudes towards the change, and thus resist change implementation and do not support their school community members. Therefore, the paper examines whether, and to what extent, school principals' leadership style (adaptive, distributed, collaborative) predicts their positive attitudes towards change. For this purpose, 229 school principals from Lithuania took part in this study. A quantitative research strategy, using adaptive, collaborative, and distributed leadership, and attitude towards change scales, was applied. The findings from multiple linear regression reveal that adaptive, distributed, and collaborative leadership styles are positively related to their positive attitudes towards change. More specifically, adaptive leadership is the strongest predictor for school principals' positive attitudes towards change. The study uncovers the under researched

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connection between the leadership style and attitudes towards change in the light of the imposed changes and gives practical implications for the future.

Keywords: COVID-19, adaptive leadership, distributed leadership, collaborative leadership, principal, attitudes towards change.

1. Introduction

Similar to organisations in other sectors, educational organisations have been affected by the COVID-19 pandemic. School principals' role in the processes of organisational change is crucial, and even more crucial now, when educational systems around the world face with the imposed change. Van Wart, Kapucu (2011) note that to overcome these changes, there is little preparation and decision making occurs outside the organisation, whereas the change affects the entire organisation. It is in the context of the pandemic that school principals have become executors of national guidelines, and coordinators of crisis management in schools and communities. In other words, school principals have not become the initiators of change, but rather its recipients. Yet on the other hand, in the absence of a clear strategy for the implementation of the change at the school level, they had to search for ways and solutions to manage the changes in the organisations. And it is even more important that this change is understood, accepted, supported, and successfully implemented by the school community. The existing literature has not yet fully revealed how, under the conditions of the imposed change, the principal acts simultaneously as an initiator and an executor of change. In this dual role, school principals must personally be able to change and adapt to changes. Therefore, we believe that not only principals' openness to change (Harris, 2001), perception or belief about change (Goodson, 2001), but also their own readiness for change (Zimmerman, 2011), commitment to change (Herscovitch, Meyer, 2002), and positive attitudes towards change (Dunham et al., 1989) is the key leading school in the COVID-19 conditions. Moreover, the attitudes of the principal towards change determine the employees' attitudes towards change (Aslan et al., 2008). The study of Walk (2022) demonstrates that leader resistance to change is positively related to follower resistance.

Previous literature has predominantly investigated the impact of certain leadership styles (e.g., transformational or transactional leadership, instructional leadership) on employee reactions to change (e.g. Kursunoglu, Tanriogen, 2009; Leithwood et al., 1994). However, there is gap in studies analysing how certain leadership style is connected to the same person's attitudes towards change. Moreover, the research prior to the pandemic (e.g. Moore, 2009) shows that school principals with appropriate leadership skills and attitudes are likely to manage changes in the organisation more successfully. Yet, the pandemic situation itself is changing the leadership employed by school principals and its nature (Harris, 2020). The scientific studies conducted in the context of COVID-19 (e.g., Azorín, 2020; Harris, 2020; Harris, Jones, 2020; Leithwood et al., 2020; Thornton, 2021) reveal that there is a reorientation of school principals towards collaborative, distributed, and adaptive leadership. Thus, the lack of research analysing the relationship between leadership styles and attitudes under the conditions of imposed change determined our aspiration to scientifically assess the relationships between different leadership styles (adaptive, distributed and collaborative in the case of our study) of school principals and their attitudes towards change under the conditions of the COVID-19 pandemic. Assuming that some leadership styles encourage the principals' positive attitude towards changes more than others, we raise the research question – whether, and to what extent, school principals' leadership style predicts their positive attitudes towards change.

2. Theoretical Background

2.1 Attitudes toward Change

Change is the process in the organisation, which can either positively affect the organisation and promote its development or result in failure and negative consequences for organisation. In many cases, it depends upon the leader's attitudes and behaviour, which could influence the development of successful change strategies and enhance the health of applicable organisational cultures (Stauffer, Maxwell, 2020). Attitudes of individuals towards change are one of the most significant factors, which determine successful and sustainable reforms in schools (Aslan et al., 2008). Therefore, the aforesaid authors claim that attention should be drawn to principals' attitudes towards change before proposing changes in schools.

Attitudes are internal dispositions of an evaluative nature, which determine a person's reactions towards a situation and their behaviour (Ajzen, 2012). According to the theory of planned behaviour (Ajzen, 1991), attitude is based on the beliefs a person holds regarding the consequences of behaviour, knowledge (not necessarily correct or factual information) and experience, which he or she has, and is defined as a tendency to respond to an object in a favourable or unfavourable way (Ajzen, 2020). In other words, a person has a positive or negative reaction to a specific object. Thus, evaluation is the key aspect of attitude-like construct. Attitudes can differ in their strength, stability, and resistance to change (Ajzen, 1991). It may depend on the extent to which the object or issue is important and personally relevant (the so-called personal relevance) for a person, on how much direct experience was gained with the attitude object, as well as on the attitudinal extremity. The stronger and more stable the attitude, the better a person's behaviour is predicted (Ajzen, 2012). A person's attitude shapes his or her behavioural intention, which in turn is related to his or her behaviour: the person will choose the option that is associated with the strongest intention. This is referred to as a decision-making model regarding an individual's behaviour (Ajzen, 2020).

In this study we focus on principals' attitudes towards change. While analysing this construct, we refer to a three-dimensional model of attitudes towards change, proposed by Dunham et al. (1989), which is composed of: cognitive, affective, and behavioural dimensions. The cognitive dimension of an attitude defines a person's thoughts directed at the attitude object. It consists of the information and beliefs that a person possesses about the object (Eagly, Chaiken, 1993). The affective dimension describes a person's feelings when the attitude object is encountered with. A person's emotions can be either positive or negative, depending on how the person evaluates the attitude object (Eagly, Chaiken, 1993). In other words, the affective dimension reveals the extent to which a person likes, enjoys, or dislikes changes in the organisation (Dunham et al., 1989). The behavioural dimension defines the way a person intends to behave towards the attitude object: depending on how a person evaluates the attitude object, his or her behaviour will be either supportive and encouraging or hindering and opposing the attitude object (Eagly, Chaiken, 1993). Thus, the principal perceives and interprets, as well as develops feelings regarding the change; whereas these cognitive and affective reactions to change determine his or her tendency to act in one way or another. Summarizing, attitudes towards change refer to the evaluation of the change, which is manifested by a person's positive or negative reaction to that change. Therefore, a person's attitudes towards change can play an important role when explaining why the members of an organisation might choose to support or resist the organisational change, and how much effort they will expend in exchange (Dunham et al., 1989; Kin et al., 2018). Hence, seeking for positive changes in an organisation, managed and implemented employees' attitudes need to be understood. School principals' attitudes towards change are even more significant, since they determine not only principals' behaviour regarding the change, but also teachers' attitudes and behaviour through principals' behaviour (Kin et al., 2018), as well as the success or failure of the change implementation at school in general (Dolph, 2017; Preston et al., 2013).

