

Human Capital Development and Faculty Members' Contributions

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Abstract: High performance and organisational development can be guaranteed by attracting, developing, and retaining talented employees within an organisation. This study investigated the relationship between Human Capital (HC) development plans and faculty members' contributions at a Tertiary institution in Lagos. This study explores the mediating influence of HC development programmes on the relationship between HC development plans and faculty members' contributions. This study adopted a survey research design. A quantitative approach to data collection and analysis procedures was adopted for this study. Data was collected from selected faculty members of a higher education institution in Lagos metropolis using a simple random sampling technique. 306 self-administered questionnaires were distributed to the respondents at the institution. Three hypotheses were formulated and tested using inferential statistics via SmartPLS 3.3 software application, which is instrumental in running a Variance-Based Structural Equation Modelling (SEM). The results showed that HC development programmes fully mediate the relationship between HC development plans and faculty members' contributions. This study submits that adequate funding and proper resource allocation to support smooth implementation of faculty members' developmental strategies is critical to university performance, in terms of quality of graduates and credible research outputs for national development.

Keywords: Faculty members' contribution; HC development plans; HC development programmes; Lagos Metropolis; Mediation; Tertiary Institutions

JEL Classification: M12; I31

1. Introduction

In the global environment, high performance can only be recorded by institutions that regard Human Capital (HC) as the most valuable asset (Marimuthu, Arokiasamy & Ismail, 2009; Choudhury & Naya, 2011). Hence, organisational development in a knowledge-based economy can be guaranteed if recruited employees are developed and adequately utilised (Shahin & Alquadri, 2008). An empirical study revealed that continuous progression on HC development was gingered by different economic depression witnessed in many nations worldwide (Okeke, 2013). Many countries around the world have placed a high priority on a regular update of human capital towards accelerating economic growth by investing adequate time and effort (Marimuthu, et al. 2009). In Nigeria, many government and corporate organisations are beginning to recognise employees as human assets and have decided to contribute to their professional development (Shahin, et al., 2008). HC is an embodiment of rare and imitable values, which serves as organisations' driving force for increased performance and economic development of many nations (Schults, 1961; Saleim, Ashur & Bontis, 2007; Hsu, 2008; Marimuthu et. al, 2009, Gates & Lngevin, 2010; Segal, Borgia & Schoenfeld, 2010). HC can influence any

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country's socio-economic and political situation because of the need to fast track the growth and development of the nation (Grossman & Helpman, 1991; Lucas, 1993; Osadebe, 2014). Despite the positive influence of human capital development on firms performance (Atiku & Lawal, 2021; Mankiw, Romer, & Weil, 1992; Babatunde & Adefabi, 2005; Marimuthu et. al, 2009; Dauda, 2010; Choudhury et al., 2011), the most important asset (people) is the least that is well managed (Beaes, 2011). Therefore, this study investigates the relationship between HC development plans and faculty members' contributions to the goals and objectives of the institution.

HC was found to be more significant to countries with a large labour supply. The labour market demands are met through training, investment in education, health, and moral principles that are embedded in HC (Osadabe, 2013). The formation of HC will then be achieved by developing human resources into highly effective human resources (Crook, Todd, Combs, Woehr, & Ketchen Jr, 2011). Through HC, an effective relationship is guaranteed when knowledge and idea are developed, shared, and transferred (Atiku, 2020; Han, Han & Brass, 2014). HC has to do with an investment in people stored with knowledge, skills, attitude, and other competencies to improve service delivery through training and education and other professional initiatives (Papadimitrious, 2011; Sharabati & Nour, 2013). HC comprises an integration of knowledge, skills, attitudes, experience, and other characteristics that can be utilised for organisational success. Dauda (2010) put it that HC impacts economic development, productivity growth, as well as the advancement in education. Accordingly, the reason why the government provides subsidies on education and job skills instruction is attributable to its impact on economic growth and development. HC is a tool for national development because it is linked with human development. Crook et al. (2011) confirm that HC remains vital in people and the economic development of every nation.

Osadebe (2013) introduced HC development to include measures and procedures of investments that generate knowledge, skills, and health in people. HC development involves creating an enabling environment and building an appropriate number of required human resources to the realisation of goals of an organisation or a nation. HC development is a way of building competence and calculating the mobilisation of HC, which opens the door of innovation, increases output and superior global trade, and combining them with the world economies (Osadebe, 2013). Similarly, HC development is regarded as a fundamental pathway to connect to the global market. Specifically, Higher Education Institutions (HEIs) should invest the necessary resources in developing faculty members to exert a great impact on performance (Marimuthu, 2009).

