THE IMPACT OF WORK STATUS, ADVANTAGEOUSNESS, ENGAGEMENT AND BURNOUT ON THE PERCEIVED ACADEMIC PERFORMANCE OF OPEN DISTANCE ELECTRONIC LEARNING STUDENTS

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ABSTRACT

This research aimed to answer three questions arising from a mega open-distance e-learning institution in South Africa. First, is there a significant difference between the levels of engagement and burnout with studies and the perceived academic performance of working and full-time students? Second, is there a significant difference between historically disadvantaged and historically advantaged students and their engagement and burnout with studies and perceived academic performance? Third, to what extent do study engagement and study burnout predict perceptions of academic performance, controlling for work status? Online and validated questionnaires were used to collect data from 423 respondents. Using a quantitative approach, including *t*-tests and hierarchical multiple regression, the findings revealed that while working students reported higher levels of study burnout, the gap was small. However, they maintained a positive self-perception of their academic performance. In contrast, full-time students were more engaged in their studies and gave themselves higher performance ratings. Additionally, when work status was controlled, study engagement—rather than study burnout—significantly predicts perceived academic performance. The higher perception of academic performance and greater engagement reported by historically disadvantaged students are noteworthy. By reporting the results, ODeL educators will gain a deeper understanding of students' study habits across diverse backgrounds and the potential impact of study engagement and burnout on academic achievement. It may also assist institutions in (re)structuring their teaching and learning policies. Given the variables and case examined, there is ample scope for further research.

***Keywords*:** work status, study engagement, study burnout, perceived academic performance, open distance electronic learning

INTRODUCTION

The concept of engagement has been defined as “a positive and fulfilling state of mind that is associated with performing daily activities of any sort and is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p.74). Personal engagement, initially associated with work roles (Kahn, 1990), gave rise to the terms "employee engagement" and, later, "work engagement.” As noted by Schaufeli & Bakker (2010), work or organizational engagement can be defined in terms of affective (emotional) and extra-role behavior, personal initiative, job involvement, satisfaction, and workaholism.

However, poorly managed work environments can lead to significant psychosocial hazards, notably burnout (Edú-Valsania et al., 2022). The latter is phrased by Göldağ (2022) “as a psychological syndrome marked by emotional exhaustion, depersonalization, and reduced personal accomplishment, commonly affecting those in people-oriented roles. Its key manifestations include heightened emotional fatigue, work-life incompatibility, lowered

productivity and motivation, negative attitudes toward one's profession, strained interpersonal relationships, feelings of personal failure, and the development of dependent behaviors". Schaufeli (2017) noted that work engagement can be extended to other actions and behaviors, including sports, volunteering, hobbies, leisure activities, and education. This has led to growing interest in student engagement research.

Given diverse data sets, research has consistently shown that the more students engage in their studies, the better their academic performance tends to be. For example, Lei et al. (2018) found a moderately strong, positive correlation across a range of dimensions, including behavioral, emotional, and cognitive engagement. They also noted that academic achievement is influenced, among others, by cultural values and/or gender. Many other studies have also reported significant correlations between engagement and academic performance (Alrashidi et al., 2016; Salmela-Aro et al., 2022; Delfino, 2019; Paloș et al., 2019; Picton et al., 2018; Schlenker et al., 2013; Skinner & Belmont, 1993; Tannoubi et al., 2025).

Similarly, student burnout has also been recognised by many researchers. Balogun et al. (1996) described three dimensions of student burnout: exhaustion caused by study demands, cynical attitude toward learning and study goals, and feelings of incompetence and decreased performance. After a systematic review of factors contributing to burnout among student populations of different countries, Chong et al. (2025), concluded that student burnout is a complex issue influenced by a variety of factors related to the environment, psychosocial competencies, and coping strategies, as well as mental burden, demographics, and lifestyle choices. Other factors identified include gender, grade level, parental education level, monthly living expenses, study and life pressures, and interest in their field of study (Liu et al., 2023). Additionally, increased workload, academic anxiety, and lack of self-efficacy (Joshua, 2024; Zhang et al., 2023) have been identified as additional factors. As a final example, Kim et al. (2018) found that social support from parents and peers is negatively correlated with student burnout, whereas school type (including postsecondary) positively moderates this relationship.

