

## **Demographic Variables, School Time and Future Goals as Predictors of School Burnout: Mediating Role of Perceived Instrumentality**

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**Abstract:** *This study explored the demographic variables of age and class level, school time and future goals as predictors of school burnout. The study also focused on the extent to which Perceived Instrumentality (PI) mediated the relationship. The study was conducted among a random sample of 225 students (all male) from one secondary school in Mombasa, Kenya. Data instruments consisted of the School Burnout Inventory and items used by other researchers in the area. A series of multiple regression analyses was done on data collected. School burnout was found to vary by class level, PI and both Intrinsic Regulation and Extrinsic Regulation. Ambivalent Perceptions of Instrumentality (API) mediated the influence of Internal Regulation (IR) and External Regulation (ER) on school burnout. The study recommended that schools should put in place deliberate interventions to let students know the future implications of current school commitment and also allow students to set own future goals in real terms.*

**Keywords:** *School time, Future goals, Task instrumentality, Internal Regulation, External Regulation, School burnout*

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### **1. INTRODUCTION**

This study sought to determine the contribution of demographic variables of age and class level; school time and future goals in predicting school burnout. The study also sought to determine the extent to which the relationships are mediated by task instrumentality of current tasks. This study stems from the researchers' interest in learners' dwindling academic performance. The first part of the paper reviews the literature in the area of school burnout, the problem statement and the theoretical and conceptual framework. The second part deals with findings and discussion of data. Conclusions and recommendations for educational practice are then given.

### **2. SCHOOL BURNOUT AND TIME SPENT IN SCHOOL**

School burnout has been defined as exhaustion due to study demands, a cynical attitude towards school, and feelings of inadequacy as a student (Salmela-Aro, Kiuru, Leskinen and Nurmi, 2009). The concept of burnout has been studied as a work-related outcome though research in the academic setting has focused on university students and to the school context in relation to academic achievement (Salmela-Aro, Kiuru and Nurmi, 2008). The Job Demands-Resources (JD-R) model of occupational stress has been useful in studying burnout and assumes that the characteristics of working environments can be divided into demands and resources. Demands require physical and psychological effort while resources function towards achieving work goals (Bakker and Demerouti, 2007). In the school setting, the model assumes that study demands wear out students' energy and lead to burnout, and that resources lead to engagement.

### **3. TIME SPENT IN SCHOOL**

While time spent in school is a demand felt by students that requires adjustment, future goals are a personal resource that leads them towards study persistence, that is, the time and energy spent on study activities. School time therefore presents challenges to study-related goals while future goals are functional in achieving study-related goals. Students' negative attitudes towards extra

time spent in school and future goals set in extrinsic terms are hypothesized to lead to Negative Perceptions of Instrumentality (NPI) of current school tasks to future goals. On the contrary, future goals set in intrinsic terms are hypothesized to lead students to have Positive Perceptions of Instrumentality (PPI) of current schoolwork to the realisation of future goals and positive perceptions of school time. The former is expected to lead to school burnout. Empirical findings in the school setting reveal that demands are positively related to school burnout while personal resources are negatively related to school burnout (Salmela-Aro and Upadyaya, 2014). It is also hypothesized that positive perceptions towards school time positively predicts study persistence and negatively correlates with school burnout.

