Abstract

An attractive reward system promotes academic staff engagement which impacts on an organisation’s ability to acquire, retain and motivate high potential employees and ultimately attaining higher levels of performance. The primary goal of this paper is to explore the impact of reward system on employee engagement and organizational performance in selected Technical Universities (TUs) in Ghana. To achieve this objective, data was collected using Google forms from 31 academic staff working at 6 selected TUs. Data was captured in SPSS version 27, and analyzed using descriptive statistics, multiple linear regression, and structural equation model. The findings of the study reveal that reward system (RS) has a significant effect on employee engagement (EE) and predicts organisational performance (OP) while EE significantly predicts OP. Additionally, RS significantly mediates EE and OP for the selected Technical Universities in Ghana. In the light of these findings, organizational reward system and academic staff engagement are critical human resource factors for improving the performance of the selected institutions sampled. The outcome of this research calls for the policy makers and the TUs management to consider reward system and academic staff engagement programs as tools for addressing the current challenges facing the sector. The study contributes significantly to the knowledge and application of RS, EE and OP in theory and practice in the context of higher education sector.

Keywords
Reward system, Employee Engagement, Organisational Performance, Technical Universities, Ghana

1. Introduction
The post Coronavirus (Covid-19) has caused a complex array of social, economic and political changes worldwide posing serious challenges to the world of work. In addition, with the globalization and rapid diffusion of technologies, the new workplace environments are characterized with increased and intensified work pace. The rate at which these changes are happening poses serious implications and consequences for the Higher Education Institutions (HEIs), especially those of the developing nations. This is because, HEIs hold strategic position in every nation given that they are tasked with sharing and imparting knowledge, and forging the quality of citizens of any nation (ChaaCha and Oosthuysen, 2023; Workineh and Shimels, 2010). These have resulted in drastic changes on
the daily roles of academic staff which has become more challenging for the HEI’s in managing their workforce. From across all schools of thought, employees (in this article-academic staff) are considered the most valuable assets needed for driving institutions to success in these changing times, hence, the importance of motivating employees. In this context, reward system within the academia is gaining more attention given the growing concerns that the sector is not sufficiently rewarded and recognized. The higher education sector in developing countries is characterized with increasing competition in the job market, more diverse and a high demanding work environment. Hence, the sector is faced with the challenges of motivating the workforce to ensure efficient employees are retained to drive institutional goals and objectives. This is akin to the Ghana higher education sector (inclusive of technical universities), as elsewhere in other developing countries.

Similarly, with these challenges sweeping the higher education sector, highlight the importance of engaging employees which has remained an evergreen topic in the higher education sector. Employee engagement (EE) has never been more critical than now in the higher education sector given the global changes, and particularly the post Covid-19 pandemic era. It is considered one of the essential key elements of success beyond academic practices, given that it boosts morale, enhances talent retention as well as productivity. In absence of such engagement, the rate of disconnected employees would likely increase, and manifests in institutional financial loss, increased labour turnover/absenteeism, and loss of productivity for institutions. Thus, the importance of harnessing the shared values of the diverse academic workforce, to achieve the institutional goals and objectives thereby leading to improved performance. In fact, the Gallup Report of (2020), for American organizations' (HEIs inclusive) on employee engagement and performance shows that high employee engagement correlates strongly with positive performance outcomes which includes profitability, productivity, well-being, and retention. The Africa People Advisory Group (2021) shared similar views on the importance of employee engagement and performance of organizations. These reports show that engaged employees are emotionally committed, more productive, and effective, with a higher tendency to stay longer at their organizations. Therefore, the importance of reward system in this context cannot be overlooked.

Given the foregoing, this article is organized as follows: beyond this introduction, the article presents the objectives of the study used to develop the tested study hypotheses. The next section critically reviewed relevant literature on the concepts of reward system, employee engagement and organizational performance and relates the discussion to higher education sector. Furthermore, is the section on the methods adopted for the study and the results and discussions of the research findings. The article then puts forward the concluding thoughts and the study recommendations.