Research on study engagement and study burnout among e-learning students has attracted less attention. Here, engagement strategies include instructor factors such as prompt feedback and communication, diversified means of content delivery, as well as a learning environment aimed at promoting inclusivity and participation (Bedi, 2023), the number of times a student log-in to a Learning Management System (Moubayed et al., 2020), interaction patterns between students, tutors, and content (Muzammil et al., 2021), supported by Bryan et al. (2018), but who added thoughtful engagement with a limited number of tools.

Regarding burnout, Tomaszek & Muchacka-Cymerman (2022) reported a negative association between burnout in online learning and psychological well-being, with Toubasi et al. (2022) also reporting low levels. In contrast, Hunt et al. (2023) found significantly higher levels of burnout among medical students who used exclusive online learning approaches, while Öldağ (2022) found that digital students' levels of digital burnout were above average. However, this was moderated by device type, study level, and internet usage time. In closing, Salmela-Aro et al. (2022) suggest that managing technical demands and enhancing digital resources are crucial to mitigating both burnout and promoting engagement in electronic learning environments.

The literature also reports a positive relationship among online study engagement, burnout, and academic achievement. For example, Wang et al. (2025) found a strong correlation between the frequency of accessing online learning resources and academic performance. Hussain et al. (2018) reported a positive association between engagement with a learning management system, its associated activities, and assessment scores. Similarly, Kuo et al. (2014) list various other

factors that led them to conclude that online student engagement is a significant predictor of academic performance. Argyriou et al. (2022) provide more specific findings, reporting that engagement with online quizzes predicts student performance on a final exam. On the contrary, after a systematic review of student engagement with digital technologies, Nkomo et al. (2021) concluded that there is uncertainty about what student engagement with learning technologies entails, as well as about the contextual variation and modalities of student engagement when using digital technologies. However, Salmela-Aro et al. (2022) suggested that managing technical demands and improving digital resources are critical to fostering engagement and mitigating burnout in electronic learning environments. Marôco et al. (2020) demonstrated that both student engagement and burnout serve as significant predictors of subjective academic performance. However, their findings indicate that student burnout tends to diminish the positive impact of student engagement on academic outcomes. Burnout has also been shown to significantly influence academic procrastination (Sujadi et al., 2023), performance (Saleem et al., 2024), and grade-point average (Puah et al., 2024).

Research Problem

For a full-time or part-time (working) open and distance e-learning (ODeL) student, the term engagement encompasses engagement at two levels. In an ODeL environment, students learn at their own pace and convenience. Most distance students are also older, have jobs and families, and are known to find it challenging to balance their work and school schedules (Mohanachandran & Ramula, 2013). For these students, then, a broader interpretation of engagement is required: work engagement during the day as an employee and study engagement with schoolwork—the latter typically performed in the evenings, on weekends, during holidays, and during leave periods. Nirmalasari et al. (2023) posit that although the academic performance of full-time employees who enrol as part-time students is sparsely reported, working students' risk of study burnout is greater than that of full-time students. This, however, must be interpreted in light of their finding that part-time students who acknowledge burnout symptoms appear to perform well academically.

In addition, online student engagement and burnout can take on new meanings in developing countries, where, as Van der Merwe (2019) noted, many historical, technological, and infrastructural impediments continue to challenge students. Here, the South African context offers a unique case. He further notes that, with the arrival of democracy in 1994, a massification and increased diversity in a student body previously denied access to quality education occurred. However, deeply rooted legacy effects attributed to the previous political system of apartheid continue to impact historically disadvantaged (HD) individuals and students. Ethnicity, particularly language and history, is closely tied to culture (Ochs al. 2024). In the South African context, HD typically refers to South African citizens by birth or descent, i.e., Africans, Coloureds, Indians, and people of Chinese descent (Law Insider, n.d.). Therefore, as noted by Letseka et al. (2010), it is not surprising that, 16 years after democracy, the average dropout rate for students from these groups was more than double that of students from other cultures.

