

Effects of Teachers Adversity Quotient on student academic Performance in Public Secondary Schools in Kenya

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Abstract

Effective teachers are at the centre of a counties development agenda in order to continuously provide quality human resource in every sector of our economy. Various research studies reveal that various factors such teachers cognitive ability, subject knowledge, teaching experience and teachers classroom behavior are related to teacher quality and increased students academic performance. A much recent factor in increasing teacher effectiveness is adversity quotient. A person with good Adversity quotient can achieve any goal by fighting against all odds. The purpose of this paper was to investigate the teachers diversity quotient dimensions and their relationship to students academic performance. The study adopted Adversity quotient theory and correlation design. The study sample comprised of 441 secondary school teachers. Data was collected using the Adversity Quotient Profile Questionnaire for teachers. Kenya certificate of secondary education results were used as the standardized measure for students academic performance. Data was analyzed using Pearson's Product Moment correlation coefficient to test relationships between the variables. Validity was done using cronbach's alpha and coefficient value of 0.7 was accepted. The results revealed positive and significant correlation between adversity quotient and students academic performance (n=441), (r = .530), (P<0.01). The study recommends policy makers to recognize the importance of testing and assessing teachers' adversity quotient, devising appropriate and timely teacher support mechanisms and professional development programmes in order to improve teachers adversity quotient capacity for the purpose of raising students' academic performance in schools.

Key words: teachers adversity quotient adversity quotient dimensions, students academic performance

Introduction

Adversity quotient is a concept that has been gaining prominence in education sector over the last decades Bhamra, Dani and Burnard (2011). According to Usha and Praseeda (2014) adversity quotient is the capacity to adjust to adversities in life. Bhamra, Dani and Burnard (2011), the concept of adversity quotient is closely related with the competency and ability to return to a stable state after period of turbulence and discontinuities. Adversity quotient helps answer questions relating to adversities in educational institutions (Vogus & Sutcliffe 2007). Jackson, Firtko and Edenborough, (2007); Feldman (2009) states many teachers struggle to meet the organizational' demands as they traverse the challenges associated with stressful and traumatic situations encountered in the occupational setting. They may also experiences adversities particularly in decision making and meeting deadlines. For, example challenging environments includes scarcity of resources, inadequate, heavy workload, poor discipline among the students, strikes and increase in drug and substance abuse. All these adverse situations have adverse effects not only to the teachers but also to students and their parents.

The path to success, both in business and in life, is learning how to convert any adversity into a genuine advantage (Stoltz & Weihenmayer, as cited by Cornista & Macasaet, 2013). Adversity strikes without warning (Hewitt as cited by Canivel, 2010) but adversities are part of living and people choose the way they react to each adversity in their lives (Brunkhorst as cited by Cornista & Macasaet, 2013). Also, Stoltz defined that AQ® determines whether an individual will stand strong and true when faced with adversity or the person will be crippled or destroyed (as cited by Enriquez & Estacio, 2009).

These people exhibits high productivity and performance have high capacity to remain motivated (Vakharia,2012). It has been found that individuals with high AQ level take greater responsibility to fix problems and they do not blame others for failures. The school is one of the sources of stress and adversities for teachers because they must cope up with too many assignments to be marked, high pressure for producing good grades, adverse remarks from parents as a result of poor performance in examinations and lack of discipline among students (Hema and Gupta, 2015). Similarly, Sarita and Sonia(2015) states that overloaded curriculum, inappropriate school timings, high student-teacher ratio, nonconductive physical environment, poor teacher-student relationships, irrational rules of discipline, negative attitudes, overemphasis on weaknesses rather than strengths (Masih and Gulrez, 2006) are some of the forms of adversity in our schools. Adversity Quotient has been found positively related to school performance and teachers competency (Amy and Alison (2015). In addition, research has shown that measurement of adversity quotient is a good index in measuring success (Mary, 2015).