1.1. Objectives
The reward system and employee engagement for organizational performance has never been more important in the higher education sector than now. This is because of the increasing brain drain across professions which has intensified the limited capacities facing African education sector in the post Covid-19 era (Ossai and Ogboj, 2021i; Dzinamarira and Musuka, 2021). Additional to the Ghana higher education sector challenges are the slow pace to adopting new models of operation; teaching, and learning; failure in providing relevant programs, and infrastructures for addressing local problems aimed at contributing to the social changes. This study posits that reward system plays a vital role in addressing these on-going challenges. Adopting a quantitative research approach, this study investigates the impact of reward system on academic staff engagement and organizational performance of selected technical universities in Ghana. Specifically, the study addresses the following objectives:

- To examine the influence of reward system on academic staff engagement of TUs in Ghana.
- To examine the influence of reward system on the performance of TUs in Ghana.
- To examine the influence of academic staff engagement on performance of TUs in Ghana.
- To investigate the mediating effect of rewards systems on the relationship between academic staff engagement and the performance of TUs in Ghana.

2. Literature Review
2.1 Reward System, Employee Engagement and Organisational Performance
Reward has become a vital tool central in any working relationship within an organisation. Recent developments have shown an increase in scholarly works embracing reward in higher education, a sector which has not been sufficiently rewarded and recognized over the years. The concept of reward lacks a comprehensive definition,
because of its wider functions, however, psychological research associates it with behaviour. In this context, reward is mostly used to describe an event that produces a pleasant or positive affective experience (White, 2011), thereby eliciting approach and consummatory behavior (Schultz, 2007). In this regard, appropriately rewarding employees helps to (i) attract the right caliber of employees, (ii) retain excellent performers; and (iii) maintain the employees’ zeal to work (Emuron, 2020). In essence, organisations compete to maintain a market share and use good reward systems (RS) in pursuit of their goals and objectives. Being an important component of human resource management practice, Armstrong (2006) posit that reward system consists of an integrated strategies, procedures, and activities of a company to reward its workers in accordance with their commitment, ability, and skills. As an integrated strategy, reward systems comprise of intrinsic and extrinsic factors that enhance and motivate the conduct of employees to attain high performance in an organization. While intrinsic rewards are mostly financially related (e.g. salary, wages, bonuses,), extrinsic rewards relate to non-financial e.g. recognition, praise, flexible working hours and social rights etc. A comprehensive reward system capable of addressing the needs of academic staff has been a daunting task facing higher education sector. With the recent societal changes and new world of work fast evolving, researchers and professionals are calling for continuous engagement of the employees to compliment the available organisational reward system to drive business success. Thus, employee engagement (EE), a concept dominating academic research today and particularly, human resource management, is gaining ground as a support for organisations’ mental capital both for ‘cognitive and emotional fortitude, and strength of the employees’ towards higher economic outcomes (Schaufeli and Salanova, 2014:295). The concept was first coined by Kahn (1990), as the investment of the self into work roles but overtime has developed beyond such. Views on employee engagement varies, in its interpretation, calculation, and conceptualization, from either individual or organizational perspectives. In this context, the terminologies used among researchers differ e.g. work engagement, personal engagement, job engagement, and organizational engagement. This article adopts Schaufeli, et al, definition widely accepted in academic and industry research. Employee engagement is therefore defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá and Bakker, 2002). These authors note that when employees are engaged, there exists a feeling of enthusiasm, dedication, and absorption in relation to their work. Such feelings induce employees to be energetic, passionate, involved (mentally, physically and emotionally) towards positive organizational performance (Schaufeli, et al., 2002; Shuck and Wollard, 2010; Rana, Ardichvili and Tkachenko, 2014).

Organisational performance (OP) is a concept often debated on its acceptable definition. Guillen and Saris (2013), refers organisational performance to transforming adaptive and complex change realized with a model composed of multiple indicators for the purpose of generating core added value for the business. In agreement, a review of scholarly works on OP shows the concept is measured across multiple indicators in relation to the internal and external environment of the organisation (Kandzija, Petrescu, Panagoreţ and Panagoreţ, 2022; Farouk, 2016; Antunes da Silva and Borsato, 2017). In this regard, such indicators range from financial to non-financial, which may include the structures, policies, culture etc. In essence, all aspects of organisation affect its performance including its reward system and employee engagement. Various research studies have demonstrated the positive relationship (directly or indirectly) on the variables of reward system, employee engagement and organisational performance (Mansor, Mat Jusoh, Hashim, Muhammad and Omar, 2023; Tripathy, and Rohidas, 2022; Marleyna, Devie and Foedjiawati, 2022; Manzoor, Wei and Asif, 2021). This is akin to academic staff in the context of higher education as demonstrated by various research studies (Cassim, Botha, Botha, and Bisschoff, 2024; Nachonga, & Matagi, 2022; Agbionu, Anyalor, and Nwali, 2018). A good reward system motivates academic staff to show more commitment to their work. Siswanto et al., (2021) posit that meeting the needs and wants of employees, including rewards, leads to higher organizational performance. Similarly, institutions with high employee engagement often outperform their competitors. Hence, RS and EE are considered important drivers for institutional overall performance in the higher education sector.