A review of the literature revealed that, while much local and international research has examined the correlation between student engagement and symptoms of burnout, it was primarily conducted in residential universities, with most e-learning studies conducted during and after the COVID-19 pandemic, which forced rapid online approaches. The impact of these two factors on the academic performance of ODeL students, whether full- or part-time, HD or not, has not, outside Fynn (2022), received much attention. He, however, used dropout intention as a proxy for academic performance. Furthermore, Van de Vijver & Leung (1997) stated that before comparing

scores across cultural groups, one should test items for possible bias, a viewpoint supported by Goliath-Yarde & Roodt (2011), who proposed that South African research must consider cultural factors when implementing an engagement scale to ensure accurate assessments.

Conceptual Framework, Objectives and Research Questions

Elements of the Job Demands–Resources (JD-R) Model Demerouti et al. (2001) underlies this research. Initially developed for occupational settings, it provides an understanding of the interplay among environmental conditions, individual well-being, and performance outcomes. The core logic is that excessive demands result in burnout and negative consequences, while resources are linked to engagement and positive outcomes. In educational settings, JD-R has been reconceptualised as study demands and study resources (Lesener et al., 2020). Study demands refer to requirements that involve cognitive and emotional effort and entail psychological costs. In an ODeL setting, it may include workload, time pressure, technological challenges and competing responsibilities. In this study, work status serves as a proxy for demands.

Study resources are linked to a variety of aspects, including appreciation, autonomy, supervisor support, social support, and developmental opportunities. Here, it is proposed that the availability (or non-availability) of study resources is closely linked to students' advantageousness (e.g., situational factors, quality primary and secondary education, socio-economic factors, access to resources, etc.). Conceivably, the availability of study resources is associated with academic performance. Work status and advantageousness can then be considered as contextual factors that may influence exposure to both study demands and access to study resources, and as noted by (Tóth & Jagodics, 2025), excessive demands strain students' mental resources, leading to burnout. Although engagement and burnout are distinct, they are often related (Moodie et al. 2012) e.g., students may simultaneously experience high levels of engagement with their work and/or studies while also reporting symptoms of burnout due to external pressures. Outcomes are then related to study engagement, student burnout, and academic outcomes (Bakker & Mostert, 2024).

In the absence of similar studies, it is therefore essential to investigate and assess the impact of work status and advantageousness on study engagement, study burnout, and academic performance in an ODeL institution. However, whereas it would be ideal to collect actual measures of student performance (e.g., instructor-awarded and published grades), privacy and confidentiality laws, institutional restrictions, and varying grading systems across faculties, among other factors, make this prohibitive. In the current context, it is proposed that academic performance is also linked to conscientiousness, punctiliousness, perfectionism, and academic adjustment (Cazan & Stan, 2019) rather than solely to grades. Given evidence that a student's perceived academic performance reflects their actual academic performance (Marsh, 1990; Cunningham, 2021), this study will use perceived academic performance as the outcome.

The current research aimed to answer three research questions. First, is there a significant difference between the levels of engagement and burnout with studies and the perceived academic performance of working and full-time ODeL students? Second, is there a significant difference between the levels of engagement and burnout with studies and the perceived academic performance of historically disadvantaged (HD) and historically advantaged (HA) ODeL students? Third, to what extent do study engagement and study burnout predict perceptions of academic performance if we control for work status? By reporting the results, ODeL educators will gain a deeper understanding of students' study habits across diverse backgrounds and the potential impact of study engagement and burnout on academic achievement. It may also assist institutions in (re)structuring their teaching and learning policies.

RESEARCH DESIGN AND METHODS

The study used a quantitative, cross-sectional design in a specific case. The research was carried out at a mega ODeL institution in South Africa, where the student body is mainly HD (80%). The institution is the oldest dedicated distance education provider in the world (150 years) and the largest in Africa, with 370,000+ registrations in 2025 (Unisa, 2026). Digitisation of student transactions using integrated ICT applications started in 2000. Since the advent of COVID-19, summative assessments have been moved online using a proctoring system. To accommodate students who lack access to technology for completing a course, fully functional computer laboratories are available in various regions of the country. At the time of this research, students also received a free 30GB data package per month, along with complimentary access to the university's web-based resources, which include the official learning management system.