Adversity quotient describes three types of workers in the workplace; these are the Climbers, the Campers and the Quitters. According to the adversity quotient theory, Quitters are workers of minimal drive and little ambition. They are rarely creative, do not like to take risks and tend to avoid challenges. They invest only minimally in their work (Elizabeth, 2007). Campers , may be defined as workers who have stopped moving forward in their career as they have become weary of the many obstacles in today's schools. As such, they have settled for what they think is good enough, rarely ever taking on bigger challenges. Campers therefore are workers who are satisfied with the current state of affairs in their work and their school, letting greater opportunities passes them by. However, in the school set up, satisfactory academic results are not good enough (Stoltz, 1997, Elizabeth, 2007). Climbers, in the other hand, are workers who continuously seek for improvement and growth. They live to get the utmost out of life, are self-motivated and highly driven. They Honken, N.B., and Ralston, P.A.S. (2013). High achieving high school students and not so high achieving college students: A look at self control, academic ability, and performance in college. *Journal of Advanced Academics*, 24 (2), 108-124.

Self-discipline is a key indicator to improve learning outcomes in learning environment. Self disciplined teachers are visionary and are often a source of inspirational to their students. According to Stoltz, Climbers are thus the ideal teachers for any school (Elizabeth, 2007). Further, more whether a person is a quitter, camper or climber depends on his or her Adversity Quotient, which comprises four different dimensions known as CORE, an abbreviation for control, openness, reach and endurance. A person's inner CORE tells and determines how to handles conflicts, deadlines, setbacks, injustices, opportunities and challenge. According o to TSC(2016) teachers success in their work is mainly measured through students academic achievement particularly summative examinations. Table 1 below shows students' performance in 2014-2016 in Kenya.

Table 1: KCSE Performance in 2014 -2016 in Kiambu and Nairobi

	National KCSE index	Nairobi KCSE index	Kiambu KCSE index
2014	30.8% C+ and above	30.48% C+ and above	26.15% C+ and above
2015	31.5% C+ and above	31.85% C+ and above	27.9% C+ and above
2016	10.8 % C+ and above	9.8% C+ and above	8.4% C+ and above

It is inevitable for teaches to encounter difficulties, demands, complexities, and adversities in life dealing with students at school and in the community. Thus, there is need to determine the adversity quotient of teachers and how it influences students' academic performance. Considering the above discussion the current study sought to examine the relationship between teachers' adversity quotient and students' academic performance.

The Problem Statement

Research shows a variety of factors that contribute to variations in students' academic performance (Musili, 2015; Mwangi, 2015). Other studies show evidence of adequate teaching staff, inadequate funds, drug and drug substances, violence, strikes and distraction of school property is on the rise (Musili, 2015; TSC, 2016). Constant changes in the education sector is a course of stress, frustrations and dissatisfaction among teachers such as teachers appraisal (TSC, 2016; MOEST, 2012) all of which leads to school adversity and risk in students' academic performance.

The question is :Does teachers adversity quotient affects the Students' academic performance. This study therefore sought to establish the effects of the teachers' adversity quotient on students' academic performance in public secondary schools in Kiambu and Nairobi Counties in Kenya. The study was guided by the following hypothesis:

Ho₁: There is no relationship between teachers adversity quotient and students academic performance in public secondary schools in Nairobi and Kiambu counties

Ho₂: Is there is no significant difference between teachers adversity quotient and their academic qualification in public secondary schools in Nairobi and Kiambu counties

The Concept of Adversity Quotient

Adversity is one of the crucial aspects in life that shapes an individuals' character and one's potentials. According to Braes and Brooks (2010) adversity quotient is a state of ability that enables individuals, groups or communities to prevail through moments of adversity. Stoltz (2000) as cited by Enriquez & Estacio (2009) states that adversity quotient determines whether a individual stands strong when faced with adversity. Similarly, (Stoltz & Weihenmayer, as cited by Cornista & Macasaet, 2013) argues that key to success is learning how to convert adversity into potential opportunities. Adversity strikes without warning (Hewitt as cited by Canivel, 2010) but adversities are part of life and therefore people choose the way to act during adversity (Brunkhorst as cited by Cornista and Macasaet, 2013). Adversity quotient is a term derived from three major fields: cognitive psychology, psychoneuroimmunology, and neurophysiology (Elizabeth, 2007; Enriquez and Estacio, 2009). Psychoneuroimmunology is the study of the relationship between the brain and the immune system. Neurophysiology is the science of neuroscience that deals with the nerve cells that deals with information coding, transmission, and storage. Neurophysiology deals with the electrical properties of the nerve cell membrane, the generation of action potentials that carry information, and the communication of information between cells over the synaptic space. Cognitive psychology is the scientific study of mind and mental function that comprises of learning, memory, attention, perception, reasoning, language, conceptual development, and decision-making. Adversity quotient is therefore a critical role in understanding what it takes to succeed in life (Stoltz as cited by Cornista and Macasaet, 2013).