2.2 Theoretical underpinnings and hypotheses development
Employee - organisation relationship is one of the main tenets of management practices. It involves all aspects in the relationship including formal, informal, social, and psychological, that defines employers’ expectations and employees’ contributions as well as inducements towards the contributions (Che, Zhu and Huang, 2022; Tsui, Pearce, Porter and Tripoli, 1997; Tsui, Pearce, Porter and Hite, 1995). One of the theories that underpins employer and employee relationship is the Social Exchange Theory (SET). Rooted in the works of Homans (1958), SET is built on the idea of social exchange as a behaviour and its application span through sociology, and behavioural
psychology field. In Jonason, and Middleton (2015), attempt in linking SET to relationship, the authors assert that behaviours can be thought as a cost benefit analysis, i.e. individuals are likely to perform a behaviour with society and their environment if they perceive a reward associated with the said behaviour than losing it. In contrast when the cost outweighs the benefit, individuals are not likely to perform the behaviour. Accordingly, Cropanzano et al. (2017) define SET as (i) an initiation by an actor toward the target, (ii) an attitudinal or behavioral response from the target in reciprocity, and (iii) the resulting relationship. In the triad arrangement, RS and EE can be viewed as initiators from an employer targeting employees. Employees are likely to reciprocate with positive affirmation, showing commitment to their work, which then fosters performance of the organisation as a resultant of the relationship. Conversely, if the employer feels the cost associated with RS and EE would outweigh its benefits, the behaviour will not be performed.

2.2.1 Reward system and employee engagement
Motivating employees by developing emotional connections between the employer and employees in this changing time is an important management practice. Siswanto, Maulidiyah and Masyhuri (2021), noted that the act of giving rewards helps to push and motivate employees to perform optimally at their workplace. Engaging employees creates a sense of loyalty and engaged employees are likely to have positive feelings towards their work, which in turn leads to lower turnover intentions, improved employee productivity leading to organisation performance (Hermawan et al., 2020). The Social Exchange Theory (SET) offers valuable insights into the interplay between reward systems and employee engagement in an organisational setting. SET posits those social interactions involve a reciprocal process where individuals aim to maximize rewards while minimizing costs in their relationships. SET suggests that individuals engage in a reciprocal relationship, expecting a fair exchange of resources. In doing so, employees are likely to contribute time, skills, and effort, in anticipation for an equitable reward. When employees believe their contributions are justly rewarded, positive behaviors benefiting the organization are more likely to be displayed. Employees are inclined to engage in behaviours that enhance their well-being and maximize positive outcomes in relationships. Thus, understanding employee engagement as a form of positive reciprocity reinforced by reward as a form of compensation (Hariandja, 2002). On the basis of the foregoing, the following hypothesis is therefore established:

H1: Reward system has a significant relationship with academic staff engagement of TUs in Ghana

2.2.2 Reward system and organizational performance
Accordingly, Tripathy and Rohidas (2022), argues that the success of firms is not fully dependent on the available human capital rather the ability to trigger the best productivity from the available human resources. Most organisations are applying innovative strategies to ensure optimal performance of the employees. As such reward system has become one of the most effective competitive tool to many organisations. Mehmood (2017) notes that incentives are important for boosting employees morale, increase workers’ job satisfaction and alter the behaviour of the dissatisfied workers. With attractive reward system, employees tend to give in their best with the resultant effect being improved OP. Notably, reward system impacts positively on organisational performance through improved employee performance (Okwuise, and Ndudi, 2023; Aliu, Sahiti and Sahiti, 2013). Mehmood (2017) explains that rewards systems are necessary for any firm to keep and hire the best employees in order to acquire a competitive edge in a competitive market. The Social Exchange Theory (SET) sheds light on how reward systems, organizational performance, and the reciprocal interactions between employees and the organization are interconnected. SET suggests that individuals engage in social exchanges expecting fair rewards for their contributions which implies that employees anticipate compensation for efforts towards their contribution in the organisation. Inversely, when employees perceive fair rewards for their contributions, they are more likely to engage in behaviors that enhance organizational performance. Thus, positive reciprocal exchanges build trust and commitment between the employer and the employee. Thus, the hypothesis: H2: Reward System has a significant relationship with organisational performance of TUs in Ghana.

