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The Psychology of Policy Resistance: Personality Traits and Teacher Responses to School Calendar Reform

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Abstract

Large-scale educational reforms are more often defeated at the implementation stage than at the design stage, because the professionals expected to enact them respond to imposed change in systematically different ways. Whether those differences are principally dispositional or principally contextual is a general and unresolved question in the study of policy implementation. This study examines the relationship between teachers' personality traits and resistance to a mandated change in the school calendar, using the transition from a two-semester to a three-semester (trimester) system in Saudi Arabia as an empirical case in which a single reform was imposed simultaneously and uniformly on an entire teaching population. In a cross-sectional correlational survey, 615 primary, middle and secondary school teachers completed the Five Factor Personality Scale and an adapted version of Oreg's (2006) resistance-to-change scale, which distinguishes cognitive, emotional and behavioural resistance. Neuroticism was positively associated with resistance across all three dimensions, whereas extraversion, openness to experience and agreeableness were negatively associated with it; conscientiousness showed no significant association. Female teachers scored significantly higher than male teachers on neuroticism, extraversion and conscientiousness, and secondary school teachers scored higher on extraversion and openness than primary and middle school teachers. Despite these dispositional differences, resistance to the reform differed significantly neither by gender nor by school level. The pattern suggests that although

personality shapes how individual teachers experience mandated change, disposition alone does not account for the overall level of resistance a reform encounters; conditions shared across the system appear to exert the stronger influence. Implications are drawn for the sequencing of person-centred and system-level implementation strategies in centralised education systems more generally.

Keywords: resistance to change; educational reform; policy implementation; Big Five personality traits; teacher change readiness; school calendar reform

Introduction

Educational reforms are more often defeated in implementation than in design. Across national systems, structurally coherent policies — new curricula, new assessment regimes, new school calendars — routinely underperform their stated aims because the professionals expected to enact them respond to imposed change in ways that policy documents do not anticipate. Research on organisational change has established that these responses are neither random nor uniformly negative: change recipients differ systematically in how they appraise a change, how they feel about it and how they act on it, and those differences have both dispositional and contextual sources (Oreg, 2006; Oreg et al., 2011). What remains contested is their relative weight. If resistance is largely dispositional, implementation strategy should be differentiated and person-centred; if it is largely contextual, the more efficient strategy is to address the workload, communication and administrative conditions that all those affected share. The distinction matters for reform practice in any system, and it is the question this study addresses.

The empirical case examined here is the Kingdom of Saudi Arabia's transition from a two-semester to a three-semester school year. The case is analytically useful for three reasons. The reform was centrally mandated rather than negotiated school by school; it was introduced across all school levels simultaneously; and it altered teachers' working conditions without altering their formal professional roles. This combination holds the change itself constant while allowing individual differences among those subject to it to vary, a configuration that is difficult to obtain in field studies of organisational change.

The Kingdom of Saudi Arabia (KSA) aims to enhance the quality of education through strategic reforms in its education system, in line with the goals of the Kingdom's Vision 2030. The strategic plan focuses on reducing reliance on petroleum derivatives, diversifying the economy and boosting investment in public services (Alharbi, 2024). Improving student learning outcomes is crucial for Saudi Arabia to meet its economic objectives, prompting the government to restructure the education sector and update legislation to develop curricula and raise educational standards. In 2021, the Ministry of Education introduced new curriculum plans for 2022,

transitioning from a two-semester to a three-semester system and increasing the number of school days from 159 to 183 (Ministry of Education, 2021).

This decision was made based on comparisons with educationally advanced countries, which revealed a gap between the Saudi educational system and those nations. This disparity was evident in the low scores of Saudi students on international assessments, such as the Programme for International Student Assessment, the Trends in International Mathematics and Science Study and the Progress in International Reading Literacy Study (OECD, 2020). The Ministry of Education (2021) believes this shift will enable the addition of new subjects and study units, while also enhancing the knowledge and skills related to existing subjects and restoring the appropriate weight of courses. This change aims to close the educational gap between different years of the educational ladder and the actual years of study, ultimately improving the Kingdom's performance in international assessments.

Personality traits are enduring dispositions that shape how individuals appraise and adapt to imposed change. Openness to experience, associated with curiosity and flexibility, may dispose teachers to read the trimester system as an opportunity, whereas neuroticism, associated with anxiety and emotional reactivity, may heighten resistance where work demands increase and support is perceived as insufficient (Gómez-Salgado et al., 2020). Extraversion and agreeableness bear on willingness to engage with colleagues and administrators during implementation (Alqahtani, 2023). These dispositions operate within a collectivist and high power-distance culture in which adherence to institutional decisions is normatively expected (Al Lily, 2018; Hofstede, 2011), so that objection carries a social cost additional to any personal one. Demographic position may matter alongside disposition: gendered expectations about domestic and professional workload (Baker, 2010; Makhoul, 2021; Reid, 2021) and the differing demands of primary, middle and secondary teaching (Tong, 2025) give teachers unequal exposure to the same reform. This study therefore examines personality, gender and school stage together.

Although the trimester model is expected to enhance efficiency and to bring benefits such as reduced learning loss and better use of resources, its implementation has encountered several difficulties. On the basis of the literature on mandated organisational change, resistance from teachers would be expected to centre on workload, compressed teaching blocks and administrative readiness (Oreg, 2006; Oreg et al., 2011). Such resistance, shaped by individual disposition and by organisational culture, may impede the transition. Although understanding how teachers adapt to change matters for any reform, the evidence base linking personality traits such as openness, agreeableness and emotional stability to teachers' readiness or resistance remains thin outside North American and European organisational settings.