Data Collection Procedures

Ethical clearance was obtained from the relevant institutional ethics committees and the student data gatekeeper. To collect data on engagement, burnout, and perceived academic performance, three scales developed and validated for the student context were used in a web-based questionnaire. A random sample of 10,000 university email addresses was extracted from the students' database, all of whom were currently registered for a formal qualification.

Student Engagement

The Utrecht Work Engagement Scale-Student Survey (UWES-9S; Schaufeli et al., 2002) was used to measure student engagement with their schoolwork. The vigour of the participants was measured with three items (e.g., “When I study, I feel like I am bursting with energy”). Dedication was measured with three items (e.g. “I am enthusiastic about my studies”), while absorption was also measured with 3 items (e.g., “I am immersed in my studies”). All items were scored on a seven-point Likert scale ranging from 0 (never) to 6 (every day). Pienaar & Sieberhagen (2005) reported acceptable Cronbach alphas for the three-factor model for South African students. Here, the questions were slightly adapted to fit the ODeL environment and the teaching and learning approach.

Student Burnout

While the Maslach Burnout Inventory-General Survey for Students (MBI-GS(S)) was specifically designed for college and university students, the Maslach Burnout Inventory-Student Survey (MBI-SS) is perceived to have wider applicability in different student-related contexts, which aligns with the current research focus. With a few minor limitations, Smit et al. (2025) validated a 15-item version for South African students. However, the instrument's length and the high licensing fee make its use prohibitive.

In searching for an alternative, both Wheeler et al. (2011) and Penny et al. (2023) found the 5-item emotional exhaustion subscale (MBI: EE) to produce the largest and most consistent alpha estimates or to be equivalent or superior to another 9-item version across various analyses. In further exploration, West et al. (2012) reported that two single items on the EE scale exhibited strong associations with multiple key published outcomes. In conclusion, Dolan et al. (2015) validated a single item (“I feel burned out from my work”) from the MBI Emotional Exhaustion

(MBI: EE) subscale as a standalone burnout measure that not only decreases the response burden but also offers a non-proprietary single-item measure to serve as a reliable substitute for burnout across occupations. Using a 7-point frequency response scale from Never to Always, the question was adapted to 'I feel burnt out from my studies"

Perceived Academic Performance Scale

The Perceived Academic Performance Scale, developed by Verner-Filion & Vallerand (2016) examined various relationships between perfectionism and academic adjustment. In two samples of undergraduate students, the internal reliability of a 5-factor, 7-point rating scale was acceptable (Study 1: $\alpha = 0.83$; Study 2: $\alpha = 0.87$). Higher scores in the scale, where respondents indicate their level of agreement/disagreement with five statements (e.g., "I meet the official performance requirements expected from a student"), with the total score calculated by summing up all responses. A higher score indicates a more positive perception of one's academic performance level. Despite the motivation for its use provided earlier, it is noted that perception data should be used cautiously as a surrogate for evidence of actual learning (Persky et al. 2020). A final open-ended survey question allowed students to provide additional comments. A summary of the responses will be included in the conclusion.

DATA ANALYSIS

To answer the research questions, the study used descriptive statistics, the independent *t*-test, and hierarchical multiple regression. Preliminary analyses were conducted to ensure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were not violated. Seven outliers were removed using appropriate statistical methods, leaving 423 responses for further analysis. Although the response rate (4.3%) was disappointing, it is in line with previous research in this population and is considered acceptable for valid statistical analysis. It is noted that data collection lasted 4 months, which provided students with ample opportunity to participate.

RESULTS

In presenting the results, WORK_STATUS refers to two modes of study: (1) study full-time or (2) work full-time or part-time and study part-time (working students). ENG_TOTAL is the total study engagement scale score, which consists of a total of three subscales: vigour (ENG_VI), dedication (ENG_DE), and absorption (ENG-AB). BO_SCORE refers to the single study-burnout score. PAP_TOTAL refers to the total Perceived Academic Perception scale score.