HC development in Higher Education Institutions (HEIs) tends to generate a significant contribution to organisational competencies (Noe, Hollenbeck, Gerhart, & Wright, 2003; Youndt, Subrahmaniam, 2004). In other words, a well-articulated and strategically managed HC can boost innovativeness and increase the competitive advantage of an institution. Hence, this study conducts an assessment of the influence of HC development plans and programmes on faculty members' contributions to a tertiary institution in Lagos, Nigeria. This study is structured into five (5) segments. The first segment introduced the background of this research with a focus on the research objectives. The second segment presents the literature on the HC development plans, HC development programmes, and faculty members' contributions as well as the theoretical framework guiding this study. The researchers also introduced the link between HC development plans and HC development programmes with extensive narratives. The third segment proffers explanations of procedures utilised for data collection and analysis procedure. In the fourth segment, data were analysed and interpreted pointing

out the implications of results in practical perspectives. The last segment in this paper focused on the conclusion, recommendations, and future research direction.

The main aim of this study is to investigate the relationship between HC development plans and faculty members' contributions at a Tertiary institution in Lagos metropolis. This study examines the mediating influence of HC development programmes on the interplay between HC plans and faculty members' contributions with the aid of Variance Based Structural Equation Modeling.

2. Literature Review

This section examines the literature to establish the relationship between HC development plans and faculty members' contributions through effective HC development plans, which includes the budget for training and education at a tertiary institution. The effectiveness of training and education was considered as strategic measures to create value, rare and imitable people to increase the productive capacity and competencies of faculty members.

2.1. Human Capital Development Plans

HC development plan is a strategic procedure arranged for the achievement of an organisational goal (Sofu, 2014). These plans explain how resources and funding of activities are distributed, formulated, and implemented to ensure employees' development goal is achieved. Similarly, Paudel (2009) regards the strategic HC development plan as a strategic process to steer human capital formation. On the other hand, the Partnership for Public Service of the United States (2013) argued that a strategic HC development plan is the link between asset (people) record keeping and asset (people) management functions in agreement with the organisation's strategic objectives. Therefore, effective HC development plans play a prominent role in achieving organisational goals. Ghosh (2005) argued that HC development planning for the educational organisation includes a strategic process of understanding organisation strength, weaknesses, opportunities, and threats followed by developing the vision, mission, and direction of organisational goals in a way that the specific plans can effect possible changes.

The report of Council Research for Development (CRD, 2016) shows that HC development plans are significant conditions required for effective development programmes and innovation. Mugabe (2013) reported that adequate implementation of HC development programmes can be achieved through a sound strategic HC development planning. The implication is that without well-articulated HC development plans, there will be no success in the implementation of the HC development programme and ultimately affect employees' contributions.

2.2. Human Capital Development Programmes

HC development programmes are deliberately organised programmes (e.g. education, training, development, and career development) offered to employees over a certain period, to increase knowledge, skills, attitude, and other professional characteristics needed to execute strategic objectives (Atiku & Fields, 2018). HC development programmes are interventions for continuous updates of dynamic capabilities and other job-related skills.

Many studies confirmed the relevance of HC development programmes to employees' development (Nadler & Nadler, 1970; Vemic, 2007; Hung, 2010; Saleem, Shahid, & Naseem, 2011; Qayyum,

Sharif, Ahmad, Khan, & Rehman, 2012). For instance, Halsay (2015) argued that training programmes involve building the right and specific knowledge, skill in manners to approach current and future challenges. The human capital development programme is a deliberate and comprehensive training for positive outcomes in an organisation (e.g. Huselid, 1995; MacDuffie, 1995; Delaney & Huselid, 1996; Valle, Martin, Romero & Dolan 2000; Aragon, Barba & Sans 2003; Birdi, Clegg, Patterson, Robinson, Stride & Wall, 2008; Aguinis & Kraiger, 2009). Enyekit, Amaehule, and Teerah (2011) put it that training and development can be used synonymously with human capital development. The foregoing shows the importance of the training programme as a fundamental tool in the human capital development programme. Ukenna, Ijeoma, Anionwu, and Olise (2010) record training as a strong predictor of HC effectiveness. This is supported by Al-Ghasawi (2012) who claims that training has a significant impact on the efficacy and effectiveness of employees. This shows that employees' competencies and contributions to the successful organisation seriously depend on the amount of training received (Bontis & Serenko, 2008).