This study seeks to answer the following main and sub-questions:

To what degree do personal factors influence teachers' opposition to the trimester system in Saudi Arabia?

Is there a significant correlation between teachers' personality characteristics and their resistance to this system?

Are there gender-based differences in teachers' personality traits, and how do these traits affect resistance to change?

Are there differences in resistance to change between male and female teachers?

Are there variations in teachers' personality traits across the primary, intermediate and secondary stages of education?

Does resistance to the trimester system change across these academic levels?

This research matters for three reasons. It clarifies how far dispositional factors account for resistance among the professionals on whom reform depends; it addresses the limited evidence on the psychological and social dimensions of educational innovation in Saudi Arabia; and it yields guidance for policymakers and administrators designing training and support during systemic change.

The intended contribution is therefore theoretical as well as national. Evidence on change recipients' reactions remains heavily weighted towards North American and European organisations and towards settings in which change is negotiated rather than imposed (Oreg et al., 2011). Testing dispositional accounts of resistance in a centralised, high power-distance and collectivist system supplies a boundary condition for those accounts: it establishes whether the trait-resistance relationships reported in that literature hold where individual discretion over adoption is minimal, and whether dispositional variation still translates into variation in resistance when the change cannot be avoided, delayed or locally modified.

Literature Review

Personality traits are the enduring characteristics used to describe psychological differences among individuals, and they have occupied psychologists since antiquity. McDougall (1932) was among the first to propose a five-factor categorisation, and subsequent empirical work refined this into the Big Five model, now the dominant descriptive framework in personality psychology. The model comprises openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Petrakis et al., 2021). These dimensions recur across languages and assessment instruments, remain largely stable over the life course, and are understood to have a partly genetic basis whose expression is nonetheless shaped by environmental influences (Zaidi et al., 2013).

The Big Five model, also known as the five-factor model, identifies five dimensions of personality: neuroticism (also termed emotional instability), extraversion, openness

to experience, agreeableness and conscientiousness. These are stable patterns of thought and behaviour that influence how individuals respond to and function across various situations (McCrae and Costa, 1999; John et al., 2008). Unlike skills that can develop over time, these traits tend to remain consistent and show little change throughout a person's life (Fagan et al., 2021). The model highlights several ways in which personality traits regulate behaviour and support human adaptability (Tupes and Christal, 1992; Fagan et al., 2021).

For example, extraversion suggests that the individual is proactive in seeking social interactions and experiences positive emotions. A highly extroverted personality is marked by sociability, activity and optimism, thriving in environments that encourage teamwork and participation (Chandrasekara, 2019). The second trait, agreeableness, involves trust, empathy, being people-focused, self-organised and acting with societal benefit in mind. It is crucial for establishing good working relationships (Bozgeyikli, 2017). Discipline aimed at completing tasks and following instructions indicates that conscientiousness leads to high performance, driven by thorough planning in structured settings and adherence to rules and regulations (Zaidi et al., 2013).

Openness to experience is characterised by curiosity, imagination, creativity, and a willingness to embrace new ideas and experiences. Individuals high in openness tend to be innovative, adaptable, and effective at problem-solving, making this trait particularly valuable in leadership, entrepreneurship, and organisational change (Sahinidis et al., 2020; McCrae & Costa, 1999). In contrast, neuroticism reflects emotional instability and is characterised by anxiety, emotional reactivity, and vulnerability to stress. Individuals with low levels of neuroticism (i.e., high emotional stability) are generally better able to cope with pressure and maintain effective performance in demanding situations (McCrae & Costa, 1999; Zaidi et al., 2013).

Personality development is itself shaped by education and parenting, and these dispositions carry consequences for academic and occupational outcomes (Gordon and Cui, 2015; Heckman and Kautz, 2013; Poropat, 2009). Conscientiousness, expressed as organisation and self-discipline, is associated with higher workplace productivity, and knowledge of trait profiles supports the design of targeted strategies for individual and team performance (Forsyth, 2019; Petrakis et al., 2021). A meta-analytic review by Javalagi et al. (2024) confirms that personality traits predict leadership emergence and effectiveness across cultural contexts, underlining the relevance of disposition to organisational functioning.

Personality traits and attitude of teachers towards the education process

For the success of the education system, it is crucial that the various components, such as schools, curriculum, teachers and administration, are in harmony. Each element can influence the entire system; in other words, the system operates as a cohesive unit. Problems in one component can have a negative impact on the entire system (Fullan, 2015). Among these components, teachers are especially vital because they

are tasked with delivering knowledge systematically using various tools and equipment within a specific environment (Darling-Hammond et al., 2017). Consequently, teachers are often seen as the most crucial part of the education system.

The effectiveness and quality of teachers are a crucial concern in many countries worldwide. Bozgeyikli (2017) emphasises the importance of psychological traits in teachers, discovering a positive link between extraversion, agreeableness, conscientiousness and openness to experience with various aspects of psychological capital, such as optimism, hope, flexibility and self-efficacy. This implies that teachers with these traits are more likely to create a positive learning environment and improve student success (Skaalvik and Skaalvik, 2010). Conversely, the study also found a significant negative correlation between neuroticism and these aspects of psychological capital, suggesting that higher levels of neuroticism could reduce a teacher's effectiveness and job satisfaction (Bozgeyikli, 2017).