There are numerous studies that confirm the relationship between employees' positive attitudes towards change and successful change implementation (Walk, 2022), as well as those proving that negative attitudes are one of the major contributors to the high rate of organisational change failure (Mukhtar, Fook, 2020). Yet, there is a lack of research analysing principals' attitudes towards change. Seemingly, the most frequent assumption is that principals have positive attitudes towards change. However, the research findings do not confirm this assumption. For instance, the study conducted by Sarafidou, Nikolaidis (2009) reveals that the perceptions of the principal as a 'responder' to change (low level of facilitation) were held by 33 % of the teachers and were associated with less positive attitudes towards school change, half of the teachers perceived their principal as the 'manager' of change (medium level of facilitation) and only 17 % as its 'initiator'. In order changes to be successfully implemented in the organisation, the school principal themselves must first have positive attitudes towards change, because only then will they be able to inspire the school community for successful changes (Heim, Sardar-Drenda, 2021).

Hence, based on the theory of planned behaviour as the conceptual framework (Ajzen, 1991) and Dunham's et al. (1989) three-dimensional model of attitudes towards change, in this study we analyse principals' attitudes towards change as a significant factor of the successful implementation of changes, caused by the COVID-19 pandemic, at school.

2.2. School Principals' Leadership in the Context of Change

A number of researchers (e.g., Fullan, 2007; Leithwood, Strauss, 2009) underline that the principal is the main factor in implementing change and innovation at school. Scientific studies emphasise on such abilities of school principals as an ability to initiate the change process competently (Kin et al., 2018), to manage the change (Kotter, 2012), to facilitate the change (Fessehatsion, 2017), to prepare the staff for the change (Baesu, Bejinaru, 2013), and others. Consequently, school principals not only perform administrative functions, but also act as a change agent (Fullan, 2007). In this act, the importance of school principals' attitudes towards change – positive or negative – is highlighted. It stands to reason that if principals are resistant to change then, far from leading as change agents, they may impede the capacity for change (Aslan et al., 2008).

It is well known that principals' leadership has differing relations to school change depending upon the leadership style; for example, instructional leadership to teachers' attitudes towards change (Kursunoglu, Tanriogen, 2009), transformational leadership to teacher commitment to change (Leithwood et al., 1994; Yu et al., 2002), distributed leadership to teachers' affective commitment to change (Thien, 2019), etc. Yet, there is a lack of scientific evidence, how the leadership style employed by the principals themselves is related to their positive attitudes towards change. Moreover, consenting to Harris (2020), COVID-19 has dramatically changed conceptions of leadership and leadership practices. Thus, it is important which leadership strategies school principals have employed during the pandemic (Brown et al., 2021) in order overcome the issues caused by the pandemic, and more specifically, how these leadership strategies are related to their positive attitudes towards change.

According to Dirani et al. (2020), in the conditions of the COVID-19 pandemic, leadership role includes the roles of a sense-maker, technology enabler, emotional stability and employees' well-being, innovative communication, and maintenance of the financial health of the organisation. Consequently, the pandemic highlighted another area, which had attracted less attention so far – namely, employees' well-being, issues of student and staff health, motivation of the staff to act in new conditions, to learn and adapt to new conditions. In these conditions, the importance of the school principal's role as an adaptive leader became apparent. The study on the Catholic Education in Australia, conducted by Goode et al. (2021) revealed that “adopting an adaptive leadership approach were found to be helpful in responding rapidly to remote learning provision” (p. 36). Yukl, Mahsud (2010) note that adaptive leadership is important when unusual events disrupt the work or create an immediate problem that requires the leader's attention. Dunn (2020) argues that basically the pandemic itself is a global adaptive challenge, where the usual performance models and solutions are not suitable. In other words, to overcome the challenges caused by the pandemic, a technical solution to the problem is not enough, it requires an adaptive approach. Thus, is also confirmed by the study of Collins-Warfield, Niewoehner-Green (2021), which was accomplished with 55 educators from 43 school organisations in the United States and other countries. Their study revealed that during the first months of the pandemic, school leaders and educators “were brave enough to try new approaches and create new structures, even when they weren't sure what would work” (p. 11). As the developers of adaptive leadership, Heifetz et al. (2009) claim, the adaptive side of change does not have a clear solution, so it forces individuals, communities, and/or organisations to search for, experiment, and develop new operating models. Heifetz (1994) maintains that adaptive leadership demands adaptive learning, i.e., learning that requires unlearning of old values, assumptions, or mindsets, and learning new ones. In other words, it is related to the changes in habits, values, assumptions, beliefs, or behaviour (Heifetz, 1994). It is recognised that such learning causes a lot of negative feelings: psychological pain, a sense of loss, stress, distress, anxiety, and suffering (Heifetz, 1994). Therefore, it is natural that without positive attitudes towards change, school principals hesitate to act as adaptive leaders. Thus, the adaptability of school leaders should be viewed not only as a framework, but also as a capability. Dunn (2020) refers to it as adaptive mindset and underlines the importance of the ‘adaptive stance’ of a school principal (which means “constantly looking for ways to test their knowledge about the teaching and learning within their unique school context” (p. 36) in the context of complex changes, such as those caused by the pandemic. Bagwell (2020) advocates that “by adopting an adaptive approach to leadership, school leaders can build resiliency and capacity for their school communities to weather future disruptions cause by the pandemic” (p. 30-31). Thus, we assume that only the leader that has positive attitudes towards change will be inclined to solve challenges by non-technical means.