2.3. Faculty Members' Contributions

The importance of faculty members' contributions to a tertiary institution's performance cannot be underrated. Kelidbari, Disgah, and Yusefi (2011) suggest that management higher educational institutions are concerned about faculty members' contributions to university goal achievement. Therefore, faculty members in the university are most often recognised based on their contributions measured mainly by effectiveness and efficiency made to the university (Bartuševičienė & Šakalytė 2013). The achievement of goals and objectives of higher education institutions is determined by the performance of the faculty members (Ahmad & Shahsrad, 2011). For example, Alagarajal and Shunk (2015) put it that faculty members' contributions can be improved by adequate training and development. Similarly, the study conducted by Ismajli, Krasniqi, and Qosja (2015) revealed that the importance of career/organisation development cannot be over-emphasised in ensuring operational efficiency. The study concluded that career development is a vital element in stimulating the effectiveness and efficiency of employees. By and large, the career development of employees has a significant effect on the effectiveness and efficiency of employees within an organisation.

Inadequate training and regular update of skills and dynamic capabilities through developmental programmes will have a positive impact on performance (Sharabati, 2013; Sharabati & Nour, 2013). Ajisafe, Orifa, and Balogun (2015) opined that training is one of the aspects of human capital development that are pertinent to the employees' efficiency and performance of an organisation. Montana and Charnov (2008) believe that there is a need for any organisation that wants improvement in employees' abilities and capabilities to invest in employees' training and development. Enyekit, Amaehule, and Teerah (2011) observed that training takes effect as a result of the inadequacy of knowledge and skills. The study concluded that the lacuna between the required and actual effectiveness of employees is achievable through training and development interventions. Training is fundamental for employees to fit into the competitive economy (Atoyebi, Olaleye, Ishola, Adekunjo, & Kadiri, 2013; Ogunjiuba, 2013). Halidou (2016) recommends that the university system is the peak and bastion of learning both in scholarship and training. Hence academic staff must be trained in all realms of teaching and learning. Therefore, the capabilities of the employees must be utilised to meet the competitive economy.

2.4. Theoretical Explanation Guiding the Research

Human capital theory (HCT) was developed from the foundation led by the proponents of economic development theory (Becker, 1967; Schults, 1988). The HCT holds that education, training (e.g. specific and general), experience, and other professional characteristics could affect the productivity and efficiency of people by enhancing the level of their cognitive skills. (Becker, 1967; Schults, 1988; Adalakun, 2011; Mudor & Toksoon, 2011; Adedeji & Campbell, 2013; Igba, Igba, & Nwoye, 2015; Halidu, 2016; Odo, Ese, & Onyeisi, 2016). Taking insights from the assumptions of HCT on the link between investments in training/development or education and returns on such investments in form of improved employees' performance and economic growth/development, therefore, HCT is an appropriate theoretical framework underpinning this study. The reason is that this study explains the extent to which HC development programmes mediate the relationship between HC development plans and faculty members' contributions. The results will be utilised to formulate principles that can guide effective implementation of HC development plans so that increased contribution can be recorded and sustained among faculty members. The theoretical model guiding this study is illustrated in Figure 1.

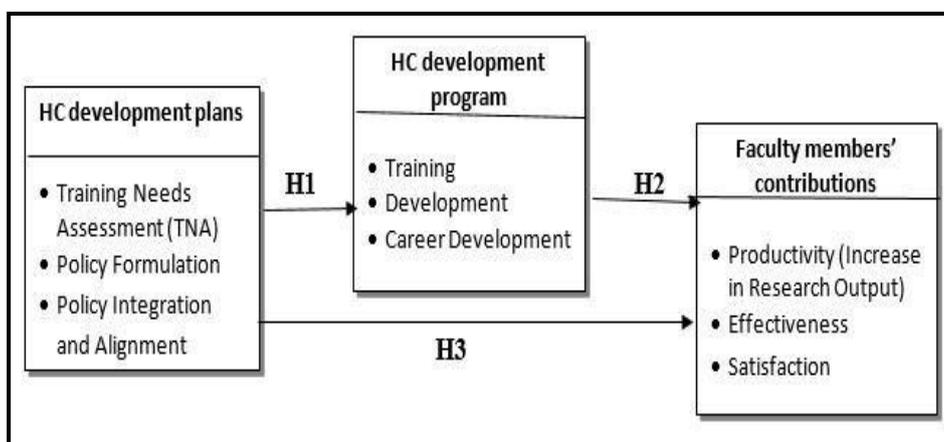


Figure 1. Human Capital Development Plans and Faculty Members' Contributions

The following hypotheses were formulated for critical statistical analysis based on the conceptual framework:

H1: There is a relationship between HC development plans and HC development programmes. **H2:** There is a positive relationship between HC development programmes and faculty members' contributions.

H3: HC development programmes mediate the relationship between HC development plans and faculty members' contributions.

3. Methodology

This research utilised a quantitative approach to explore the relationship between HC development plans and faculty members' contributions. The advanced explanatory research design was adopted to explain the mediating influence of HC development programmes on the relationship between HC development plans and faculty members' contributions. Statistically, variance-based SEM is instrumental in providing the required explanations using path analysis with the aid of SmartPLS 3.3.