It has four dimensions given the acrynim CORE: Control, Ownership, Reach and Endurance. Among the concepts listed as important in influencing person's adversity quotient are Control, Ownership, Reach and Endurance (Stoltz, 2000).

Control Dimension

The Control dimension of adversity quotient seeks to explain the extent to which a person is able to influence a difficult situation positively. It is how much control a person perceives to have over the adverse events. People who respond to adversity as temporary, external and limited are optimistic and tend to enjoy life's benefits (Canivel, 2010). People with high adversity quotient tent to handle overwhelming situations compared to those with low adversity quotient who usually give up (Cura & Gozum, 2011). In addition, the more control a person has, the more likely to take positive action (Canivel, 2010). According to Stoltz as cited by Cornista & Macasaet, (2013), control is the most crucial ingredient of the four CORE dimensions of adversity quotient because it is directly related to a person's inclination to try hard in response to a given challenge. Since its impact lies within empowerment as to whether any meaningful action will take place, the control dimension has a strong influence on all other CORE dimensions (Elizabeth, 2007). This implies that focusing on things that can be improved rather than what cannot is what Stoltz calls Response Ability (Stoltz, 2000; Elizabeth, 2007). Theories of motivation link control aspect of adversity quotient to job performance (Elizabeth (2007) and sheds lights on the reasons behind performance deficits (Judge & Bono, 2001).

In addition, it is likely that beliefs of uncontrollability will lead to non-action as a person under such beliefs can see no ways to improve the situation. In work related situations, beliefs of uncontrollability leads to performance deficits (Stoltz, 2010).

Ownership Dimension

Ownership is the likelihood that someone will actually do anything to improve the situation, regardless of their formal responsibilities. Ownership refers to the origin of the adversity and the extent of outcome in response to a problem (Canivel, 2010). A person with high adversity quotient intensifies accountability to control, empower, and to act while low adversity quotient people disown the problem leading to low reduce performance and blaming (Canivel, 2010). In addition, high adversity quotient persons hold themselves accountable for situations regardless of the cause, while those with lower adversity quotient lapse into victimization and helplessness (Cura & Gozum, 2011). The dimension Ownership explains the role of accountability which measures the extent to which a person is able to rise above excessive blame on oneself or on others. According to (Stoltz 1997; Elizabeth, 2015) blaming is none-productive practice kills enthusiasm, teamwork and self-worth by creating mistrust and alienation. In contrast, good understanding of ownership leads to innovativeness, healthy interpersonal relationships, expertise and authentic trust (Stoltz, 2000; Elizabeth 2015).

Reach

Reach dimension of adversity quotient is the extent to which someone perceives an adversity will reach into and affect other aspects of the situation or beyond. Reach refers to the extent to which positive or negative outcomes will affect the other areas of a person's life (Enriquez & Estacio, 2009). In addition, it involves putting issues into their place and not letting them undermine the healthy areas of work and the rest of one's life (Cura & Gozum, 2011). This implies that a low adversity quotient tends to allow adversity to affect other aspect of his life, for example, financial panic, sleeplessness, bitterness, distancing self from others and poor decision making (Canivel,2010).