2.2.3 Employee engagement and organizational performance
Employee engagement and organisational performance are two overarching ideas regarding workplace today. Muller, Smith and Lillah (2018), assert that employee engagement is a powerful and useful tool for organisations to achieve a competitive edge. Studies have shown that EE is influenced by various factors which encapsulates how people feel about their entire work in an organisational setting. For Stewart et al., (2019), EE is influenced by factors such as workplace culture, organizational communication, managerial styles, trust, respect, and leadership). Chakraborty and Ganguly (2019), highlights the importance of personal traits and environmental factors as
significant determinants of engagement and productivity. The authors argue that the person-environment paradigm provides the best explanatory value for work performance. From another perspective, employee performance is viewed as a function of employee satisfaction. In this context, Ramakumar, and Priyadarshini, (2021), posit that employee satisfaction and comprehensive sensitivity to both their socioemotional and physiological requirements are necessary for the organisation to achieve productivity and efficiency. Other views on the link between EE and OP suggest that variety of factors can provide a strong relationship between the two concepts. Such include developing strategies for coaching and managing an organisational workforce, recognition, co-workers, communication, working conditions, fringe benefits, the nature of the work, the nature of the organisation, organisational policies, systems, and procedures, work compensation, promotion, personal development, security, appreciation, and supervision, interact to affect employee satisfaction and performance (Mansor, Mat Jusoh, Hashim, Muhammad, and Omar, 2023; Oluwatunmise et al. 2021; Almatrooshi Singh and Farouk, 2016). When an organization's main objective is to create creative, high-quality products, employee performance will be crucial in accomplishing the objectives.

Employee engagement and organizational performance can be shaped by the principles of SET, which highlights the mutual relationships between individuals and organizations. SET proposes that individuals engage in social exchanges with the expectation of receiving fair and positive treatment in response to their contributions. In the workplace, employees who perceive their efforts as valued and rewarded are likely to reciprocate with increased engagement because of the feelings of organisational support. Engaged employees are more inclined to invest additional effort, time, and creativity in their roles, contributing to overall organizational effectiveness. An engaged employee is aware of the business context and works with colleagues to improve performance within the job for the benefit of the organization (Hui et. al. 2020). SET underscores the role of trust in social exchanges by noting that when employees trust that the organization will reciprocate their efforts with fair treatment and support, it cultivates commitment and engagement. Improving employee engagement positively affects an employee's job performance and organizational profitability. Thus, the hypothesis:

\[ H_3: \text{Academic staff engagement has a significant relationship with organisational performance of TUs in Ghana.} \]

### 2.2.4 Mediating role of reward system on employee engagement and organizational performance

Siswanto, Maulidiyah and Masyhuri (2021), research on the mediating role of reward on employee engagement and employee performance serve a competitive advantage for organisations. A well-crafted reward system encourages employee engagement which supports organisational performance as confirmed in research studies.

Marleyna, Devie and Foedjiawati (2022), demonstrated in their study how reward system supports employee engagement through satisfaction as a mediating variable. The authors argued that when employees are rewarded, they feel obligated to show higher levels of engagement, and give more effort to completing their tasks to optimize productivity. Similarly, Siswanto, Maulidiyah and Masyhuri (2021), in their study shows that reward system has a significant positive effect on employee performance through employee engagement. In support, Silitonga et al. (2020) in their study provided evidence of a direct correlation between employee engagement and organisational success. In the context of Social Exchange Theory, individuals engage in mutual relationships, notably, when employees believe the organization values their contributions and well-being, they are more likely to reciprocate with increased engagement. This is evidenced in Taba (2018), study which revealed that reward has a direct effect on employee performances and organisational commitment. Engaged employees are inclined to invest extra effort, time, and creativity in their roles, when they feel the organisation is trustworthy, fosters commitment and engagement that support performance. Thus the study proposes the hypothesis:

\[ H_4: \text{Rewards system effectively mediate the relationship between academic staff engagement and the performance of TUs in Ghana} \]