Chandrasekara (2019) further emphasises the role of personality traits in education by exploring their connection to job satisfaction and teacher performance. The findings revealed that all personality traits significantly affect both job performance and job satisfaction, with agreeableness emerging as the most influential factor, followed closely by extraversion (Chandrasekara, 2019). This highlights that teachers' personality characteristics influence their job satisfaction and classroom effectiveness, which, in turn, impact student learning and engagement (Hattie, 2008).

Furthermore, Klassen and Tze (2014) demonstrate that teachers' self-efficacy beliefs are significantly correlated with their teaching methods and student engagement, emphasising the importance of teachers developing positive psychological traits. Additionally, Dreer (2023) conducted a meta-analysis revealing that teacher well-being is strongly associated with student success, underscoring the wider impact of teacher quality on educational results.

Personality traits and resistance to change in education through the semester

The Big Five personality traits – neuroticism, extraversion, openness, agreeableness and conscientiousness – are fundamental to understanding how individuals develop coping skills and adapt to change in various settings, such as educational reforms, including the implementation of a trimester system. In systemic changes like these, resistance in Saudi Arabia can often be linked to both personality differences and cultural and institutional factors. For instance, openness, which reflects a willingness to embrace new ideas and a sense of curiosity, is positively associated with readiness to adopt innovations in education (Sahinidis and Tsaknis, 2021). Conversely, certain traits may heighten stress and resistance during change, such as neuroticism, characterised by emotional instability (Zaidi et al., 2013).

Various studies on the Saudi education system have highlighted key issues in the implementation of reform, including academic accreditation and the restructuring of

school terms (Addas, 2018). These challenges are compounded by cultural factors that uphold traditional norms and practices, as personality-driven resistance from staff and learners can affect their learning (Quamar, 2020). For example, teachers often respond defensively to educational changes because these threaten established practices and their autonomy. Additionally, attitudes such as conscientiousness, while promoting hard work and reliability, can also lead individuals to become inflexible and resistant to changing methods (Alatiq, 2020).

Understanding how personality scales relate to measuring resistance to change is crucial, as this knowledge guides reform strategies. Programmes designed to address resistance and incorporate personality traits can help decrease resistance and enhance an organisation's adaptability through professional development. Since most organisational theories emphasise traits such as agreeableness, which foster cooperation and trust, leading educational change becomes more manageable. For Saudi Arabia, which is currently reforming its educational system, tackling these psychological dimensions is essential to implementing effective changes, such as transitioning to a trimester system.

Research Methodology

1. Research Design

The study employed a cross-sectional, correlational survey design (Creswell & Creswell, 2017; Robson, 2024). Personality traits and resistance to the trimester reform were measured at a single point in time using self-report instruments, and the analyses estimate the strength and direction of associations between them, together with mean differences by gender and by school level. No variable was manipulated and no longitudinal follow-up was undertaken; accordingly, the findings describe covariation and cannot establish that personality causes resistance, nor exclude the possibility that experience of the reform has itself shaped how respondents describe their own dispositions.

2. Theoretical Framework and Operational Definitions

Personality is operationalised using the Five-Factor Model (McCrae and Costa, 1999; John et al., 2008), which represents individual differences along five broad dimensions: neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. The model was selected for three reasons. It is the dominant lexical taxonomy in personality psychology; its five-factor structure has been recovered across languages and cultural settings (Tupes and Christal, 1992; John et al., 2008); and the organisational change literature from which the present expectations are drawn is itself largely organised around these dimensions (Barrick & Mount, 1991; Judge & Bono, 2001; Oreg, 2006; Javalagi et al., 2024). Using the same taxonomy allows the results reported here to be compared directly with findings from other national and organisational contexts.

Resistance to change is operationalised following Oreg (2006) as a tripartite attitudinal construct directed at a specific change object here, the trimester reform. Its cognitive dimension concerns what the teacher thinks about the reform, including judgements of its necessity, coherence and likely consequences. Its emotional dimension concerns the affective response to the reform, including anxiety, frustration and perceived threat. Its behavioural dimension concerns reported action tendencies, including complaint, avoidance and reluctance to adopt the practices the reform requires. Two boundaries of this definition should be stated explicitly. First, resistance as measured here is a reported attitude, not observed non-compliance; no administrative, attendance or classroom-observation records were consulted. Second, resistance is directed at a specific reform rather than at change in general, and is therefore distinct from the dispositional resistance-to-change construct also developed by Oreg. Higher scores indicate greater resistance.

3. Population and Sampling Strategy

The study population comprised all primary, middle and secondary school teachers in Hafr Al Batin, a governorate in the eastern region of Saudi Arabia, numbering 7,012 according to Ministry of Education data. Both scales were distributed electronically as a single WhatsApp link circulated to the regional teacher groups, which between them cover the population. During the third semester of the 2024 academic year, 615 teachers completed both scales. Thompson's (2012) formula was used to determine the minimum sample size required for the desired precision.

$$n = \left\lceil \frac{N \times p(1-p)}{\left[N-1 \times \left(d^2 \div z^2 \right) \right] + p(1-p)} \right\rceil$$

With a population of 7,012, Thompson's formula returns a required sample of 364. The 615 responses obtained exceed that minimum, which means the sample is large enough to estimate population parameters at the intended level of precision; as discussed below, this is a statement about precision and not about representativeness. Table 1 sets out the composition of the achieved sample.