Endurance

Endurance dimension of adversity quotient is the measure of how long an adversity lasts (Enriquez & Estacio, 2009). An adversity perceived as being permanent is thought to be far more devastating than the same adversity perceived as short-lived. Possessing the ability to see past adversities that would otherwise be thought of as long-lasting or enduring, and instead reinterpreting the adversity as something short-lived will, according to Stoltz (2010), help in strengthening one's response. For instance, being rejected in a promotion interview might be interpreted and attributed to something temporal (Elizabeth, 2015). Higher adversity quotient people have the ability to tell the extent of adversity quotient and go on while lower adversity quotient people see adversity as dragging on indefinitely (Cura & Gozum,2011). Moreover, people with high endurance score view adversities as temporary and believe that there is always solution to overpower the adversity (Maiquez, Preolco, Sausa & Talatagod, 2015). Reach and Endurance are the two final CORE dimensions of adversity quotient. According to (Stoltz,2000; Elizabeth 2015) these two dimensions are highly related to each other. Apparently, according to Stoltz, a widespread problem may easily induce fear, apathy, helplessness and inaction (Stoltz, 2000).

Adversity quotient and performance

Sunan (2015) carried out a study on the influences of moral, emotional and adversity quotient on good citizenship of Rajabhat University's students in Northeastern Region of Thailand. The samples included 1,087 undergraduate students from 8 different Rajabhat universities. Data analysis was conducted in descriptive statistics and structural equation model. The results revealed that the adversity quotient and moral quotient had a positive direct effect on good citizenship with the significance level of .01 while emotional quotient had a negative direct effect on good citizenship with the significance level of .05. The structural equation model fitted well with the empirical data indicating the chi-square 167.784, df = 119, p-value = 0.0022, RMSEA = 0.019, SRMR = 0.022, chi-square/df = 1.409 R² = 0.559.

Theoretical frame work

This study is underpinned in the Adversity quotient theory. This is the discipline concerned with human elasticity or toughness. According to (Stoltz, 1997), individuals who effectively apply Adversity Quotient when faced by challenges, big or small succeed. Actually, they don't only learn from such challenges, but they encounter them better and quicker.

Adversity Quotient has been applied in business organizations and indicated that a high-Adversity Quotient personnel was transformed to competent, productive, innovative, committed and motivated employees (Stoltz, 1997). Stoltz found that several individuals have a high Intelligence Quotient and all characteristics of Emotional Intelligence; nonetheless they fall terribly below their potential. Neither Intelligence Quotient nor Emotional Intelligence seems to explain one’s success. Nevertheless, both play a role in someone’s success. The question remains, however, why do some people persist while others – perhaps equally brilliant and well-adjusted – fall short and still others quit? Adversity Quotient answers this question. According to Stoltz, success in work and life is largely determined by adversity quotient (AQ) more than other human characteristics.

An individual’s Adversity Quotient (AQ) is made up of four elements- CO2RE. These elements are: Control; Ownership and Origin; Reach; and Endurance. Schools in the 21st century are faced with many adversities which teachers must handle and this theory can help teachers increase their abilities to handle adversities and improve their students academic performance.

Measuring Adversity Quotient

An individual’s adversity quotient level can be quantitatively measured by taking the Adversity Response Profile (ARP), a questionnaire developed by Stoltz intended to gauge an individual’s pattern of responding when facing challenges or adversities (Elizabeth, 2007). The higher a person’s adversity quotient score, the higher the ability to withstand adversity, which leads into increases in performance. A person’s level of adversity quotient is thus said to predict job performance fairly well. The ARP is a self-rating questionnaire which comprises imagined scenarios, representing the four dimensions of adversity known as CORE. The questions are scored on a five-point likert scale.

Methodology

This study adopted a correlation research design using systematic random sampling to select a sample of teachers. The sample size comprised of 441 teachers. This study used adversity response profile questionnaire developed by Stoltz (2010). Kenya certificate of secondary education results for the years 2015 and 2016 were used as the standardized measure for students academic performance. The average mean score for the two years was correlated with each dimensions score. Each dimension had five questions measured on likert scale. The minimum score for scale was 10 and the maximum was 50.

Table 2: CORE Score Equivalents

Control –C		Ownership-O		Reach-R		Endurance-E	
High	48-50	High	50	High	43-50	High	44-50
Above Av.	43-47	Above Av.	47-49	Above Av.	38-42	Above Ave.	39-43
Ave.	36-42	Ave.	41-46	Ave.	30-37	Ave.	32-38
Below Av.	30-35	Below Av.	31-40	Below Av.	25-29	Below Av.	26-31
low	10-29	Low	10-30	Low	10-24	Low	10-25
C mean=41		O mean=45		R mean=32		E mean=36	

Reliability of the CORE dimensions was ascertained using Cronbach alpa coefficient of control 0.738, ownership .734, reach.647, endurance .593 and the overall Adversity quotient .762. Coefficient value of >0.590 was considered. Pearson Product Moment correlation coefficient to test relationships between the variables. Validity was done using cronbach’s alpha and coefficient value of 0.7 was accepted.