Reliability of Measurement Scales

The Cronbach's alpha statistic was .780. Broken down, it was 0.775 for PAP_TOTAL and 0.846 for ENG_TOTAL. For the ENG subcategories, the statistics were 0.707 for ENG_VI, 0.802 for ENG_DE, and 0.646 for ENG_AB. Ursachi et al. (2015) assert that an alpha between 0.6 and 0.7 is acceptable. Since BO_SCORE was a single item, reliability will require a test-retest over time.

Demographic Data

Most students (n = 232, 55%) worked full-time or part-time and therefore studied part-time, while the rest (n = 191, 45%) were full-time students. Of the students who worked, 36% worked part-time and 64% full-time. Other counts are in favour of women (n = 307, 73%), HD

students (*n* = 396, 94%), and those between 30 and 49 (*n* = 342, 81%), with the majority (*n* = 265, 63%) being in at least their second year of study. The Colleges of Education, Law, and Human Sciences, as well as Economic and Management Sciences, attracted the most respondents (78%), with the rest of the faculties ranging between 16.8% to 24.6%. Ninety-six (96) percent of respondents were from the HD group. Extremely skewed in numbers, they are more likely to respond since HD registrations typically constitute (80%) of the institution profile. Also, even if significant findings are reported for the HA, such results will remain statistically fragile.

In general terms, demographic data reflects the average institutional profile in terms of gender, age, enrolment patterns (including year of study and college registrations), and accessibility. That is, it allows more mature working female HD students to pursue their studies. The only exception to this pattern is the number of working students, which can change dramatically from year to year. In 2023, for example, only 40% of students were working full- or part-time. Data for 2025 was still not available at the time of submission of this article. Only 49% of the HD respondents were employed and earning income (53% full-time and 52% part-time), compared to only one full-time HA student, with the remainder (*n*=26) working full-time (92%) or part-time (8%).

Levels of study engagement and burnout, and perceived academic performance of full-time and working students

Table 1 shows the group statistics for each WORK category.

Table 1
Group statistics for WORK

	WORK_STATUS	***n***	***M***	***SD***	***SEM***
ENG_TOTAL	Study full-time	191	30.63	7.073	.535
	Work and study part-time	232	28.72	7.081	.514
BO_SCORE	Study full-time	191	1.57	1.783	.135
	Work and study part-time	232	1.87	1.760	.128
PAP_TOTAL	Study full-time	191	24.28	4.658	.352
	Work and study part-time	232	21.75	5.516	.400

Working students represented 55% of the respondents. The higher the ENG_TOTAL mean (out of 54) and the BO_SCORE (out of 6), the higher the engagement and burnout, respectively. The higher the PAP_TOTAL mean out of 30, the higher the students' perception of their academic performance. The ENG_TOTAL and PAP_TOTAL means for full-time students (*n* = 191; *M* = 30.63 and *M* = 24.28, respectively) were higher than for working students (*n* = 232; *M* = 28.72 and M = 21.75, respectively). However, the mean BO_SCORE was higher for working students (*M* = 1.87) compared to non-working students (*M* = 1.57). To determine whether there is a statistically significant difference between the two groups, an independent-samples *t*-test with a p-value cutoff of $p < .05$ and assuming equal variances. The results are presented in Table 2.

Table 2
Independent Sample Test WORK_STATUS

		Levene's test for Equality of Variances		t-test for Equality of Means				
						Significance		
		F	***Sig***	***t***	***Df***	***p***	M_{diff}	***SEM***
ENG_TOTAL	Equal variances assumed	.399	.528	**3.555**	421	< .001**	3.406	.958
	Equal variances not assumed			3.579	414.418	< .001	3.406	.951
BO_SCORE	Equal variances assumed	.029	.864	**-2.710**	421	.004*	-.478	.176
	Equal variances not assumed			-2.718	410.053	.003	-.478	.176
PAP_TOTAL	Equal variances assumed	13.422	< .001	**4.763**	421	< .001**	2.527	.531
	Equal variances not assumed			4.863	420.780	< .001	2.527	.520

* $p < .05$; ** $p < .001$

Significant mean differences were reported for ENG_TOTAL (t (421) =3.555, $p < .001$, Cohen's d = 0.98) and BO_SCORE (t(421) = -2,710, p = .004, Cohen's d = 0.18). For PAP_TOTAL, the difference in mean scores was also significant (t (421) = 4,4.763, $p < .001$, Cohen's d = 0.17). The largest difference and gap between the two groups was in favour of full-time students' engagement with their studies. Also favouring this group, but with a medium gap, was their higher perception of their perceived academic performance. The smallest difference, in favour of working students, was in the BO_SCORE gap.