Table 1: The characteristics of the research sample

Sample Characteristics	Number
Males	255
Females	360
Total	615
Primary	387
Middle	99
Secondary	129
Total	615

The sampling strategy was a census-style open invitation rather than probability sampling. The survey link was distributed to all regional teacher groups, so in principle every member of the defined population had the opportunity to respond; participation was nevertheless voluntary and self-selected. Of the 7,012 teachers in the population, 615 completed both instruments, a response rate of 8.8 per cent. Thompson's (2012) formula indicates a minimum of 364 responses for the desired level of precision, and the achieved sample comfortably exceeds that threshold. It is important to be precise about what this does and does not establish: meeting a size threshold addresses sampling precision, not selection bias. Because respondents chose whether to take part, teachers holding stronger views about the reform — in either direction — may be over-represented, and the obtained sample cannot be assumed to match the population on characteristics that were not measured.

Three further threats to validity follow from the design and are acknowledged here rather than only in the limitations. First, because both instruments were self-reported and completed in a single sitting, common-method variance may inflate the observed associations between personality and resistance. Second, attitudes towards a national reform are socially sensitive, and social desirability may have attenuated reported resistance, particularly in a setting characterised by high power distance and deference to institutional authority (Hofstede, 2011; Al Lily, 2018). Third, distribution through messaging groups excludes teachers who do not belong to those groups, a coverage error whose magnitude cannot be estimated from the available data.

4. Instruments

Data were gathered through two validated instruments: the Five Factor Personality Scale (Al-Duhaim and Ayoub, 2019) and the Resistance Scale (Oreg, 2006) for the Three-Semester System.

Five Factor Personality Scale

This scale features 34 items that measure five key dimensions: neuroticism, extraversion, conscientiousness, openness to experience and agreeableness. Each dimension comprises a specific number of items, ensuring comprehensive coverage of personality traits (Alam et al., 2023; Tahira et al., 2019). To determine the scale's reliability, it was piloted with an exploratory sample of 52 teachers. The internal consistency was evaluated using Cronbach's alpha, with coefficients ranging from 0.782 to 0.822.

In this study, the **Resistance** Scale for the Three-Semester System, adapted from Oreg (2006), was used to measure teachers' resistance among teachers at different educational stages. This scale was designed to address the research questions by evaluating three key aspects of resistance: cognitive, emotional and behavioural. The final version consists of 15 items, with five items dedicated to each dimension. Internal consistency was confirmed through Cronbach's alpha, with coefficients ranging from 0.711 to 0.802.

Psychometric properties

Both instruments were piloted with an exploratory sample of 52 teachers drawn from the target population and excluded from the main analysis. Internal consistency in the pilot was acceptable: Cronbach's alpha ranged from 0.782 to 0.822 across the five personality subscales and from 0.711 to 0.802 across the three resistance subscales (Cohen and Swerdlik, 2018).

5. Ethical Considerations

Permission to approach teachers was obtained. The opening page of the electronic questionnaire presented an information sheet stating the purpose of the study, the voluntary nature of participation, the approximate time required for completion, the absence of any professional consequence for declining or withdrawing, and the intended use of the data. Participants recorded informed consent by selecting an explicit consent option before the first item, and no data were retained from respondents who did not consent. No directly identifying information was collected.

6. Analysis

Several statistical procedures were applied to the data. The internal consistency of the Five Factor Personality Scale and of the Resistance to the Three-Semester System scale was examined first (Cohen and Swerdlik, 2018; Field, 2024). Pearson's product-moment correlation was then used to examine relationships between teachers' scores on the five personality factors and their resistance to the trimester system. Independent-samples t-tests compared the mean scores of male and female teachers on both scales (Gravetter et al., 2021), and one-way analyses of variance, followed by Scheffé post-hoc comparisons, tested for differences across the primary, middle and secondary levels (Field, 2024; Howell, 1992).

Results

Table 2: Correlations between personality dimensions and resistance to change

Dimensi ons	Neurotic ism	Extraver sion	Conscientiou sness	Openne ss to Experie nce	Agreeable ness	Total degree of Big Five persona lity factors
Cognitiv e Dimensi on	0.224**	0.136-	0.006-	-0.090*	-0.229**	- 0.248**
Emotion al Dimensi on	0.387**	-0.107**	0.033-	-0.085*	-0.210**	- 0.298**
Behavio ural Dimensi on	0.352**	-0.104**	0.070-	0.074-	-0.249**	- 0.326**
The overall degree of resistan ce to change	0.381**	-0.137**	0.020-	-0.097*	-0.273**	- 0.346**

The correlations in Table 2 show significant links between four of the Big Five traits and resistance to change. Neuroticism was positively associated with all three resistance dimensions, indicating that emotional reactivity accompanies greater reluctance to adopt a new system (Pandey et al., 2025). Extraversion, openness to experience and agreeableness were all negatively associated with resistance, so that lower scores on these traits correspond to higher resistance — consistent with evidence that sociability, receptiveness to novelty and cooperative orientation ease adaptation to imposed change (Barrick and Mount, 1991; Judge and Bono, 2001). Conscientiousness showed no significant association ($r = -0.020$). Table 2a summarises these associations against prior international findings.