#### **4. FUTURE GOALS**

The influence of future goals on school engagement has been studied within the framework of the Future Time Perspective (FTP) (De Volder and Lens, 1982; Nuttin and Lens, 1985). The motivational effects of the Future Time Perspective concern ascribing high valence to goals in the distant future and high instrumental value to present tasks in order to achieve goals in the distant future. It suggests that believing that school is linked to a desired future outcome, that is, instrumentality beliefs is positively correlated with task motivation in the present. Since students' perspectives about the value of current school tasks in achieving future goals influence their motivation towards task achievement, the lower the instrumental value of a goal, the lower the strength of motivation for that goal. The instrumentality of present task goals in terms of future goal setting is hence hypothesized to make a difference in student motivation. Findings of many studies conclude that framing future goals in intrinsic terms results in higher persistence than framing the same tasks in terms in extrinsic terms (Simons, Dewitte and Lens (2004; Vansteenkiste, Simons, Lens, Sheldon and Deci, 2004a; Vansteenkiste, Simons, Soenens and Lens, 2004b). Similar findings in a study by Tabachnick, Miller and Relyea (2008) show that personally valued intrinsic future goals predicted task instrumentality whereas personally valued extrinsic future goals failed to produce a statistically significant relationship with the college graduation subgoal. Taken together, these findings show that if students perceive that future goals are externally imposed, such goals do not motivate students (Phalet et al., 2001, cited in Phalet, Andriessen and Lens, 2004). Though the findings show consistency, it is important to replicate the studies in Africa for purposes of generalisation.

#### **5. TASK INSTRUMENTALITY**

Students ascribe higher valence to current school tasks and invest appropriate effort if they believe that it will lead to achieving valued future goals. Relevant studies show that perceptions of instrumentality are significantly and positively linked to students' valuing of schoolwork (Husman and Lens, 1999). Additionally, in line with Future Time Perspective, the relationship between the perceived utility value of school tasks and motivation has been established (Andriessen, Phalet and Lens, 2006; Creten, Lens and Simons, 2001; De Volder and Lens, 1982; Svanum and Aigner, 2011; Van Calster, Lens and Nuttin, 1991).

Research shows that students who believe that school is instrumental to gaining access to valued future outcomes are more motivated to achieve than students who lack these beliefs (Malka and Covington, 2005). Findings show that highly motivated students attach the highest instrumental value to their schoolwork and consequently invest maximum effort in current tasks in order to achieve future goals. It can be concluded from empirical evidence that the instrumentality of future goals increases the strength of student motivation for current school tasks. Findings also indicate that students with a positive perception of the instrumentality of schoolwork to reach future career goals have higher motivation for school tasks, while ambivalent or negative perceptions of instrumentality are associated with lower levels of task motivation and less persistence (Phalet et al., 2004). Therefore attaching higher valence to future goals and current school tasks is negatively related with academic burnout and positively with persistence.

Taken together, these findings show that distant future goals enhance students' task motivation and study persistence, if students perceive positive future outcomes as due to current schoolwork and if their schoolwork is internally regulated by future goals. Students who value self-set future goals, and those who perceive links between current schoolwork and future goals, are more motivated in schoolwork. It is hypothesized that students working towards self-set future goals are

interested in their current schoolwork as a means of achieving their future goals. This is further hypothesized to be negatively related to school burnout irrespective of the time spent in school.

## **6. STATEMENT OF THE PROBLEM**

More time spent in school due to heavy school demands (Aypay, 2011) puts a lot of stress on students in school. Preps time during weekdays, weekend classes, and holiday tuition (Mburugu, 2011) in addition to an overloaded curriculum and unrealistic expectations from parents and teachers for high grades are often likely to lead to school burnout. This is manifested in emotional exhaustion, cynicism and a sense of inadequacy which are associated with low motivation for school and lack of engagement (Ugwu, 2013) and ultimately, truancy. However, while overwhelming literature exists on work-related burnout, sparse research has been done in the school setting from a motivational perspective. Research on burnout levels in academic settings has focused on college students (Bernhard, 2007; Meier and Schneck, 1985). This study therefore aimed at finding the extent to which students' perceptions of extra time spent in school and future goals determine school burnout while mediated by the extent to which they value present schoolwork to lead them to future goals.

## **7. STUDY OBJECTIVES**

The objectives of this study were to:

- i. Establish the level of school burnout among learners over time based on based on age and class level.
- ii. Find out the extent to which perceptions of time spent in school contributes to school burnout
- iii. Find out the extent to which the instrumentality of schoolwork contributes to school burnout.
- iv. Find out the extent to which importance of future goals contribute to school burnout.
- v. Establish the extent to which the instrumentality of schoolwork mediates the influence of demographic variables, school time and future goals on school burnout.