Advantageousness

An independent sample *t*-test was also conducted to compare the mean scores of HD/HA students in ENG_TOTAL, BO_SCORE, and PAP_TOTAL.

Table 3
Group statistics based on advantageousness

		n	*M*	*SD*	*SEM*
ENG_TOTAL	HD students	396	38.02	9.590	.482
	HA students	27	26.89	9.238	1.778
BO_SCORE	HD students	396	1.76	1.794	.090
	HA students	27	2.89	1.867	.359
PAP_TOTAL	HD students	396	23.07	5.525	.278
	HA students	27	20.33	5.698	1.096

The means were higher for the HD students for both ENG_TOTAL (*M* = 38.02 vs *M* = 26.89) and PAP_TOTAL (*M* = 23.07 vs *M* = 20.33), but lower for BO_SCORE (*M* =1.76 vs *M* = 2.89).

Table 4 presents the results of the independent sample *t*-test for significance.

Table 4
Independent samples t-test, advantageousness

		Levene's test for Equality of Variances		***t*-test for equal means**				
						Significance		
		F	***Sig***	***t***	***Df***	***p***	M_{diff}	***SEM***
ENG_TOTAL	Equal variances assumed	1.582	.209	5.846	421	< .001**	7.947	1.449
	Equal variances not assumed			6.041	29.951	< .001	7.947	1.275
BO_SCORE	Equal variances assumed	.031	.860	-3.169	421	.007*	-1.010	.372
	Equal variances not assumed			-3.060	29.367	.011	-1.010	.376
PAP_TOTAL	Equal variances assumed	.299	.585	2.482	421	.010*	2.839	1.095
	Equal variances not assumed			2.416	29.433	.015	2.839	1.095

*** *p* < .05; ** p < .001**

As with WORK_STATUS, the differences in the mean ENG_TOTAL, BO_SCORE and PAP_TOTAL scores were significant, where t (421) = 5.846, p < .001, Cohen's d = 0.95; t(421) = -3.169, p = < .05, Cohen's d = 0.17 and t(421) = 2.482, p < .05, Cohen's d = 0.6, respectively. The largest difference, effect size, and gap favoured the HD students' study engagement. Also favouring this group, but with a medium gap, was their higher perception of their perceived academic performance. However, HA students showed a higher propensity for study burnout. The small effect size, coupled with a small HA sample size (n = 27), with only one participant studying full-time, makes any comparisons statistically fragile and potentially misleading, and, at best, an exploratory result.

Hierarchical Multiple Regression

To assess the ability of the two control measures (ENG_TOTAL AND BO_SCORE) to predict PAP_TOTAL after controlling for the influence of WORK_STATUS, the hierarchical multiple regression technique was employed. Tables 5–8 provide descriptive statistics, the correlation matrix and hierarchical regression results, and the model summary.

Table 5
Descriptive Statistics

	M	***SD***	***n***
PAP_TOTAL	22.89	5.569	423
WORK_STATUS	1.55	.498	423
ENG_TOTAL	37.30	9.938	423
BO_SCORE	1.83	1.818	423

Table 6
Pairwise correlation matrix

		PAP_TOTAL	**WORK_STATUS**	**BO_SCORE**	**ENG_TOTAL**
Pearson Correlation	PAP_TOTAL	1.000	-.226	-.376	.553
	WORK_STATUS	-.226	1.000	.131	-.171
	ENG_TOTAL	.553	-.171	1.000	-.554
	BO_SCORE	-.376	.131	-.554	1.000
Sig. (1-tailed)	PAP_TOTAL	.	< .001	< .001	< .001
	WORK_STATUS	.000	.	.	.004