Meanwhile, other studies (e.g., [Harris, 2020](#); [Harris, Jones, 2020](#); [Leithwood et al., 2020](#); [Thornton, 2021](#)) underline the relevance of distributed and collaborative leadership in the COVID-19 context. For instance, Thornton's (2021) research with secondary school principals of New Zealand reveals that principals were most engaged in distributed and collaborative leadership in the pandemic period. As the latter research shows, networking and collaboration outside the school was one of the key changes of the school activity. The importance of networking and collaboration outside the school in the period of a crisis is also revealed in the study conducted by Leithwood et al. (2020). The authors claim that a school principal should have an ability to make connections and facilitate collaboration outside organisational teams. On the other hand, in the face of sudden and unknown changes, leaders will also need the support and cooperation of all employees within the organisation ([Harris, Jones, 2020](#)). In other words, the principal, more than ever, will need the involvement and sharing of responsibilities by all members of the community to avoid leader's burnout. Agreeing with Harris (2020), we believe that distributed leadership becomes a necessity rather than choice in the pandemic conditions. Harris (2020) claims that in times of challenge, leaders need to establish and sustain a collaborative culture involving the use of connected networks among people. Thus, distributed leadership becomes essential seeking for the successful implementation of an unexpected change. In the situation of the COVID-19 pandemic, in the presence of "pressure" from above and the implementation of change in the organisation, shared leadership and cooperation are important on several levels, i.e., externally (with other institutions at the municipal and national level) and internally (collaboration and delegation in the organisation). Azorín (2020) identifies the reorientation of school principals to shared, collaborative, and distributed leadership during the pandemic as one of the positive aspects of the pandemic. Thus, school principals became change recipients at the same time. As it has been noted by scientists (e.g., [Piderit, 2000](#); [Walk, 2022](#)), change recipients can resist and hinder the implementation of changes, as this requires a change in attitudes, values, and work habits. Therefore, facing this imposed change, the school principal, just like any member of the school community, needs to have a positive attitude towards change.

We believe that the analysis of the relationship between school principals' leadership style, employed dealing with challenges caused by the COVID-19 pandemic, and their attitudes towards changes would provide us with useful theoretical and practical implications regarding school principals' behaviour, leading through unexpected changes (imposed changes, when a school principal appears in a dual role – as an initiator and an executor of change at the same time).

3. Materials and Methods

3.1. Sample and Procedure

A quantitative research approach was chosen for the purpose of this article. The data were collected through an online survey. The anonymous survey was conducted in February 2021. The time of conducting this study is important since Lithuanian school principals experienced two COVID-19 lockdowns in their schools during the study.

Convenience sampling was used for selecting participants. School principals and their deputies of all educational institutions in Lithuania (from pre-school to vocational education sector) were invited (by publicly available email address) to participate in the study. According to the Education Management Information System of Lithuania, in 2020–2021 academic year there were 1676 educational institutions (except higher education institutions). The principals and deputy principals who expressed interest in participating received an email with a consent form and a link to the online questionnaire (using Microsoft Office Forms). Their participation was anonymous and voluntary. Two hundred thirty-three respondents filled a self-report questionnaire. Answers of 229 respondents, who completed the full questionnaire, are analysed in the present article. 117 (51.1 %) respondents were school principals and 112 (48.9%) were deputy principals. The maximum experience of managerial work of the research participants was 40 years, while the minimum was 0.5 years. The characteristics of the study participants are presented in [Table 1](#).

The sociodemographic characteristics of the research participants show that the majority (48.5 %) of the respondents belong to the age group of 50–59. The research participants represent schools of different sizes (large, medium, small) and the geographical context of Lithuania

Table 1. Sociodemographic characteristics of the research sample

Characteristics		N	%
Gender	Female	202	88.2
	Male	27	11.8
Age groups	< 49 years old	66	28.8
	50–59 years old	111	48.5
	> 60 years old	52	22.7
School location	rural area	58	25.3
	city	110	48.0
	big city	61	26.6
School size	large	78	34.0
	medium	77	33.6
	small	74	32.4

3.2. Instruments

The questionnaire consisted of three parts. The first part – the Attitudes Towards Change Instrument (Dunham et al., 1989) – consisted of three subscales, namely 1) cognitive; 2) affective; and 3) behavioural. Each subscale consisted of six items. Examples of the items included in the cognitive subscale are: “Change usually benefits the organisation”; examples of the items included in the affective subscale are: “I find most change to be pleasing”; examples of the items included in the behavioural tendency subscale are: “I often suggest new approaches to things”. The statements were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The scores were calculated by averaging, where higher scores reflected a more positive attitude towards change. The finding of Cronbach’s alpha ($\alpha = 0.916$) suggests that the whole Attitudes Toward Change scale has an acceptable internal consistency. The second part of the questionnaire was intended to identify the expression of leadership styles. Adaptive leadership was measured using Adaptive Leadership Questionnaire (Northouse, 2016). 30 items were rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The scale was adapted as school leaders’ self-assessment form (e.g., the phrase ‘this leader’ was changed into ‘I used to’). The sum of points was calculated, where higher scores reflected a more expressed adaptive leadership style. Cronbach’s alpha test showed the Adaptive leadership scale to reach acceptable reliability, $\alpha = 0.706$. Distributed leadership was measured using eight items developed by Canterino et al. (2020). These statements were adapted for the education sector by the first and fourth authors of the article and represent different practices of distributed leadership during the COVID-19 pandemic (e.g., “I discussed with and helped my teachers in solving problems caused by the pandemic”). A five-point Likert scale was used for the measures (1 = strongly disagree; 5 = strongly agree). The scores were calculated by averaging, where higher scores reflected a more expressed distributed leadership style. Cronbach’s alpha coefficient, which measures the internal consistency of the Distributed Leadership Scale, was satisfactory ($\alpha = 0.739$). The first and fourth authors of the article formulated the statements to determine the collaborative leadership of school principals. Examples of the statements are as follows: “I was involved in the preparation of the national recommendations on how to work during the pandemic”; “The vision of organisational changes was clearly communicated to me as a manager”; “I can always consult with the municipality on the issues of work organisation issues”; etc. Possible responses ranged on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The scores were calculated by averaging, where higher scores reflected a more expressed collaborative leadership style. The Cronbach’s alpha score, which measures the internal consistency of the Collaborative Leadership Scale, was satisfactory ($\alpha = 0.811$). The third part of the questionnaire contained questions to determine the respondents’ sociodemographic characteristics (gender, age groups) and to define the school they represent.