## **8. THEORETICAL FRAMEWORK**

Students' burnout was studied within the framework of Future Time Perspective Theory (De Volder and Lens, 1982) and the Self-Determination theory (Vansteenkiste et al., 2004a). The former addresses the long-term outcomes of a current task in academic engagement and achievement while the latter provides an understanding of the motivation orientation likely to enable students achieve their future goals. The Future Time Perspective suggests that students with more valued future goals will be more motivated by current tasks. This is more likely if the future goals are self-chosen and oriented towards self-development, that is, intrinsic goals. Studies indicate that future intrinsic goals predict long-term persistence in comparison to future extrinsic goals or no goals at all. The extent to which one invests in a future goal therefore depends on how valued the future goals are. The link between perceived instrumentality of current tasks, future time orientation and motivation orientations is that when students have valued future goals and when they perceive the instrumentality of current tasks for the achievement of future goals, students will have higher motivation. It is hypothesized that students who perceive their current school tasks as important for their future goals will be more motivated than those who do not. It is further hypothesized that highly motivated students will attach higher instrumentality to current school work for achieving future goals. Therefore the study was interested in finding the extent to which motivation and future goals lead to school burnout while mediated by perceived instrumental value of current tasks.

## **9. CONCEPTUAL FRAMEWORK**

The demands-resources model is based on two processes: one requiring energy investment and exhaustion and a motivational process in which the availability of personal resources leads to study persistence. In this model, study demands (school time) require effort from the student to achieve study-related goals while personal resources (future goals) are functional in achieving

study-related goals. According to this model, both perceptions of school time and externally regulated future goals result in school burnout. The instrumentality of current schoolwork for future goal acquisition is hypothesized to mediate the relationship between perceptions of school time and future goals on school burnout.