Results

The effect of adversity quotient teacher’s highest qualification

T-test test was conducted to establish a significant difference between teachers adversity and teachers highest qualification. This is as presented in Table 2.

Table 2: One-Sample Test : adversity quotient and professional qualification

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Adversity quotient	150.032	430	.000	7.48904	7.3909	7.5871
High educational attainment	82.248	431	.000	1.08102	1.0552	1.1069

Table 2 shows a significance difference between teachers overall adversity quotient and their highest academic qualification (P= 0.000), adversity quotient (t=150.032), educational attainment (t=82.248). This means that the hypothesis, which stated that there is no significant difference between teacher’s highest educational attainment and the overall adversity quotient was rejected. Thus, it is understood that the educational attainment affected the teachers’ adversity quotient. This findings agree with those of Mary (2015) and those of Shen in (2014)

Table 3: Pearson Correlation between Overall Adversity Quotient and Students Performance

Pearson’s correlation was calculated to establish the relationship between head teachers’ overall adversity quotient and students’ performance in examinations. This is as shown in Table 3.

Table 3: Pearson Correlation between Adversity Quotient and Students Performance

The influence

		Adversity Quotient	Subject Mean
Adversity Quotient	Pearson Correlation	1	.530**
	Sig.(2-tailed)		.000
	N	441	441
Subject mean	Pearson Correlation	.530**	1
	Sig. (2-tailed)	.000	
	N	441	441

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

Table 3 shows a significant and positive relationship between teachers overall adversity quotient and students academic performance (r = .530, (n=441) P<0.01). There is a positive correlation between overall adversity quotient and academic problem that is if the adversity quotient is high, we can reduce the academic problem to some extent. This result implies that the overall adversity quotient influences students’ academic performance. High score in adversity quotient leads to improvement in students’ academic performance while low score implies low academic performance.

The results in this study confirm research by Williams (2003) and Stoltz (2010) that teacher’s adversity quotient is related to students academic performance. Teachers with high adversity quotient are able to overcome all hardships they face in their work to post high scores for their students. On the other hand, teachers with low adversity quotient even when all other conditions for good performance are availed, they still post low academic performance for their schools. Hence adversity quotient is an important tool of improving students academic performance.

5.11 Conclusions

The results of this study support the perception that teachers’ response to adversity is an important factor in students’ academic performance. Students of teachers with high adversity quotient have high mean scores and grades in KCSE than those of teachers with lower adversity quotient. There was a statistically significant and strong correlation between students academic performance in KCSE and teachers’ adversity quotient ((r=0.530, P< 0.01). These data indicates that teachers adversity quotient has influence on students’ academic performance.

In the determination of influence of adversity quotient dimensions, on students academic performance, the results indicated that in the all the four dimensions of adversity quotient were important in influencing in students academic performance because they all had a significant and positive relationship with students academic performance, meaning that the score of each adversity quotient dimension increased as students performance. Given the prominence of accountability and the reliance on empirical evidence to inform policy decisions on students' success in academic performance in the current era, the findings of this study are critical in understanding the importance of teachers adversity quotient on students' academic performance. These results provide a holistic representation on how to measure teachers' adversity quotient and how to improve it using the dimensions. The results lay emphasis on the importance of teachers' adversity quotient in handling school adversities. It is evident that the endeavors to improve students academic performance through teachers' adversity quotient are likely to be effective. This means that if education stakeholders focus on improving the teachers adversity quotient as the adults who spend much time with children at their tender age, then students academic performance can be improved. The study recommended that the teachers employer consider including adversity quotient in teacher recruitment and development programmes, the curriculum developers to consider including adversity quotient in teacher training course and the school principles to consider undertaking teachers adversity quotient tests for their teacher in order to improve it for purpose of maintain excellent students academic performance.

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