3.3. Data Analysis

The data analysis was made using IBM SPSS Statistics 22.0. statistical package. Descriptive statistics, which including frequencies and percentages, was used to present the main characteristics of the research sample. Means, standard deviations, kurtosis, skewness, and correlations were calculated to present the general results of the study.

In this research, correlational analysis was used to test the relationship between adaptive leadership, distributed leadership, collaborative leadership, and attitudes towards change. The absolute value of the Pearson coefficient (r) determined the strength of the correlation. Cohen's (1988) guidelines were used to interpret the strength of the association: $0.1 < r < 0.3$ a small correlation, $0.3 < r < 0.5$ a moderate correlation, $r > 0.5$ a strong correlation.

Multiple linear regression was used to estimate the relationship between independent variables and the dependent variable. In order to conduct multiple regression analysis, multicollinearity was checked by correlation matrix and variance inflation factor (VIF). High correlation values (greater than ± 0.8) and $VIF > 4$ indicate multicollinearity. Autocorrelation in the residuals of a linear regression model was checked with the Durbin-Watson test. The test statistic ranges from 0 to 4. A value near 2 indicates no autocorrelation (Hair et al., 2019). In the regression analysis, the effect size of the predictor variables is given by the beta loadings. In interpreting the effect, the size gives the following guidance: 0 – 0.1 weak effect, 0.1 – 0.3 modest effect, 0.3 – 0.5 moderate effect, and > 0.5 strong effect (Cohen et al., 2018).

Cronbach's alpha was used to determine the internal consistency and reliability of the questionnaire. If Cronbach's alpha ranges from 0, it means that there is no internal consistency; if it ranges to 1, it means the maximum internal consistency score. The Cronbach's alpha of 0.70 or higher for a set of items is considered acceptable (Cohen et al., 2018).

The statistical significance level is paramount when testing the hypotheses. The most generally used statistical differences are grounded on $p < 0.05$ as a rule, thus providing 95 % confidence in the results being recognised as the standard when being contextualised to other research perspectives (Neuman, 2014).

4. Results

In the first step of the analytic process, descriptive statistics were computed for each scale. The obtained results are presented in Table 2. The study reveals that school principals have relatively positive attitudes towards change. The results of the descriptive statistics demonstrate that the mean score of attitude towards change ($M = 4$) is above scale midpoint 3. The means of the attitude components (cognitive, affective, behavioural) are also higher than the average score, but we can see that the behavioural component of attitudes is rated higher.

Table 2. Descriptive statistics of the study variables

	Min	Max	Mean	SD	Skewness	Kurtosis
Attitudes towards change	3	5	4	0.45	-0.086	-0.262
Cognitive	2.80	5	3.89	0.47	0.062	-0.061
Affective	2.70	5	3.97	0.52	-0.065	-0.545
Behavioural	3	5	4.14	0.49	-0.280	-0.394
Adaptive leadership	14	22	18.13	1.301	0.321	0.677
Distributed leadership	2.88	5	4.10	0.43	-0.068	-0.151
Collaborative leadership	1.44	4.56	3.04	0.64	-0.040	-0.384

The mean of the adaptive leadership scale ($M = 18.13$) shows that school leaders are characterised by moderately expressed adaptive leadership. The obtained minimum value ($Min = 14$) reveals that some school leaders are less characterized by adaptive leadership, and the maximum value ($Max = 22$) shows that some of them are characterised by strong adaptive leadership. Similar results are observed in the case of distributed leadership – the assessment ranges from 2.88 to 5 ($M = 4.10$). It can be stated that school principals are characterised by moderately and strongly expressed distributed leadership. Meanwhile, the values of the collaborative leadership scale range from 1.44 to 4.56, and the obtained average is only 3.04. In this case, the collaborative leadership of the school principals can be considered as moderately expressed. In other words, in the case of the study, the school leaders were not inclined to collaborate with the Ministry of Education, Science, and Sport, municipality or other national or regional institutions.

Table 3. Correlations between the study variables

	Collaborative leadership	Distributed leadership	Adaptive leadership
Attitude toward change	0.272**	0.402**	0.397**
Collaborative leadership		0.347**	0.128*
Distributed leadership			0.382**

Note. * – Correlation is significant at the 0.05 level (2-tailed).

** – Correlation is significant at the 0.01 level (2-tailed).

Correlational analysis of the research data reveals that the more expressed adaptive, distributed, and collaborative leadership of the school principals, the more positive attitudes towards change are characteristic of them (Table 3). This is confirmed by the moderate correlation coefficient between the principals' distributed leadership and attitudes towards change ($r = 0.402$, $p < 0.01$), as well as between the principals' adaptive leadership style and attitudes towards change ($r = 0.397$, $p < 0.01$). The principals' collaborative leadership and attitudes towards change have a small correlation ($r = 0.272$, $p < 0.01$).

Multiple linear regression aims to determine whether the leadership behaviour of school principals can predict their positive attitudes towards change. The results in Table 3 (correlation) and Table 4 (VIF) shows that there is no multicollinearity between the predictors (collaborative, distributed and adaptive leadership). Thus, multiple linear regression is possible. The model coefficient of determination $R^2 > 0.20$ was obtained, so it is concluded that the linear regression model cannot be rejected. The ANOVA result ($R^2 = 0.265$; $F = 27.471$, $p < 0.0001$) confirms that there are predictors in the model that depend on the positive attitudes of school principals towards change (Table 4). The assumption that the residuals are uncorrelated with the independent variable is satisfied because the Durbin–Watson value ($d = 1.677$) is close to 2. The model does not have any autocorrelation problem. Judging from the values of standardised coefficients β , all predictors are statistically significant. However, it is adaptive leadership ($\beta = 0.298$) that most predicts the school principals' positive attitudes towards change, although beta loadings disclose a modest effect. The prognostic value of distributed leadership ($\beta = 0.250$) is similar to adaptive leadership. The weakest predictor is collaborative leadership ($\beta = 0.153$).