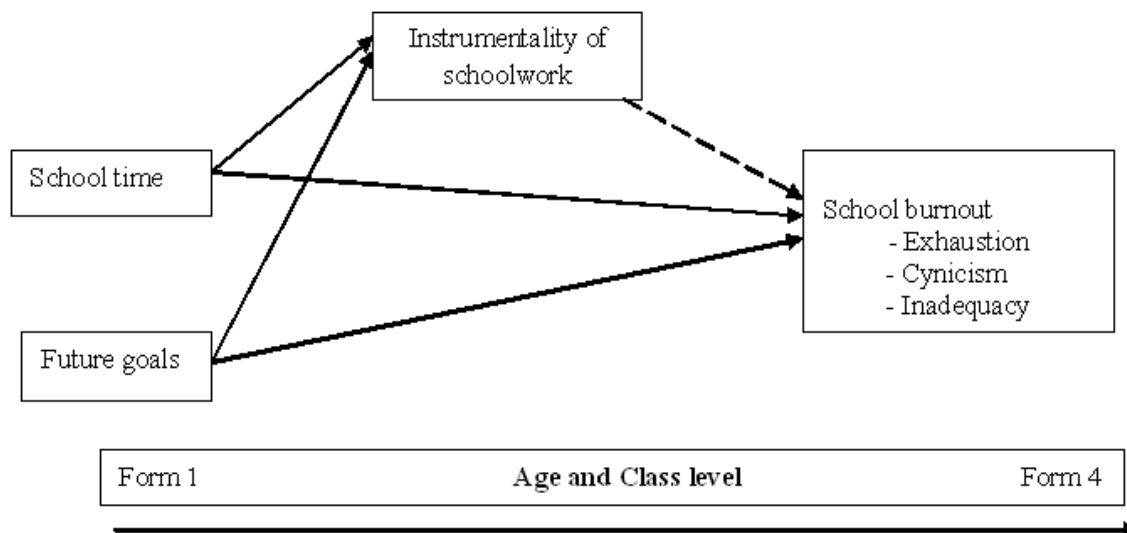


Fig1. Hypothesised interrelationships of variables leading to academic burnout

## 10. RESULTS AND DISCUSSION

Means, standard deviations, and intercorrelations for scores on each of the variables are presented in Table 1 for the total sample (Appendix I). School burnout was positively and significantly correlated with school time, exhaustion, cynicism, and inadequacy. It was also highly correlated with No Regulation (NR) and NPI. Academic burnout was strongly and negatively correlated with Positive Perceptions of Instrumentality (PPI), Intrinsic Regulation (IR) and Extrinsic Regulation (ER). PPI was negatively and significantly correlated with class and the three facets of school burnout. As expected NPI was positively correlated with perceptions of school time and exhaustion and negatively correlated with PPI. The implication is that PPI and NPI are mutually exclusive. API was highly and significantly correlated with PPI and NPI. Cynicism had moderate to high correlations with both intrinsic and extrinsic motivation. Additionally, intrinsic and extrinsic regulation were moderately and significantly correlated. These results were largely consistent with the findings reported by other studies (Salmela-Aro et al., 2008; Salmela-Aro and Upadyaya, 2014).

The first objective of the study was to determine the level of school burnout among students on the basis of age and class. School burnout was measured by levels of exhaustion, cynicism and inadequacy. Findings of the study indicate that students aged 14 and 15 years recorded the highest levels of school burnout (M=26.20, 25.64) respectively. The lowest means were reported by 16 and 22 year olds (M=21.08, 11.50) respectively. Students in the last grade recorded the highest levels of school burnout (M=23.39) while those in the lowest grade recorded the lowest (M=22.16). Levels of school burnout increased with class level. ANOVA results show a significant effect of class level on PPI [F(3, 221) = 3.662, p.05], NPI [F(3, 221) = 4.454, p.05] and also on IR [F(3, 221) = 4.632, p.05]. While age was not a significant predictor of any of the facets of school burnout, the regression equation for class level on inadequacy was significant F(1, 219) = 4.090, p.05. Perceptions of the instrumentality of current tasks on future goals were found to increase with class level if the goals were framed in intrinsic terms F(33, 220) = 4.632, p.05. The findings concerning the significant effect of class level on instrumentality supports Creten et al. (2001) who found a significant effect of grade level on instrumentality for distant goals, F(3, 594) = 5.59,  $p < .0009$ . In their study, students in grade 9 and 10 scored higher than students in grade 11 and 12. However, the findings of this study are seemingly contradictory: While it was expected that an increase in PPI would be accompanied by a reduction in school burnout due to task persistence, findings indicate that students at the highest grade reported the highest levels of school burnout.

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The second objective of this study was to establish students' attitudes of school time on school burnout. Respondents were required to show their extent of liking extra hours of study on weekdays and weekends and their willingness to be in school on weekends if it was not mandatory. Respondents in the study are required to attend school on Saturday when in third and fourth grade in secondary school. Findings of the study indicate that while fourth grade students liked extra hours on weekends and weekdays, more students 116 (51.3%) would not attend if it was not mandatory. Similarly, almost equal numbers of third and fourth grade students (29.2%, 27.4%) respectively were ambivalent about attending extra hours of study on Saturday.

School time was entered in the regression analysis in two steps: a hierarchical analysis beginning with students' attitudes towards extra school hours on weekdays, extra hours on weekends and willingness to attend on Saturday if it was not mandatory; and as a single model encompassing the three. In the first model, extra school hours on weekdays accounted for 1.9% variance in school burnout. When extra hours on Saturday was added to the model, the two items explained 10.1% variance in school burnout and was significant  $F(2, 118) = 6.636, p.05$ . In the final model, when willingness to attend school on Saturday was added, it explained 11.1% of variance in school burnout and was also significant  $F(3, 117) = 4.868, p.05$ . The largest change in variance was explained by students' attitudes concerning extra school hours on Saturday ( $R^2 = .082$ ). When entered as a single variable, perceptions of school time accounted for 9.7% of variance in school burnout and was significant  $F(1, 119) = 12.832, p.05$  (Table 2).