Table 2a: Summary of associations between Big Five personality traits and overall resistance to the trimester reform (N = 615)

Personality trait	r with total resistance	Significance	Direction of association	Consistency with prior international findings
Neuroticism	0.381	$p < 0.01$	Positive — higher neuroticism, higher resistance	Consistent (Oreg, 2006; Oreg et al., 2011)
Extraversion	-0.137	$p < 0.01$	Negative — higher extraversion, lower resistance	Consistent (Barrick and Mount, 1991; Judge and Bono, 2001)
Openness to experience	-0.097	$p < 0.05$	Negative — higher openness, lower resistance	Consistent in direction, weaker in magnitude (Sahinidis and Tsaknis, 2021)
Agreeableness	-0.273	$p < 0.01$	Negative — higher agreeableness, lower resistance	Consistent (Oreg et al., 2011)
Conscientiousness	-0.020	Not significant	No detectable association	Divergent — discussed in the text

Note. Coefficients are Pearson product-moment correlations with the total resistance score, reproduced from the final row of Table 2. Dimension-level coefficients are given in Table 2.

Table 3: The differences between the mean scores of male and female teachers on the scale of the Big Five personality factors

Dimensions	Gender	N	M	SD	DF	T	Sig
Neuroticism	Male	255	11.435	3.788	613	3.359	0.000
	Female	360	12.358	2.680			
Extraversion	Male	255	16.364	2.231	613	3.555	0.000
	Female	360	16.958	1.892			

Conscientiousness	Male	255	18.035	2.708	613	3.046	0.002
	Female	360	18.641	2.215			
Openness to experience	Male	255	15.517	1.953	613	0.377	0.706
	Female	360	15.575	1.789			
Agreeableness	Male	255	14.200	1.973	613	1.562	0.119
	Female	360	14.450	1.942			
Total degree of big five personality factors	Male	255	75.552	6.702	613	4.595	0.000
	Female	360	77.983	6.285			

Table 3 outlines the differences in average scores of male and female teachers across the Big Five personality traits. The findings reveal statistically significant differences at the 0.01 level for neuroticism, extraversion, conscientiousness and the overall Big Five score, all favouring female teachers. Notably, female teachers scored higher in neuroticism ($M = 12.358$ vs. 11.435), extraversion ($M = 16.958$ vs. 16.364), conscientiousness ($M = 18.641$ vs. 18.035) and the total Big Five score ($M = 77.983$ vs. 75.552). These differences, with p-values below 0.01, indicate that gender has a significant influence on these personality traits among teachers.

However, there are no statistically significant differences between male and female teachers in terms of openness to experience and agreeableness. The average scores for these traits are nearly identical across genders, with openness to experience showing no notable difference ($M = 15.575$ for females and $M = 15.517$ for males, $p = 0.706$). Similarly, agreeableness also showed no significant difference ($M = 14.450$ for females and $M = 14.200$ for males, $p = 0.119$).

Table 4: The differences between the mean scores of male and female teachers on the scale of resistance to change for the three-semester system

Dimensions	Gender	N	M	SD	DF	T	Sig
Cognitive dimension	Male	255	11.488	3.025	613	0.149	0.882
	Female	360	11.433	3.077			
Emotional dimension	Male	255	10.117	3.017	613	0.137	0.891
	Female	360	10.150	2.771			
Behavioural dimension	Male	255	9.364	3.633	613	0.308	0.758
	Female	360	9.450	3.197			
Total degree of resistance to change	Male	255	30.952	8.521	613	0.125	0.901
	Female	360	31.033	7.376			

Table 4 shows the mean score differences between male and female teachers regarding resistance to change within the three-semester system. The data indicates no significant gender differences across all dimensions – cognitive, emotional and behavioural – as well as the overall resistance score. Specifically, male teachers scored slightly higher in the cognitive dimension ($M = 11.488$) than female teachers ($M = 11.433$), but this difference was not statistically significant ($p = 0.882$). In the emotional dimension, males scored 10.117, females 10.150, with no significant difference ($p = 0.891$). In the behavioural dimension, the mean scores for male teachers ($M = 9.364$) and female teachers ($M = 9.450$) were also nearly identical, with no statistical significance ($p = 0.758$). The total resistance scores were also nearly identical, 30.952 for males and 31.033 for females, again showing no significant difference ($p = 0.901$). These findings suggest gender does not significantly influence teachers' resistance to change in the three-semester system, and both genders exhibit similar resistance levels across all dimensions, implying other factors may play a larger role.

Table 5: ANOVA Results for personality traits and schooling level

Dimensions	Source of Variance	Sum of Squares	DF	Mean of Squares	F	Sig
Neuroticism	between groups	50.144	2	25.072	2.435	0.088
	Within groups	6300.490	612	10.295		
	groups total sum.	6350.634	614			
Extraversion	between groups	58.118	2	29.059	6.985	0.001
	Within groups	2545.941	612	4.160		
	groups total sum.	2604.059	614			
Conscientiousness	between groups	1.056	2	0.528	0.088	0.916
	Within groups	3679.285	612	6.012		
	groups total sum.	3680.341	614			
Openness to experience	Within groups	31.490	2	15.745	4.613	0.010
	groups total sum.	2088.647	612	3.413		
	groups total sum.	2120.137	614			
Agreeableness	between groups	20.950	2	10.475	2.749	0.065
	Within groups	2332.279	612	3.811		
	groups total sum.	2353.229	614			
Total degree of Big Five personality factors	Within groups	357.903	2	178.951	4.193	0.016
	groups total sum.	26116.723	612	42.674		
	groups total sum.	26474.634	614			