Given the foregoing, the article proposes a framework depicted using Figure 1, that exhibits the research constructs and relationships that guided the hypotheses development.
The relationship in Figure 1 shows that academic staff engagement is the independent variable influence organisational performance (dependent variable). Rewards systems (mediating variable) also influence performance and mediates between employee academic staff engagement and performance. The framework shows how the constructs are related and provides the basis to develop the research hypotheses.

3. Methods
This is a report of a pilot study in an on-going research investigating the impact of rewards on employee engagement and organizational performance in selected technical universities in Ghana. The idea is to measure the relationship if any, among these variables in the context of a technical university in developing country. Hence, the study adopted a quantitative, descriptive and cross-sectional survey research design. Adopting a non-probability simple random sampling technique, the unit of analysis comprises of thirty-one (31) academic staff members selected from six technical universities in Ghana. Using closed-ended questionnaires, data was collected through Google forms. The questionnaires were adopted from the works of Ramos-Villagrasa et al. (2015) Abubakar et. al. (2018 and Chiang, (2005). The questions were measured using a 7-point Likert scale ranging from 0 to 7 (strongly disagree to strongly agree). A total of thirty-one questionnaires were retrieved and considered ideal for the analysis. Data was captured into the Statistical Package for Social Science (SPSS) version 27.0 and analysis performed using descriptive statistics, multiple linear regression and structural equation model. Descriptive statistics was used to analyze the demographic characteristics of the respondents and presented as frequency, percentages mean and standard deviation. Multiple linear regression was used to determine the influence of the variables and the structural equation model was used to establish the mediation role of reward system on the relationship between academic staff engagement and the performance of Technical Universities in Ghana. Thus, the study tested the structured research hypotheses presented earlier.

It is noteworthy to indicate that all ethical procedures which include granting of permission to conduct the study, the use of informed consent, maintaining the anonymity of the respondents, etc. were duly followed. The participation of the respondents was solely voluntary basis.

4. Results
4.1 Reliability and Validity Test
The measurement of data quality was done by testing for the validity and reliability of the study using Cronbach Alpha and CFA. Cronbach’s alpha measurement of internal consistency was utilized to evaluate the overall reliability of the measurement scale, where alpha estimated the proportion of the total variance that is not due to error which represents the reliability of the scale. Table 2 provides a summary of the reliability analysis. The Cronbach’s alpha reliability coefficient obtained from the questionnaire is between 0.706 and 0.865 and the result is indicated in Table 2. That is, organisational performance with Cronbach’s alpha of 0.942, reward system with Cronbach’s alpha of 0.953. This indicates that the study is reliable and researchers can stand on these findings to make future recommendation.

Similarly, to attain model fit to data, CFA was conducted on all the items simultaneously and purifications were done by analysing the modification indices while ensuring that enough and key items necessary to capture each construct were retained (Hair et al., 2014; Diamantopoulos and Siguaw, 2000). After dropping a few high correlating error terms, a satisfactory measurement model fit to data was attained, given Chi-square ($\chi^2$) =862.47,
degree of freedom ($d.f.$) = 574, normed chi-square ($\chi^2/d.f.$) = 1.503, root mean square error of approximation (RMSEA) = .047; non-normed fit index (NNFI) = .903, comparative fit index (CFI) = .916, standardized root mean square residual (SRMR) = .053. The average variance extracted ranges from 0.547 to 0.733, while the composite reliability values range from 0.79 to 0.89. The item loadings and their associated t-values are shown in Table 1 below.