Table 4. Linear regression analysis of leadership as a predictor of the school principals' attitudes toward change

	Unstandardized Coefficients		Standardized Coefficients β	t	p	VIF
	B	SE				
(Constant)	0.714	0.380		1.876	0.062	
Collaborative leadership	0.108	0.042	0.153	2.557	0.011	1.115
Distributed leadership	0.261	0.067	0.250	3.868	0.0001	1.297
Adaptive leadership	0.104	0.021	0.298	4.848	0.0001	1.175

The obtained regression model is recorded by the following equation:

$$Y = 0.714 + 0.104AL + 0.261DL + 0.108CL$$

Note: Y – Attitudes towards change; AL – Adaptive leadership; DL – Distributed leadership; CL – Collaborative leadership.

As it has already been mentioned, attitudes towards change include three components: cognitive, affective, and behavioural. Table 5 presents the results of multiple linear regression, revealing how different assumed leadership styles of school principals predict individual components of attitudes towards change. Judging from the obtained coefficients of determination R^2 , leadership styles explain a similar percentage (about 23 %) of the cognitive and behavioural components of attitudes.

Table 5. Linear regression analysis of three attitudinal components predicting leadership

	Unstandardized Coefficients		Standardized Coefficients β	t	p	VIF
	B	SE				
Cognitive component ($R^2 = 0.238$; $F = 23.465$, $p < 0.0001$; $d = 2.100$)						
(Constant)	0.794	0.406		1.957	0.052	
Collaborative leadership	0.150	0.046	0.203	3.271	0.001	1.137
Distributed leadership	0.243	0.074	0.219	3.296	0.001	1.309
Adaptive leadership	0.091	0.023	0.251	3.984	0.0001	1.171
Affective component ($R^2 = 0.168$; $F = 15.182$, $p < 0.0001$; $d = 2.038$)						
(Constant)	1.015	0.471		2.157	0.032	
Collaborative leadership	0.101	0.053	0.124	1.911	0.057	1.137
Distributed leadership	0.262	0.085	0.214	3.076	0.002	1.309
Adaptive leadership	0.087	0.026	0.216	3.282	0.001	1.171
Behavioural component ($R^2 = 0.228$; $F = 22.120$, $p < 0.0001$; $d = 2.095$)						
(Constant)	0.731	0.429		1.705	0.090	
Collaborative leadership	0.069	0.048	0.089	1.432	0.154	1.137
Distributed leadership	0.256	0.078	0.221	3.296	0.001	1.309
Adaptive leadership	0.119	0.024	0.312	4.921	0.0001	1.171

Note. d – Durbin-Watson test statistic.

The cognitive component is statistically significantly predicted by all the three leadership styles, particularly by adaptive leadership. The behavioural component is statistically significantly predicted by distributed leadership and adaptive leadership. Although the emotional component is predicted by two leadership styles, the linear regression model is rejected, since the coefficient of determination is $R^2 < 0.20$.

5. Conclusion

As an imposed change, the COVID-19 pandemic showed that school principals cannot only become change initiators, but also be its executors. Moreover, they can perform these two roles simultaneously, i.e., they can implement national guidelines and initiate change within the organisation. In such a dual role, it is important that school principals have positive attitudes towards change. This study, therefore, integrated school principals' attitudes towards change and captured leaders as recipients and executors of change, as well as explored how their attitudes correlated with their employed leadership style during COVID-19. More specifically, we sought to examine whether, and to what extent, school principals' leadership style (adaptive, distributed, collaborative) predicted their positive attitudes towards change.

The results indicated that adaptive, distributed, and collaborative leadership styles were positively related to school principals' positive attitudes towards change. More specifically, the adaptive leadership was the strongest predictor for school principals' positive attitudes towards change, while collaborative leadership was the weakest one. These results of our study showed that in the conditions of imposed change, not all the employed leadership styles were equally effective. On the one hand, our study revealed that collaborative leadership was a predictor for school principals' positive attitudes towards change, yet a very weak one (the effect size of the predictor is modest). On the other hand, the school principals' collaborative leadership itself was moderately expressed. The findings that Lithuanian school leaders were not inclined to collaborate and network during the COVID-19 pandemic are in line with previous studies in this field (Kaminskienė et al., 2021). More specifically, this study (Kaminskienė et al., 2021) showed that those principals who had more work experience were less willing to cooperate and communicate with the national institutions (e.g., Ministry of Education, Science, and Sport) during the first two months of the lockdown. We assume that such results of our and other researchers' studies could have been determined by the specifics and context of the work of Lithuanian school principals. Compared to other countries, school principals in Lithuania participate much less often in the activities of professional networks: 13 % of principals in Lithuania have participated in such activities, while in the OECD it is slightly more than 60 % (OECD, 2019). Moreover, according to the TALIS 2018 data (OECD, 2019), more than a third of school principals in Lithuania claim that during their formal

studies (before becoming a school principal or after) they did not study school administration or leadership. Meanwhile, the implemented national projects on educational leadership have the least impact on strengthening school principals' networking outside of school (Damkuvienė et al., 2021).

As can be seen from the research results, some leadership styles encourage principals' positive attitude towards changes more than others. As already mentioned, in the case of our study, adaptive leadership promotes positive attitudes towards change more than other styles. To be more precise, adaptive leadership mostly affects all the three components of attitudes towards change: cognitive, affective, and behavioural. It must be mentioned that adaptive leadership effect size for cognitive and affective components is modest, meanwhile for behavioural – moderate. Having positive attitudes in all these three aspects, school principals are likely to show commitment to changes and effectively implement changes (Kin, Kareem, 2017). Distributed leadership predicts school principals' cognitive and behavioural components of attitudes towards changes (however effect size of the predictor is modest); meanwhile, collaborative leadership statistically significantly predicts only the cognitive component (effect size of the predictor is modest). The non-expression of the affective component in this case can pose a risk that school principals will demonstrate less proactive behaviour in the implementation of changes, since research shows that it is the affective component that is a significant factor in predicting an individual's employed behaviour (Forgas, 2010; Lawton et al., 2009; Taut, Baban, 2012).