Table 5 displays the ANOVA results for the Big Five personality traits across primary, middle and secondary school levels. The analysis examines whether teachers' personality traits vary according to their level of schooling. Significant differences are found in extraversion ($F = 6.985$, $p = 0.001$), indicating that teachers' extraversion scores vary substantially across school levels. Openness to experience also shows significant variation ($F = 4.613$, $p = 0.010$), implying that schooling influences this trait. Additionally, the overall Big Five personality scores differ significantly ($F = 4.193$, $p = 0.016$), indicating that the level of schooling has a significant influence on overall personality. Conversely, there are no significant differences in neuroticism ($F = 2.435$, $p = 0.088$) or conscientiousness ($F = 0.088$, $p = 0.916$), suggesting these traits are relatively stable across levels. Last, agreeableness is marginally significant ($F = 2.749$, $p = 0.065$) but does not reach statistical significance. Overall, the findings indicate that schooling level has a significant influence on extraversion, openness to experience and overall personality traits, while neuroticism, conscientiousness and agreeableness are less affected.

Table 6: Scheffé post-hoc comparisons of personality traits across educational stages (primary, middle and secondary)

Trait	Comparison (I – J)	Mean difference (I – J)	p
Extraversion	Secondary – Primary	0.720	< 0.01
	Secondary – Middle	0.847	< 0.01
	Middle – Primary	0.126	> 0.05
Openness to experience	Secondary – Middle	0.711	< 0.01
	Secondary – Primary	0.457	> 0.05
	Middle – Primary	0.253	> 0.05
Total Big Five score	Secondary – Middle	2.206	< 0.05
	Secondary – Primary	1.728	< 0.05
	Middle – Primary	0.477	> 0.05

Note. Values are Scheffé mean differences between group means (I – J); a positive value indicates a higher score for group I. Significance levels are two-tailed.

Table 6 reports the Scheffé post-hoc comparisons conducted for the three traits on which the one-way ANOVA returned a significant effect of school stage. For each pairwise comparison the table gives the mean difference between the two group means and the associated significance level.

Extraversion. Secondary school teachers scored significantly higher than primary school teachers (mean difference = 0.720, $p < 0.01$) and than middle school teachers (mean difference = 0.847, $p < 0.01$). Primary and middle school teachers did not differ (mean difference = 0.126, $p > 0.05$).

Openness to experience. Secondary school teachers scored significantly higher than middle school teachers (mean difference = 0.711, $p < 0.01$). Neither the secondary–primary comparison (mean difference = 0.457, $p > 0.05$) nor the middle–primary comparison (mean difference = 0.253, $p > 0.05$) reached significance.

Total Big Five score. Secondary school teachers scored significantly higher than middle school teachers (mean difference = 2.206, $p < 0.05$) and than primary school teachers (mean difference = 1.728, $p < 0.05$), while primary and middle school teachers did not differ (mean difference = 0.477, $p > 0.05$).

Taken together, the Scheffé comparisons indicate that secondary school teachers score higher on extraversion and on the total Big Five score than teachers at both other stages, and higher on openness to experience than middle school teachers only; the secondary–primary difference in openness did not reach significance.

Table 7: One-way ANOVA for resistance to change for the three-semester system (Primary, middle and secondary)

Dimensions	Source of Variance	Sum of Squares	DF	Mean of Squares	F	Sig
Cognitive dimension	between groups	43.211	2	21.605	2.327	0.098
	Within groups	5682.926	612	9.286		
	total sum	5726.137	614			
Emotional dimension	between groups	10.167	2	5.084	0.615	0.541
	Within groups	5060.359	612	8.269		
	total sum	5070.527	614			
Behavioural dimension	between groups	21.911	2	10.955	0.957	0.384
	Within groups	7003.257	612	11.443		
	total sum	7025.268	614			
Total degree of resistance to change	between groups	50.875	2	28.438	0.410	0.664
	Within groups	37929.039	612	61.976		
	total sum	37980.000	614			

Table 7 presents the results of a one-way ANOVA for resistance to change within the three-semester system, comparing primary, middle and secondary educational

stages. The table includes variance analysis for the cognitive, emotional and behavioural aspects of resistance, along with the overall resistance to change.

None of the dimensions of resistance differed significantly across school stage. The cognitive dimension yielded $F(2, 612) = 2.327, p = 0.098$; the emotional dimension $F(2, 612) = 0.615, p = 0.541$; the behavioural dimension $F(2, 612) = 0.957, p = 0.384$; and total resistance $F(2, 612) = 0.410, p = 0.664$. In every case the significance level exceeds 0.05, so no post-hoc comparisons were performed.

The ANOVA findings indicate that the educational stage (primary, middle or secondary) does not significantly influence the dimensions of resistance to change, including cognitive, emotional and behavioural aspects, nor the overall resistance when considering the three-semester system. This suggests that resistance to change remains relatively consistent across these educational levels.