Table 1. Cronbach’s Alpha Reliability Coefficient of the Study

<table>
<thead>
<tr>
<th>Sub-sections of questionnaire</th>
<th>Number of items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement</td>
<td>15</td>
<td>0.952</td>
</tr>
<tr>
<td>Individual Performance</td>
<td>18</td>
<td>0.913</td>
</tr>
<tr>
<td>Organizational Performance</td>
<td>12</td>
<td>0.942</td>
</tr>
<tr>
<td>Reward System</td>
<td>21</td>
<td>0.953</td>
</tr>
<tr>
<td>Total Variables</td>
<td>66</td>
<td>0.971</td>
</tr>
</tbody>
</table>

Source: Field data, (2024) (N = 31)

Table 2. Goodness of fit indices

<table>
<thead>
<tr>
<th>Measurement model</th>
<th>$\chi^2$</th>
<th>d.f.</th>
<th>$\chi^2$/d.f.</th>
<th>RMSEA</th>
<th>NNFI</th>
<th>CFI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement set 1 (CFA)</td>
<td>862.47</td>
<td>574</td>
<td>1.503</td>
<td>.047</td>
<td>.903</td>
<td>.916</td>
<td>.053</td>
</tr>
<tr>
<td>Measurement set 2 (1st order CFA)</td>
<td>47.53</td>
<td>26</td>
<td>1.893</td>
<td>.052</td>
<td>.978</td>
<td>.986</td>
<td>.033</td>
</tr>
<tr>
<td>Measurement set 3 (2nd order CFA)</td>
<td>49.43</td>
<td>31</td>
<td>1.595</td>
<td>.051</td>
<td>.980</td>
<td>.986</td>
<td>.034</td>
</tr>
</tbody>
</table>

Notes:

i. Measurement set 1: employee engagement, individual performance, organizational performance, reward system, vigor, dedication, absorption, task performance, counterproductive behaviour, conceptual performance, extrinsic financial rewards, extrinsic non-financial reward, intrinsic work-related rewards and other rewards.

ii. Measurement set 2 & 3: employee engagement, individual performance, organizational performance, and reward system. Modelled with the retained items from measurement set 1

4.2 Demographic data

The descriptive statistics of the participants is distributed along gender, age, marital status, highest academic qualification, job status, years worked at the university, and employees’ institutional representation. The result is presented in Table 1. From the Table, majority (80.6%) of the respondents who participated in the study were males and 19.4% of the respondents were females. Concerning the age distribution of the respondents, 16.1% of the respondents were single, 74.2% of them were married and 9.7% of the respondents were divorced. Again, with respect to the highest academic qualification, majority (87.1%) of the respondents were masters’ certificates holders whilst 12.9% of the respondents were PhD holders. Also, 41.9% of the respondents were assistant lecturer, 32.3% of them were lecturers, whilst 22.6% of the respondents were senior lecturers and 3.2% of the were senior lecturers PhD. Also, 6.5% of the respondents have worked at the university less than one year. 32.3% of them have worked at the university for one to five years, 16.1% of the respondents have worked at the university for six to ten years, whilst 22.6% of the respondents have worked at the university for eleven to fifteen years, 22.6% of the respondents have worked at the university for sixteen years and above. Considering the employee’s institution in which they work, 16.1% of the respondents work at Takoradi Technical University (TTU), 9.7% of the respondents work at Accra Technical University (ATU), 6.4% of the respondents work at Kumasi Technical University (KsTU), 16.1% of the respondents work at Cape Coast Technical University, 38.1% of the respondents work at Ho Technical University, 38.7% of the respondents work at Ho Technical University and 12.9% of the respondents work at Tamale Technical University (Table 3).
Table 3. Demographic profile of participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n=31)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
<td>80.6</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>19.4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 – 29 years</td>
<td>12</td>
<td>37.7</td>
</tr>
<tr>
<td>30 – 39 years</td>
<td>10</td>
<td>32.3</td>
</tr>
<tr>
<td>40 – 49 years</td>
<td>9</td>
<td>29.0</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>Married</td>
<td>23</td>
<td>74.2</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>Highest Academic Qualification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters</td>
<td>27</td>
<td>87.1</td>
</tr>
<tr>
<td>PhD</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>Job Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistance</td>
<td>13</td>
<td>41.9</td>
</tr>
<tr>
<td>Lecturer</td>
<td>10</td>
<td>32.3</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>Senior Lecturer PhD</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Years worked at the University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below I year</td>
<td>2</td>
<td>6.5</td>
</tr>
<tr>
<td>1-5 years</td>
<td>10</td>
<td>32.3</td>
</tr>
<tr>
<td>6-10 years</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>11-15 years</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>16 years above</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>Employees’ institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TTU</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>ATU</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>KsTU</td>
<td>1</td>
<td>6.4</td>
</tr>
<tr>
<td>CCTU</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>HTU</td>
<td>12</td>
<td>38.7</td>
</tr>
<tr>
<td>TaTU</td>
<td>4</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Source: Field data, (2024) (N = 31)

4.3 Test of Research Hypotheses
The four hypotheses set out for this study were tested and presented as follows:

4.3.1 Reward system and employee engagement
The result of the test of hypothesis on the constructs of reward system and employee engagement is presented in Table 4.