ENG_TOTAL	.000	.000	.004	.
BO_SCORE	.000	.004	.000	.000

Table 7
Hierarchical regression analysis showing WORK_STATUS, BO_SCORE and ENG_TOTAL as predictors of PAP_TOTAL

	Cumulative		Simultaneous		
	***R²* change**	***F* change**	***Beta***	***t***	***p***
WORK_STATUS	0.51	F (1,421) =22.684*	-.132	-4.763	.001*
BO_SCORE	0.278	F (3, 419) =86.192**	-.094	-.094	.051
ENG_TOTAL			.478	9.874	< .001**

* $p < .05$; ** p < .001

Table 8
Model Summary

					Change Statistics				
Model	***R***	***R²***	**Adjusted *R²***	**Estimate**	***R²* Change**	***F* Change**	***sr***	***Df2***	**Sig. *F* Change**
1	.226[a]	.051	.049	5.431	.051	22.684	1	421	< .001**
2	.574[b]	.329	.325	4.577	.278	86.912	2	419	< .001**

** $p < .001$

When WORK_STATUS was entered in Step 1 (Table 8), it explained 4.9% of the variance in PAP_TOTAL (R^2 = .049, $F(1, 421) = 22.684$, $p < .001$). After entering ENG_TOTAL and BO_SCORE in Step 2, the total variance explained by the entire model increased to 32.5% (R^2 = .325, $F(3, 419) = 86.912$, $p < .001$), which was statistically significant. Therefore, these two control measures explained an additional 27.8% of the variance of WORK_STATUS. However, it appears that the combination of WORK_STATUS (β=-.1.32, t = -4.763, p = .001) and ENG-TOTAL (β=.478, t = 9.874, $p < .001$) is largely responsible for the prediction of PAP_TOTAL in the final step. Indeed, when ENG_TOTAL and BO_SCORE were added as two separate steps in a 3-step model (not reflected in the tables), the variance explained by the latter increased the predictive power of the whole model by only 6% (R^2 = .006, $F(3, 419) = 3.822$, p =.051), which was not significant. However, in combination with ENG_TOTAL, the potential secondary or mediated influence of the BO_SCORE should still be recognized since the final 2-step model remains significant.

DISCUSSION AND CONCLUSIONS

This research aimed to answer three questions. First, is there a significant difference between the levels of engagement and burnout with studies and the perceived academic performance of working and full-time ODeL students? The results show that ODeL students who study full-time are not only more engaged in their studies but also perceive their academic performance more positively. This aligns with general research suggesting that student

engagement predicts academic performance (van Beek et al., 2013; Salanova et al., 2009), as well as with Amadi et al. (2022) and Jardim (2020), who reported that full-time study results in better overall outcomes. Despite the statistically significant and medium gap in favour of full-time students for perceived academic performance, the mean of 21.75 out of a possible 30 for working students remains 'positive'.

On the other hand, working ODeL students experience more burnout in their studies. This finding complements the results of Schramer et al. (2020), who reported higher burnout among working students in a residential university setting. Yang (2004) notes that balancing academic and job demands can lead to time management challenges and frustration, thus increasing stress levels and burnout. That full-time working students have less time and/or scope for studies may also result in forced "cramming", a notion that aligns with the results of a systematic review of the literature by Ribeiro et al. (2018), who found that cramming exacerbates self-reported stress, which is linked to decreased quality of life and overall well-being, ultimately leading to burnout. In contrast, Rockman et al. (2022) suggest that employed students may have developed better time management skills, which could explain the small gap in study burnout observed between working and full-time students. Nirmalasari et al. (2023) found that full-time employees who pursue part-time studies, despite recognising manifestations of academic burnout, can maintain acceptable academic performance. Finally, given the older age profile of the current cohort, the results extend the findings of Rüschoff & Kowalewski (2024), who reported higher burnout and lower engagement among younger working students. Overall, as demands increase, burnout tends to increase.