The results of the study on the ambiguous interaction of principals' leadership styles with the individual components (affective, cognitive, behavioural) of the attitude concept invite a discussion about the significance of these components for the principals' attitudes and behaviour. Previous studies (e.g., Taut, Baban, 2012) reveal the influence of the affective component on the behaviour of individuals. As stated by Forgas (2010), affective component is a key feature of attitude concept, which is a dominant force in determining employees' responses and dispositions to social situations, affecting subsequent behaviour. It is believed that the affective component is very significant in attitude formation, since the strength and direction of attitudes largely depend on this component (the more negative the feelings are in relation to a specific object, the more negative, critical attitudes are produced) (Forgas, 2010). The results of our research reveal that although the affective component is predicted by two leadership styles, the linear regression model is rejected because the coefficient of determination is $R^2 < 0.20$. These results raise considerations in two directions: (1) to what extent the affective component is significant for the formation of the principals' positive attitudes towards changes and for the implementation of changes at school as an organisation, and (2) what leadership style could be recommended for school leaders in the context when the school encounters a need to quickly and efficiently implement changes, and the school principal has to assume the roles of a change agent and a facilitator of changes. Unfortunately, studies on the first question could not be found in the sample of principals, yet the studies in the sample of teachers reveal ambiguous results. On the one hand, it seems that the cognitive component is more significant for teachers' positive attitudes towards change than the affective component (Kin, Kareem, 2017). According to the researchers, it is the cognitive mechanism and process of reasoning that are essential in the formation of teachers' attitudes: teachers must have a clear understanding of the purpose of the change, they should have sufficient knowledge about the change, teachers scrutinise the strengths and weaknesses of the potential change to be made in school and then form attitudes towards change, and if these are positive, they put a lot of effort into implementing this change. On the other hand, the researchers (Kin, Kareem, 2017) claim that the affective component cannot be rejected as insignificant in the process of the formation of teachers' attitudes, since changes are related to emotions, which form the background of any urge of change, whereas the dominance of the cognitive component, in comparison with affective component, only shows that teachers are not emotional, but rather they are more rational in making sense of change. Finally, the significance of the behavioural component of attitudes for teachers' behaviour in a specific situation is emphasised: the more expressed the behavioural component is, the more actively teachers are involved in the implementation of changes (Kin, Kareem, 2017). The question arises whether the results of the research in the sample of teachers can be applied to school leaders. We would like to invite to consider this issue, which is very important in revealing the mechanisms of the formation of attitudes and their significance for the behaviour of leaders in the implementation of changes at school, in the future research. As far as the second question (what leadership style could be recommended for school leaders when implementing changes) is concerned, attention should be drawn to the research results obtained in

other research samples (rather than school principals) that the congruence of affective and cognitive components increases the manifestation of certain behaviour, while greater cognitive-affective inconsistency is associated with weaker attitude-intention relationships (Conner et al., 2021; Sánchez-García, Batista-Foguet, 2008). This encourages the assumption that positive cognitive and affective components, which will lead to positive behavioural component (Kin, Kareem, 2017) and all together will form positive attitudes towards change, are highly significant for school principals. In this context, it is important to understand why, based on the results of our study, the affective component of attitudes was least predicted by all the three leadership styles. Other researchers note that cognitive and behavioural components converge across cultures and religions, but the affective component remains significantly diverse (Zhang et al., 2021). Hence, the results obtained in our study could be determined by cultural differences (Lithuanians are not inclined to talk and show emotions, the display of emotions is culturally regarded as negative behaviour, which may explain why the affective component is less expressed in the attitudes). Another possible assumption explaining these results is related to the context in which the study was conducted. The study was conducted during the COVID-19 pandemic, when schools encountered unexpected changes that needed to be implemented urgently, which caused mixed emotions for teachers. The obtained results of the study may reveal that school principals deliberately based their leadership style on the cognitive and behavioural components, putting less emphasis on the affective component.

This study has several limitations that should be addressed. First, the results obtained in our study were based on self-report assessments. Therefore, the responses of the research participants could have a common method bias. To test if the collected data were prone to the common method bias, Harman's single-factor test was conducted. The results indicated that a single factor accounted for only 20.15 % of the total variance (i.e., < 50 %), which showed that a single factor of the data set did not explain most of the variance for the research objective; therefore, the assumption of common method bias was withdrawn (Podsakoff et al., 2003). Second, the research context (a pandemic) can also be considered as a limitation. School principals had experienced two COVID-19 lockdowns in their schools during the study. Lockdown fatigue may have influenced the low participation of school principals in the study. On the other hand, it was important for us to reveal the connections between school principals' leadership and attitudes towards change particularly in a crisis situation. Acknowledging the limitations of the current study, we envisage the value of a future longitudinal research, seeking to reveal the formation of attitudes toward change in the contexts of extreme change. Moreover, it is also important to highlight how school principals' attitudes towards change are related to the socio-demographic variables: age, gender, type of organisation, size of organisation, etc.

Despite some limitations of this study, it is important in several ways. First, our study shifts the research focus from teachers and students to the school leader as the central figure. More importantly, the focus is not on the interaction and influence of principals and teachers, but on the performance and attitudes of the principals themselves in the conditions of COVID-19. Moreover, in the face of this imposed change, school principals become the recipients of change, too. Second, the study highlights the importance of different leadership styles in the light of the imposed change for positive attitudes towards change. School principals are encouraged to employ the adaptive leadership style when they have to work in uncertain circumstances or in the context of constant changes. Although school principals' collaboration outside the school is important in overcoming imposed change challenges, it should be noted that they may approve of changes at the level of ideas; in other words, their attitudes towards changes will be positive at the cognitive level, with a risk to never be manifested through behaviour. The results of the study also encourage the search for solutions on how to arouse positive attitudes of school principals towards changes not only on the cognitive, but also on the affective levels, since all the three components of attitudes – cognitive, affective, and behavioural – are important for the effective implementation of changes, for personal involvement and engagement of other employees, as well as for the commitment to changes.