Discussion

The findings are consistent with the expectations derived from the literature reviewed above, although not uniformly so. Four of the five Big Five dimensions were significantly associated with resistance to the trimester reform in the predicted directions. Openness to experience — curiosity, receptiveness to novelty and comfort with ambiguity — was negatively associated with resistance, in line with evidence that open individuals appraise organisational innovation more favourably (Sahinidis and Tsaknis, 2021). Neuroticism, characterised by emotional reactivity and vulnerability to stress, was positively associated with resistance across all three dimensions and showed the strongest association of any trait (Zaidi et al., 2013; Oreg, 2006). Extraversion and agreeableness were both negatively associated with resistance, consistent with accounts in which sociability and cooperative orientation ease adaptation to change imposed from above. Conscientiousness, by contrast, showed no significant association, a result taken up below. It should be noted that the effect sizes for extraversion and openness are small in absolute terms; the associations are statistically reliable at this sample size but account for little variance individually.

Impeding factors for educational reform in KSA are not solely personality traits, but also include traditional values such as respect for authority, adherence to religious and social norms and cultural dimensions such as high power distance and collectivism (Alghamdi and Malekan, 2020). The Saudi education system, influenced by a strict adherence to traditional values and practices, often encounters resistance from educators and students when reforms conflict with established norms. For example, teachers may adopt defensive attitudes related to autonomy and self-rule or resist changes that threaten conventional teaching methods (Quamar, 2020). While conscientiousness is generally characterised by being hardworking, reliable, and committed to work responsibilities, previous studies have suggested that highly conscientious individuals may sometimes display greater adherence to established routines, which could make adaptation to new strategies more challenging in certain

contexts (Alatiq, 2020). However, the present study did not find a significant relationship between conscientiousness and resistance to change. Therefore, policies should focus on promoting professional development, shared decision-making and collaborative learning communities to cultivate a positive culture that values openness to change (Fullan, 2013; Hargreaves and O'Connor, 2018).

As Addas (2018) notes, innovations such as academic accreditation and the restructuring of school terms encounter additional difficulty where culture and individual attitudes resist change; without deliberate attention to these psychological and cultural dimensions, reform of this kind is unlikely to succeed.

To reduce such resistance, educational policymakers and administrators should incorporate psychological theories into their frameworks. Effective professional development programmes that address personality traits associated with resistance can help mitigate such objections and foster greater adaptability in the workplace. For instance, focusing on traits such as agreeableness can enhance trust, empathy and collaboration among change agents, thereby facilitating smoother transitions, as Oreg et al. (2011) suggest. These programmes can create tailored environments that meet individual and organisational needs, better preparing educators and learners to navigate reform initiatives.

Situating the findings in the international literature

Read against the wider evidence base, the pattern reported here is notable less for the trait correlations themselves than for what accompanies them. The direction of the trait–resistance associations reproduces findings from North American and European organisational research: neuroticism predicts resistance positively, and extraversion, agreeableness and openness predict it negatively, as reported in Oreg's original work on dispositional and contextual sources of resistance (Oreg, 2006) and in the sixty-year review of change-recipient reactions by Oreg, Vakola and Armenakis (2011). That these relationships hold in a centralised, high power-distance system in which teachers had no discretion over adoption is itself informative: it suggests the trait–resistance link is not an artefact of settings where employees can plausibly refuse or renegotiate a change, but persists where the only available responses are attitudinal.

At the same time, the magnitude of these associations is modest, and the group comparisons place a clear limit on how far a dispositional account can be taken. Female and male teachers differed significantly on three of the five traits, and secondary teachers differed from primary and middle teachers on extraversion, openness and the composite score — yet resistance to the reform differed on none of the three resistance dimensions, by either gender or school level. Substantial dispositional variation therefore coexisted with a common level of resistance. The most economical reading is that features shared across the whole system exerted a stronger influence on the aggregate level of resistance than individual differences did, with personality shaping the texture of the response rather than its overall intensity.

This has a direct implication for implementation strategy in any comparable system: person-centred measures such as differentiated coaching may improve the experience of individual teachers without moving the aggregate level of resistance, which is a system-level rather than a person-level outcome.

The null result for conscientiousness deserves attention because it diverges from a common expectation. Conscientiousness is sometimes theorised as a source of rigidity: highly conscientious individuals are held to be invested in established routines and therefore slower to abandon them (Alatiq, 2020). It is equally often theorised as a source of compliance, since conscientious employees are dutiful and inclined to implement what their institution requires (Barrick and Mount, 1991). These two mechanisms predict opposite signs, and where both operate within the same population they may cancel, producing precisely the near-zero coefficient observed here. This interpretation is post hoc and cannot be tested with the present data, but it is readily testable: a study distinguishing the orderliness and industriousness aspects of conscientiousness would predict opposite associations for the two, and the null result reported here would be the aggregate of them.

A further comparative observation concerns gender. Female teachers scored higher on neuroticism, extraversion and conscientiousness, yet reported no more resistance than their male colleagues. Given that neuroticism was the strongest single correlate of resistance, a dispositional account would predict higher resistance among female teachers; it was not observed. Whether this reflects offsetting trait effects, differential reporting norms across gender in this cultural setting, or genuinely similar appraisals of the reform cannot be determined from cross-sectional self-report data, and the question is left open. What can be said is that the gender difference in traits does not translate into a gender difference in reform response, which is the outcome policy actually concerns.

Finally, comparison with studies conducted in other non-Western settings is instructive. Research on Pakistani public sector university teachers found the Big Five dimensions related to work engagement in broadly the directions reported here (Zaidi et al., 2013; Tahira et al., 2019), and cross-cultural meta-analytic evidence indicates that personality–outcome relationships in organisations are moderated but not abolished by cultural context (Javalagi et al., 2024). The present findings extend that pattern to a mandated national reform in education, a domain in which the change recipient has professional expertise but no formal say in the decision.