Table 4. Regression analysis of RS on EE

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>95% Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta (β)</td>
</tr>
<tr>
<td>Reward System</td>
<td>0.419</td>
<td>0.144</td>
<td>0.474**</td>
</tr>
<tr>
<td>Constant</td>
<td>2.839</td>
<td>0.674</td>
<td>0.425</td>
</tr>
</tbody>
</table>

Source: Field Data, (2024) *p < 0.05, **p < 0.01 (N = 31)

Dependent Variable: Employee Engagement

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As indicated in Table 4, multiple linear regression was used to examine the influence of reward system on academic staff engagement of TUs in Ghana. From the four subscales, extrinsic financial reward, extrinsic non-financial, intrinsic work-related rewards, other reward. All the regression assumption were met and could be reasonably interpreted. The results indicated that rewards system (p = 0.007) was a statistically significant predictor of academic staff engagement. The model accounted for 68% of the variance in performance, clearly indicating that reward system is not the only factor influencing performance.

### 4.3.2 Reward system and organizational performance

#### Table 5. Regression Analysis of RS on OP

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>95% Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reward System</td>
<td>0.797</td>
<td>0.160</td>
<td>1.680**</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.444</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Field Data, (2024)*  
**p < 0.01  
Dependent Variable: Organisational Performance

As depicted in Table 5, multiple linear regression was used to examine the influence of reward system on the performance of TUs in Ghana. From the four subscales, extrinsic financial reward, extrinsic non-financial, intrinsic work-related rewards, other reward. All the regression assumption were met and could be reasonably interpreted. The results indicated that reward system (p = 0.000) was a statistically significant predictor of organisational performance. The model accounted for 68% of the variance in performance, clearly indicating that reward system is not the only factor influencing performance.

### 4.3.3 Employee engagement and organizational performance

To answer this research objectives, multiple linear regression was used to explore the influence of academic staff engagement on performance of TUs in Ghana. From the three subscales, vigor, dedication and absorption that met all the criteria of regression assumption and could be reasonably interpreted.

#### Table 6. Regression Analysis of EE on OP

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff Engagement</td>
<td>1.617</td>
<td>0.283</td>
<td>0.632</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Field Data, (2024)*  
**p < 0.05, **p < 0.01  
Dependent Variable: Organisational Performance

The results, as shown in Table 6, indicated that academic staff engagement (p = 0.009) was a statistically significant predictor of organizational performance. The model accounted for 76% of the variance in performance, clearly indicating that academic staff engagement is not the only factor influencing performance.
4.3.4 Mediating role of reward
With respect to this research question, the study determined whether rewards systems mediate in the relationship between academic staff engagement and the performance of TUs in Ghana. To be able to answer this research objective, the study adopted Structural Equation Model (SEM) to determine the mediation role of reward system (Table 7).

Table 7. Mediation Results

<table>
<thead>
<tr>
<th>Effect type</th>
<th>Paths</th>
<th>Effect (Boot) SE</th>
<th>P-value (Boot)</th>
<th>LLCI (Boot)</th>
<th>ULCI (Boot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediation</td>
<td>Employee Engagement→ Reward System→ OP</td>
<td>0.079</td>
<td>0.208</td>
<td>0.132</td>
<td>0.321</td>
</tr>
</tbody>
</table>

*p path significant at 5% (2-tailed test).
Number of bootstrap samples = 5000.
Number of bootstrap samples = 1000

With respect to this research question, the study determined whether rewards systems mediate in the relationship between academic staff engagement and the performance of TUs in Ghana. To be able to answer this research objective, the study adopted structural equation model (SEM) to determine the mediation role of reward system.