Second, is there a significant difference between the levels of engagement and burnout with studies and the perceived academic performance of HD and HA ODeL students? Research that considered racial differences in study engagement, study burnout, and academic performance generally focused on structural and/or contextual factors affecting minority (black) groups in the USA, the impact of racial discrimination and associated stress on engagement (Mills et al., 2024), study burnout among medical students (Lawrence et al., 2021; Briggs et al., 2023; Yepez, 2023) while performance gaps focus more on social and other inequalities and racial stereotyping (Reardon et al., 2024). It is then challenging to situate the current findings within the broader literature.

Nonetheless, given the lingering South African context of disparities, the high(er) perception of academic performance and high(er) engagement reported by historically disadvantaged students is noteworthy. As noted by Boumi et al. (2020), student enrolment patterns are often dependent on economic circumstances. The higher percentage reported can be explained by current demographic data, which show that 49% of HD students study full-time, allowing them to spend more time on their studies. Also, with 51% of HD students employed, some of the challenges reported by Van der Merwe et al. (2023) in a systematic review of e-learning challenges in sub-Saharan Africa may be resolved. For HD students not deriving income, the National Student Financial Aid Scheme (NSFAS) is available to local students who meet the minimum income threshold. The latest data (2023) available on the current institutional intelligence hub shows that 42% of registered students are NSFAS recipients. Third, to what extent do study engagement and study burnout predict perceptions of academic performance, controlling for work status? The results showed that study engagement and burnout, the latter to a lesser degree, significantly predict the perceptions of academic performance of working and full-time ODeL students. This finding partly resonates with Van Beek et al. (2013) and Salanova et al. (2009), who posit that study engagement explains future performance; the latter authors add that it does so more than

study burnout. It also affirms Schaufeli & Bakker's (2001) view that burnout and work engagement are two distinct concepts that should be assessed independently.

In summary, the findings of this study contribute to our understanding of work status, advantageousness, study engagement, and study burnout among ODeL students, as well as their impact on perceived academic performance: (a) Working students reported higher levels of burnout but still maintained a positive academic self-perception (b) In contrast, full-time students were more engaged in their studies and gave themselves higher performance ratings (c) When work status is considered, study engagement—rather than study burnout—significantly predicts perceived academic performance. Conclusions regarding the differences between HD and HA students cannot be generalised, given the small sample size of the first group.

The findings relate to the JD-R model as follows: for working students, as demands increase, burnout increases; resources affect engagement, which, in turn, predicts performance strongly; burnout impacts outcomes indirectly or less strongly, with engagement the dominant driver of performance; and engagement and burnout, while related, are distinct concepts.

In conclusion, based on a final open survey question that allowed students to provide additional comments, the following concise summary of their responses may deepen understanding of both the ODeL environment and the findings' context. The HD group frequently complains about difficulties with online proctoring, network/system downtime, a lack of lecturer support, financial aid delays, the need for laptops/therapy, a preference for in-person exams, and balancing work/family with studies. Some of these challenges align with those identified by other researchers: technical access barriers (Enwereji & Van Rooyen, 2025), engagement challenges (Alshwiah & Dammam, 2021) and time management (Mathew & Iloanya, 2016). Overall, it aligns with the concept of resource scarcity. In contrast, the HA group's (albeit limited) responses appear more measured. They mainly emphasise work-life balance and long hours in demanding jobs, self-motivation strategies, and external burnout factors, rather than studies. It partly resonates with work-study themes identified Gezani (2024). However, both groups express a deep passion and determination to succeed despite the overwhelming challenges and immense pressure they face.

LIMITATIONS AND FUTURE RESEARCH

As noted, before, the small sample size of the HA group may be a statistical limitation, as indicated by the small effect size. While the single burnout measure used in this study has been validated, burnout remains a multidimensional construct and may well have influenced the reliability of the current results. Likewise, perceived academic performance, despite using a validated instrument, still relied entirely on self-report, and some may argue that it introduced a level of method bias. Other confounding factors, not investigated in this study, could potentially have affected the impact of work-life balance of working students, e.g., well-being (quality of life, physical health, and mental health), programme climate, stressors, and sources of support (Yusuf et al., 2020). Given the numerous variables at play (including those examined in the current study), there is thus ample scope for further investigation in other ODeL environments, e.g. in developed countries.

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COMPETING INTEREST

There is no competing interest to declare

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