A further objective of the study was to determine the extent to which the instrumentality of current tasks influenced school burnout. Students were said to have PPI if they knew more people who are successful in life because of doing well in school than who did not. Students who knew more people who are successful in life without doing well in school or dropping out were assigned to the NPI category. Students who know as many (or as few) people who are successful in life with and without doing well in school, were assigned to the API category. Findings indicate that 138 (61.1%,  $M = 2.56$ ) of students had PPI while 80 (35.4%,  $M = 2.19$ ) had NPI. Two thirds of the sample 151 (67.1%,  $M = 4.76$ ) were ambivalent. Perceptions of instrumentality were entered independently in the regression equation since PPI and NPI were found to be mutually exclusive ( $r = -.234$ ). The regression equation of both PPI and NPI were significant [ $F(1, 217) = 24.191, p.05$ ;  $F(1, 217) = 11.809, p.05$ ] and explained 10% and 5.2% variance in school burnout respectively. API contributed 9.7% variance in school burnout and the regression equation was also significant (Table 2). This finding offers partial support to Andriessen et al. (2006) and Creten et al. (2001) who confirmed the motivational role of perceived instrumentality. Both studies report high correlation between instrumentality and student motivation for future goals. It is therefore inferred that student motivation will be negatively correlated with school burnout.

Another objective of this study was to establish the motivational importance of future goals on school burnout. It was hypothesized that students' perceptions of the content of the future goals (whether intrinsic or extrinsic) motivates the performance of current class work and therefore negatively predicts school burnout. Students who were working towards helping themselves in future were assigned to the IR category while those who expected to get a job or help their families in future were assigned to the ER category. A third category, No Regulation (NR) consisted of students who attended school because they had nothing else to do. The highest mean was shared equally by IR and ER categories (4.01) while the No Regulation category recorded mean of 2.38. It is therefore evident that students were equally motivated by future goals framed in intrinsic and extrinsic terms. To test for the influence of their motivational importance, a series of regression analyses were done. IR accounted for 1.9% in variance of school burnout and the regression equation was significant  $F(1, 216) = 4.102, p \leq .05$  while ER accounted for 2.1% variance. The regression equation was also significant  $F(1, 215) = 4.700, p \leq .05$ . No Regulation accounted for 3.6% of variance in school burnout and the regression equation was also significant  $F(1, 217) = 8.195, p \leq .05$ . The significant relationship between all motivational orientations and school burnout supports the findings of Ozcetin and Eren (2010) who found out that a considerable amount of the students perceived only a weak or moderate link between their future goals and current school tasks. However, the findings contradict Vansteenkiste, Matos, Lens, and Soenens (2007) and Vansteenkiste et al. (2004b) who found that future goals framed in intrinsic

terms had a positive effect on among others, long-term persistence. The implication of the findings is that future goals remain important irrespective of their motivation orientation.

The final objective of this study was to find the extent to which instrumentality of current tasks mediates the influence of demographic characteristics, school time and future goals on school burnout. To test for mediation, each of API, PPI and NPI was regressed on demographic characteristics, school time and future goals. Age and class level were not entered into the mediation equation because they were not significant predictors of school burnout. Instrumentality of current schoolwork was not found to mediate the influence of school time on school burnout. Findings show partial mediation of perceptions of instrumentality. In the first analysis, school burnout was regressed on IR and the equation was significant,  $F(1, 216) = 4.102$ ,  $p < .001$ ,  $R^2 = .019$ . IR significantly predicted school burnout ( $\beta = -.137$ ,  $p < .05$ ). In the second analysis, school burnout was regressed on ER, which also yielded a significant effect,  $F(1, 215) = 4.700$ ,  $p < .05$ ,  $R^2 = .021$ . When introducing API into the regression analysis, the link previously found between IR and school burnout disappeared ( $\beta = -.026$ ,  $p = .704$ ), while API still showed a significant contribution to school burnout ( $\beta = -.138$ ,  $p < .05$ ,  $R^2 = .019$ ). The same effect was seen when API was introduced to the regression equation concerning ER ( $\beta = -.023$ ,  $p = .730$ ). The reduction of the direct effect of IR and ER on school burnout due to the introduction of API into the equation supports the hypothesis that perceptions of instrumentality acts as a mediator of the relationship between future goals and school burnout (Figure 2). The finding concerning partial mediation of perceptions of instrumentality offers support to Vansteenkiste, Simons, Lens, Soenens, Matos and Lacante (2004) who found out that task orientation mediated the positive and negative effects of the intrinsic and extrinsic goal framing on performance and persistence.