The result indicated that the relationship between academic staff engagement and organizational performance is mediated by reward system (β=0.079, 95%CI [0.132, 0.321]). The result showed that controlling for the mediator (reward systems), academic staff engagement was a significant predictor of organizational performance. The result obtained suggest that reward systems serve as a mediator variable in the relationship between academic staff engagement and performance.

5. Discussion
Findings from Table 3 shows that reward system has a significant and positive contribution to employee engagement (academic staff engagement) (β =0.474, p < 0.05). This means that if the Technical Universities in Ghana put in place systems to reward its academic staff engagement with the institution will be positive. Akhtar, Sachu, and Ali (2012) reviewed that each element of reward system is a highly significant component that influences performance. The study by Yasmeen, Farooq, and Asghar (2013) on the effect of rewards on organizational performance in Pakistan, on the other hand, found that there is little or no correlation between pay and performance of the organization. However, it was discovered that promotions and organizational performance have a weak to moderate link. Although these two studies are comparable to the one being undertaken now, they were carried out outside of Tanzania, where the impact of rewards on organizational performance may have distinct effects due to cultural differences and other peculiarities.

On the variables of RS and OP, findings from Table 4, indicates that reward system has a significant and positive contribution to Organisational performance (β =1.680, p < 0.05). This means that if the Technical Universities in Ghana put in place systems to reward, its employees, the performance of such institution will increase positively. Alam (2017) emphasises that rewards play a significant role in the performance management feedback loop. Mehmood (2013) explains that reward systems are necessary for any firm to keep and hire the best employees in order to acquire a competitive edge in a market that is highly competitive. He goes on to say that the usage of rewards motivates workers to perform more quickly and efficiently because they require an incentive to do so. He comes to the conclusion that in order to establish a lasting competitive advantage, the reward system should be compatible with the corporate culture and the strategy.

Similarly, findings from Table 5, indicates that employee (academic staff) engagement has a significant and positive contribution to organizational performance (β =1.617, p < 0.05). This means that if the Technical Universities in Ghana engages its academic staff, the performance of such institutions will increase positively. As can be seen in the literature review. According to Chakraborty and Ganguly (2019), there is a significant positive association between employee engagement and important factors like drive, organisational citizenship, job involvement, and performance. In firms around the world, a different study discovered beneficial relationships between employee

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engagement, job productivity, organisational turnover, and customer satisfaction (Ramakumar, and Priyadarshini, 2021) Kumar, Oluwatunmise et al. (2021) asserts that all firms seek to be profitable. Poor employee outcomes are harmful to a specific company's success because the performance of any organization's employees is what determines its success (Oluwatunmise et al., 2021).

The mediating role of RS on EE and OP is clearly depicted in Table 6. Findings suggest that the relationship between employee (academic staff) engagement and organizational performance is mediated by reward system ($β=0.079$, 95%CI [0.132, 0.321]). The result showed that controlling for the mediator (reward systems), academic staff engagement was a significant predictor of performance. The result obtained suggest that reward systems serve as a mediator variable in the relationship between academic staff engagement and performance. Silitonga et al. (2020) provided evidence that there is a direct correlation between employee engagement and organisational success. He referred to employee engagement as a human resource approach that has a significant impact on company productivity by engaging people. According to Silitonga et al. (2020), there is a correlation between employee satisfaction and engagement. According to the findings of their study, Silitonga et al. (2020), highly effective personnel are also very effective for the organization's financial success. Another study found that rewards had the same effects on performance and employee satisfaction (Ibrar and Owais, 2015; Aktar, 2013; Ajmal, 2015). According to Farid et al. (2019), Gohari (2013) and Aktar and Pangil (2018) rewards have a direct impact on both employee performance and satisfaction.

6. Conclusions and Recommendation

The study's findings have important practical implications for organizations operating in Ghana. It suggests that academic staff engagement is essential for enhancing performance. Organizations can foster engagement by providing learning opportunities, encouraging communication among employees and management, and creating a culture that promotes a positive attitude towards new ideas and perspectives. Furthermore, the study's identification of gaps in the literature provides a foundation for future research in this area. Researchers can explore these gaps to gain a deeper understanding of employee engagement, its relationship with organizational performance, and the factors that facilitate or hinder engagement. Overall, the study highlights the importance of employee engagement in the workplace and the need for organizations to invest in strategies that promote engagement. By doing so, organizations can enhance their performance and create a more fulfilling work environment for their employees.

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