References

- Ajzen, 1991 – Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. 50(2): 179-211.
- Ajzen, 2012 – Ajzen, I. (2012). Attitudes and persuasion. In K. Deaux & M. Snyder (Eds.), *The Oxford handbook of personality and social psychology* (pp. 367-393). Oxford University Press.

- Ajzen, 2020 – Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*. 2(4): 314-324.
- Aslan et al., 2008 – Aslan, M, Beycioglu, K., Konan, N. (2008). Principals' Openness to Change in Malatya, Turkey. *International Electronic Journal for Leadership in Learning*. 12(8): 14.
- Azorín, 2020 – Azorín, C. (2020). Beyond COVID-19 Supernova. Is Another Education Coming? *Journal of Professional Capital and Community*. 5(3/4): 381-390.
- Baesu, Bejinaru, 2013 – Baesu, C., Bejinaru, R. (2013). Leadership approaches regarding the organizational change. *The USV Annals of Economics and Public Administration*. 13(2/18): 146-152.
- Bagwell, 2020 – Bagwell, J. (2020). Leading Through a Pandemic: Adaptive Leadership and Purposeful Action. *Journal of School Administration Research and Development*. 5: 30-34.
- Brown et al., 2021 – Brown, M., O'Hara, J., McNamara, G., Skerritt, C., Shevlin, P. (2021). Global messages from the edge of Europe the cause and effect of leadership and planning strategies during the COVID-19 pandemic. *Irish Educational Studies*. 40(2): 151-159.
- Canterino et al., 2020 – Canterino, F., Cirella, S., Piccoli, B., Shani, A.B.(Rami) (2020). Leadership and change mobilization: The mediating role of distributed leadership. *Journal of Business Research*. 108: 42-51.
- Cohen et al., 2018 – Cohen, L., Manion, L., Morrison, K. (2018). *Research Methods in Education* (8nd ed.). New York: Routledge.
- Cohen, 1988 – Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ:Lawrence Erlbaum Associates.
- Collins-Warfield, Niewoehner-Green, 2021 – Collins-Warfield, A., Niewoehner-Green, J. (2021). Caring for the Whole Student in Response to the Adaptive Challenge of COVID-19. *NACTA Journal*. 65: 156-163.
- Conner et al., 2021 – Conner, M., Wilding, S., van Harreveld, F., Dalege, J. (2021). Cognitive-Affective Inconsistency and Ambivalence: Impact on the Overall Attitude–Behavior Relationship. *Personality and Social Psychology Bulletin*. 47(4): 673-687.
- Damkuvienė et al., 2021 – Damkuvienė, M., Balčiūnas, S., Valuckienė, J., Petukienė, E., Pranckūnienė, E. (2021). Profesinio kapitalo, kaip kompleksinės adaptyviojo sistemos pajėgumo, vystymas [Developing Professional Capital as a complex Adaptive System Capacity]. Šiauliai, Šiaulių spaustuvė. [in Lithuanian]
- Dirani et al., 2020 – Dirani, K.M., Abadi, M., Alizadeh, A., Barhate, B., Capuchino Garza, R., Gunasekara, N., Ibrahim, G., Majzun, Z. (2020). Leadership competencies and the essential role of human resource development in times of crisis: a response to Covid-19 pandemic. *Human Resources Development International Journal*. 23(4): 380-394.
- Dolph, 2017 – Dolph, D. (2017). Challenges and Opportunities for School Improvement: Recommendations for Urban School Principals. *Education and Urban Society*. 49(4): 363-387.
- Dunham et al., 1989 – Dunham, R., Grube, J., Gardner, D., Cummings, L., Pierce, J. (1989). The Development of an Attitude Toward Change Instrument. Paper Presented at the Academy of Management Annual Meeting, Washington, DC.
- Dunn, 2020 – Dunn, R. (2020). Adaptive leadership: leading through complexity. *International Studies in Educational Administration*. 48(1): 31-38.
- Eagly, Chaiken, 1993 – Eagly, A.H., Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers.
- Fessehatsion, 2017 – Fessehatsion, P.W. (2017). School Principal's Role in Facilitating Change in Teaching-Learning Process: Teachers' Attitude. A Case Study on Five Junior Schools in Asmara, Eritrea. *Journal of Education and Practice*. 8(6): 134-142.
- Forgas, 2010 – Forgas, J.P. (2010). Affective Influences on the Formation, Expression, and Change of Attitudes. In Forgas, J.P., Cooper, J., Crano, W.D. (Eds.). (2010). *The Psychology of Attitudes and Attitude Change* (1st ed.). Psychology Press.
- Fullan, 2007 – Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers college press, Colombia university. New York and London.
- Goode et al., 2021 – Goode, H., McGennissen, R., Rutherford, E. (2021). An Adaptive Leadership Response to Unprecedented Change. *International Studies in Educational Administration*. 49(1): 36-42.
- Goodson, 2001 – Goodson, I. (2001). Social histories of educational change. *Journal of Educational Change*. 2: 45-63.