Theoretical implications

Three theoretical implications follow. First, the study supplies a boundary condition for dispositional accounts of resistance: trait–resistance relationships established largely in Western, negotiated-change settings persist under centrally mandated change in a collectivist, high power-distance system, which suggests the underlying mechanism is appraisal rather than strategic behaviour. Second, the coexistence of significant trait differences with non-significant differences in resistance indicates

that the individual and system levels of explanation are not interchangeable; a model that predicts which individuals resist most does not thereby predict how much resistance a reform will meet. Third, the null result for conscientiousness suggests that treating Big Five dimensions as unitary predictors of change response may obscure countervailing mechanisms operating within a single dimension, and supports the case for aspect-level rather than domain-level measurement in change research (Oreg et al., 2011; Javalagi et al., 2024).

Limitations

Five limitations bound the claims made here. First, the design is cross-sectional, so the associations reported cannot establish causal direction; it is possible that teachers who had already formed negative views of the reform described their own dispositions accordingly. Second, both constructs were measured by self-report in a single administration, so common-method variance may have inflated the correlations. Third, the sample was self-selected from a single governorate: 615 of 7,012 teachers responded, a rate of 8.8 per cent, and teachers with stronger views may be over-represented. Generalisation to other regions of the Kingdom, and to other education systems, should therefore be treated as a hypothesis rather than an inference. Fourth, the study measured no organisational variables. Because workload, communication quality and administrative readiness were not assessed, the interpretation that system-level conditions dominate the aggregate level of resistance is an inference from the absence of group differences rather than a direct finding, and requires testing in a design that measures those conditions. Fifth, resistance was measured as a reported attitude rather than as observed conduct, and the relationship between attitudinal resistance and actual implementation behaviour is not addressed by these data.

Conclusion

This study examined whether teachers' personality traits explain resistance to a centrally mandated change in the school calendar, using the Saudi transition to a trimester system as an empirical case. Four of the five Big Five dimensions were significantly associated with resistance: neuroticism positively, and extraversion, openness to experience and agreeableness negatively. Conscientiousness was not. Traits also varied by gender and by school level. The central finding, however, is a negative one: despite this dispositional variation, resistance to the reform did not differ significantly between male and female teachers, or across primary, middle and secondary levels, on any of its cognitive, emotional or behavioural dimensions. Personality therefore appears to shape which individuals within a teaching population resist a reform most strongly, without determining how much resistance the reform encounters overall. For research on educational change, this argues against treating dispositional and organisational explanations as competing accounts of the same outcome, since they appear to address different outcomes. For reform implementation — in Saudi Arabia and in other centralised systems introducing

change of this kind — it suggests that differentiated, person-centred support and system-level attention to the shared conditions of teachers' work are complements rather than alternatives, and that the second is unlikely to be substituted for by the first.

The results emphasise the need for tailored approaches that consider both internal and external factors to facilitate the transition process while supporting educators in adapting to educational reforms.

Implications for Policy and Practice

Differentiate support without expecting it to lower aggregate resistance. Teachers lower in openness and extraversion reported greater resistance, so collaborative learning communities, coaching models and practice-based workshops that reduce the ambiguity of a new calendar are a reasonable use of professional development resources. The group comparisons reported here caution, however, against expecting such measures on their own to change the overall level of resistance a reform meets, since that level did not vary with the trait profile of the group.

Treat the shared conditions of teachers' work as the primary lever. Because resistance was essentially uniform across gender and school level despite substantial variation in disposition, measures that apply to everyone — realistic workload modelling for compressed terms, clear and early communication of the implementation timetable, and demonstrable administrative readiness before the change takes effect — are the more likely route to lowering aggregate resistance. This recommendation is grounded in the pattern of null group differences reported here together with the wider implementation literature (Fullan, 2013; Hargreaves and O'Connor, 2018); the specific conditions named were not measured in this study.

Involve teachers in implementation rather than only in adaptation. Participation in decisions about how a mandated reform is enacted locally is associated with lower resistance in the change literature, and is compatible with a system in which the decision itself is not open to negotiation (Oreg et al., 2011; Fullan, 2013). This recommendation extends beyond the present findings and rests on that literature rather than on these data.

Directions for further research. Three extensions follow directly from the limitations. A longitudinal design measuring resistance before, during and after implementation would establish whether trait–resistance associations are stable or reflect adaptation over time. A design that measures workload, communication quality and perceived administrative readiness alongside personality would allow the relative contribution of dispositional and organisational sources to be estimated directly, which the present design cannot do. Finally, replication in other centralised systems introducing comparable calendar or structural reforms would test whether the pattern reported here — trait variation without corresponding variation in resistance — is a general feature of mandated change or specific to this setting.

Declarations

Ethics approval and consent to participate

The study was approved by University of Hafr Al Batin. The approval number is HPO-05-FT-25/34. All participants provided informed consent prior to participation, and the study was conducted in accordance with the Declaration of Helsinki.

Consent for publication

Not applicable. The manuscript contains no individual person's data in any form.

Availability of data and materials

Available on feasible request.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Each author's contributed using CRediT roles: conceptualisation, methodology, investigation, formal analysis, writing — original draft, writing — review and editing. All authors read and approved the final manuscript.

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