## 11. CONCLUSION

The study confirmed grade level differences in students' perceptions of the importance of school in the achievement of valued future goals. It was also confirmed by this study that IR and PPI promote motivation and therefore negatively relate to school burnout. However, also ER was found to enhance task motivation and negatively relate to school burnout. Hence, both externally and internally defined future goals reinforce PPI. Taken together, findings confirm that distant future goals framed in both intrinsic and extrinsic terms enhance students' motivation, if students perceive positive instrumentality of current school tasks.

Students, who value distant future goals, and those who perceive positive connections between present school tasks and future goals, develop an increased interest in their schoolwork which in turn motivates effective learning in the classroom. Schools should have formal and informal programs that enable students to make a connection between their current commitment to school and its future implications. Students should be trained to understand how their present task-engagement is related to desired future goals.

Future research should investigate the influence of home and school environments on students' setting of future goals. Such studies should focus on the extent of the motivational impact of parents' and teachers' expectations on students' future goals. Conditions of disadvantage including poor neighbourhoods may also have an influence on students' setting of future goals and their perceptions of the instrumentality of current school tasks.

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**APPENDIX 1**

**Table1.** Descriptive statistics and inter correlations among study variables

	Variables	M	S D	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.	Age	17.40	1.55	.691**	-.255**	-.093	-.041	.002	.055	.010	-.079	-.170*	.168*	.021	-.044
2.	Class	2.64	1.12	-	-.329**	.061	-.007	.135	.181*	.089	-.048	-.214**	.238	.052	.080
3.	School time	4.18	1.09		-	.241**	.241**	.275**	-.102	-.098	.194*	-.146	.270**	.115	.312**
4.	Exhaustion	7.84	2.58			-	.415**	.440**	-.043	-.079	.055	-.188**	.217**	.052	.757**
5.	Cynicism	6.19	3.29				-	.491**	-.305**	-.219**	.293**	-.311**	.181	-.068	.843**
6.	Inadequacy	8.77	2.32					-	.087	.003	.035	-.188**	.161*	.005	.776**
7.	Internal reg	4.35	.93						-	.471**	-.113	-.003	-.072	-.065	-.137*
8.	External reg	8.03	2.09							-	-.059	.200**	-.128	.034	-.146*
9.	No regulation	2.38	1.39								-	-.088	.107	.029	.191**
10.	PPI	2.56	.57									-	-.234**	.527**	-.317**
11.	NPI	2.19	.69										-	.703**	.227**
12.	API	4.76	.79											-	-.030
13.	Acad burnout	22.87	6.53												-



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**Table2.** *Summary of results from regression analysis of variables on school burnout*

Variable	B	$\beta$	t	p	R <sup>2</sup>	Adj R <sup>2</sup>
Age	-.186	-.044	-.650	.517	.002	-.003
Class	.461	.080	1.175	.241	.006	.002
School time	1.870	.312	3.582	.000	.097	.090
IR	-.948	-.137	-2.025	.044	.019	.014
ER	-.456	-.146	-2.168	.031	.021	.017
No Regulation	.896	.191	2.863	.005	.036	.032
PPI	-3.619	-.317	-4.918	.000	.100	.096
NPI	2.136	.227	3.436	.001	.052	.047
API	-.248	-.030	-3.582	.000	.097	.090