- Hair et al., 2019 – Hair, J.E., Black, W.C., Babin, B.J., Anderson, R.E. (2019). *Multivariate Data Analysis* (8th ed.). Boston: Cengage Learning EMEA.
- Harris, 2001 – Harris, A. (2001). Building capacity for school improvement. *School Leadership and Management*. 21: 261-270.
- Harris, 2020 – Harris, A. (2020). COVID-19–school Leadership in Crisis? *Journal of Professional Capital and Community*. 5(3/4): 321-326.
- Harris, Jones, 2020 – Harris, A., Jones, M. (2020). COVID 19 – School Leadership in Disruptive Times. *School Leadership & Management*. 40(4): 243-247.
- Heifetz et al., 2009 – Heifetz, R.A, Grashow, A., Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Boston, MA: Harvard Business School Press.
- Heifetz, 1994 – Heifetz, R.A. (1994). *Leadership without easy answers*. Cambridge, MA: Harvard University Press.
- Heim, Sardar-Drenda, 2021 – Heim, I., Sardar-Drenda, N. (2021). Assessment of employees' attitudes toward ongoing organizational transformations. *Journal of Organizational Change Management*. 34(2): 327-349.
- Herscovitch, Meyer, 2002 – Herscovitch, L., Meyer, J.P. (2002). Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*. 87(3): 474-487.
- Kaminskienė et al., 2021 – Kaminskienė, L., Tutlys, V., Gedvilienė, G., Chu, L.Y. (2021). Coping with the pandemic and the school lockdowns: The perspective of Lithuanian school principals. *Sodobna Pedagogika/Journal of Contemporary Educational Studies*. 72(138): 270-285.
- Kin et al., 2018 – Kin, T.M., Kareem, O.A., Nordin, M.S., Bing, K.W. (2018). Principal change leadership competencies and teacher attitudes toward change: the mediating effects of teacher change beliefs. *International Journal of Leadership in Education. Theory and practice*. 21(4): 427-446.
- Kin, Kareem, 2017 – Kin, T.M., Kareem, O.A. (2017). Measuring teacher attitudes towards change: an empirical validation. *International Journal of Management in Education*. 11: 437-469.
- Kotter, 2012 – Kotter, J.P. (2012). *Leading change*. Boston, MA: Harvard Business Review Press.
- Kursunoglu, Tanriogen, 2009 – Kursunoglu, A., Tanriogen, A. (2009). The relationship between teachers' perceptions towards instructional leadership behaviors of their principals and teachers' attitudes towards change. *Procedia Social and Behavioural Science*. 1(1): 252-258.
- Lawton et al., 2009 – Lawton, R., Conner, M., McEachan, R. (2009). Desire or reason: Predicting health behaviors from affective and cognitive attitudes. *Health Psychology*. 28(1): 56-65.
- Leithwood et al., 1994 – Leithwood, K., Menzies, T., Jantzi, D. (1994). Earning teachers' commitment to curriculum reform. *Peabody Journal of Education*. 69(4): 38-61.
- Leithwood et al., 2020 – Leithwood, K., Harris, A., Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*. 40(1): 5-22.
- Leithwood, Strauss, 2009 – Leithwood, K., Strauss, T. (2009). Turnaround Schools: Leadership Lessons. *Education Canada*. 49(2): 27-29.
- Moore, 2009 – Moore, B. (2009). Emotional intelligence for school administrators: A priority for school reform? *American Secondary Education*. 37(3): 20-28.
- Mukhtar, Fook, 2020 – Mukhtar, N.A., Fook, Ch.Y. (2020). The Effects of Perceived Leadership Styles and Emotional Intelligence on Attitude toward Organizational Change among Secondary School Teachers. *Asian Journal of University Education*. 16(2): 36-45.
- Neuman, 2014 – Neuman, W. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson, Essex, UK.
- Northouse, 2016 – Northouse, P. (2016). *Leadership: Theory and Practice*. 7th edition. Sage Publications.
- OECD, 2019 – OECD. *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris, 2019.
- Piderit, 2000 – Piderit, S.K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *The Academy of Management Review*. 25: 783-794.

- [Podsakoff et al., 2003](#) – Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*. 88: 879-903.
- [Preston et al., 2013](#) – Preston, J.P., Jakubiec, B.A., Kooymans, R. (2013). Common Challenges Faced by Rural Principals: A Review of the Literature. *The Rural Educator*. 35(1): 1-10.
- [Sánchez-García, Batista-Foguet, 2008](#) – Sánchez-García, M., Batista-Foguet, J.M. (2008). Congruency of the Cognitive and Affective Components of the Attitude as a Moderator on Intention of Condom Use Predictors. *Social Indicators Research*. 87(1): 139-155.
- [Sarafidou, Nikolaidis, 2009](#) – Sarafidou, J.-O., Nikolaidis, D.I. (2009). School Leadership and Teachers' Attitudes towards School Change: The Case of High Schools in Greece. *International Journal of Learning*. 16(8): 431-440.
- [Stauffer, Maxwell, 2020](#) – Stauffer, D.C., Maxwell, D.L. (2020). Transforming Servant Leadership, Organizational Culture, Change, Sustainability, and Courageous Leadership. *Journal of Leadership, Accountability and Ethics*. 17(1): 105-116.
- [Taut, Baban, 2012](#) – Taut, D., Baban, A. (2012). Relative contribution of affective and cognitive attitudes in predicting physical activity. *Cognition, Brain, Behaviour: An Interdisciplinary Journal*. 16(3): 403-421.
- [Thien, 2019](#) – Thien, L.M. (2019). Distributive Leadership Functions, Readiness for Change, and Teachers' Affective Commitment to Change: A Partial Least Squares Analysis. *SAGE Open*. April-June: 1-15.
- [Thornton, 2021](#) – Thornton, K. (2021). Leading through COVID-19: New Zealand secondary principals describe their reality. *Educational Management Administration & Leadership*. 49(3): 393-409.
- [Van Wart, Kapucu, 2011](#) – Van Wart, M., Kapucu, N. (2011). Crisis Management Competencies. *Public Management Review*. 13(4): 489-511.
- [Walk, 2022](#) – Walk, M. (2022). Leaders as change executors: The impact of leader attitudes to change and change-specific support on followers. *European Management Journal*. 1-10. (In Press)
- [Yu et al., 2002](#) – Yu, H., Leithwood, K., Jantzi, D. (2002). The effects of transformational leadership on teachers' commitment to change in Hong Kong. *Journal of Educational Administration*. 40: 386-389.
- [Yukl, Mahsud, 2010](#) – Yukl, G., Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research*. 62(2): 81-93.
- [Zhang et al., 2021](#) – Zhang, B., Zhang, Y., Zhou, P. (2021). Consumer Attitude towards Sustainability of Fast Fashion Products in the UK. *Sustainability*. 13(4): 1646.
- [Zimmerman, 2011](#) – Zimmerman, J.A. (2011). Principals Preparing for Change: The Importance of Reflection and Professional Learning. *American Secondary Education*. 39(2): 107-114.