3.1. Population and Sampling Technique

This research investigated the four campuses of Lagos State University sited in the most populous city in Nigeria. The selected population was estimated at 1449 faculty members across all levels. First, a convenience sampling procedure was adopted to equally distribute a total of 306 questionnaires among four participating campuses. Second, a simple random sampling procedure was utilised to select four campuses. A total of 265 questionnaires were returned while two out of the returned questionnaires were not properly filled and were discarded. The remaining 263 questionnaires were coded and it represents 85.95% response rate utilised for the data analysis.

3.2. Measuring Instrument

HC development plan and programme: The items used to measure HC development plans and HC development programmes were drawn from the Dimensions of Strategic Management of Human Capital Development Questionnaire (DSMHCDQ). DSMHCDQ was developed to measure the effectiveness of HC development and it consists of 48 items and six-dimensional scales designed on a 5-point Likert scale rating that ranges from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha coefficient for the total measuring scale consisting of 48 items is 0.93. The present study considers this measuring instrument useful to investigate the relationship between HC development plans and faculty members' contributions at a Tertiary institution in Lagos metropolis. The two Dimensional scales of DSMHCDQ with 12 items was adopted in this research on a 5-point Likert scale rating that ranges from 1 (strongly disagree) to 5 (strongly agree). The Strategic Planning (SP) dimension has 5 items measuring HC development plans with a Cronbach alpha of 0.838. 7 items in the Strategic Motivation (STM) scale was utilised to measure HC development programmes, the scale produced Cronbach's alpha of 0.900.

Faculty members' contributions: Academic Staff Performance Scale (ASPS) was developed by the researchers with Cronbach's alpha coefficient of 0.891 to measure faculty members' contributions. The scale used in measuring the construct has 18 items, which was designed on a 5-point Likert scale ranges from 1 (strongly disagree) to 5 (strongly agree). The ASPS was adopted to measure work outcomes of academics to gain an understanding of the level of faculty members' contributions, in terms of their effectiveness and job satisfaction.

3.3. Data Analysis Procedures

The three research hypotheses formulated from the conceptual framework were analysed using appropriate inferential statistics. The variance-based SEM is the appropriate inferential statistics used in this study for hypotheses testing via SmartPLS 3.3. First, data collected were coded and transferred into the IBM Statistical Packages for Social Sciences (SPSS) Version 25 for initial analysis such as the internal consistency of the research instrument using Cronbach's alpha and bivariate correlations between variables. Second, to achieve Variance Based SEM, and the SPSS data file was transferred as a Comma Delimited (*.CSV) file to SmartPLS version 3.3 for further analysis of the quantitative data (Ringle, Wende & Becker, 2015). The variance-based SEM was utilised to provide a better explanation of the mediating influence of HC development programmes on the interplay between HC development plans and faculty members' contributions using path analysis.

4. Results and Discussion

This section reports the outcomes of the research hypotheses that were tested. The outcomes of this study provide scientific contributions to knowledge on the relationship between HC development plans and faculty members' contributions (FMC) to higher education institutions in Nigeria. The results are presented in Table 1.

Table 1. Construct Reliability and Validity

Construct	CA	CR	AVE	HCD plans	HCD programme	FMC	HCD plans	0.838	0.886	0.608	0.78
HCD programme		0.900		0.921	0.626	0.637**		0.791			
FMC		0.891		0.915	0.607	0.571**		0.710**		0.779	

**The Correlations are all significant at $p < 0.001$. CA is the Cronbach Alpha, CR is Composite Reliability and Diagonals are the Square Roots of Average Variance Extracted (AVE).

As shown in Table 1, the internal consistency of the items measuring the constructs was analysed and crosschecked with composite reliability coefficients and Cronbach's alpha. The composite reliability coefficient was adopted to calculate the degree to which the latent construct indicator shares in the construct measurement (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). The Cronbach's alpha is utilised for measuring the internal consistency of the latency of the constructs. The Cronbach's alpha in this research shows that constructs measured in this research are well above the threshold level 0.7, which is mostly preferred (Ringle, Wende & Becker, 2015). An inference drawn from these results is that the scales utilised to measure the constructs are reliable. Therefore, the result reflects acceptable internal consistency of items in the scale since all the constructs Cronbach's alpha are between 0.8 and 0.9. The Cronbach's alpha in Table 1- for FMC, HC development plans, and HC development programmes are 0.891, 0.838, and 0.90 respectively.

The research instrument was validated using the threshold of AVE. AVE is used to estimate the amount of variance. The AVE is an indication of the convergent validity of all constructs investigated in this study, which is higher than the acceptable level of 0.50. The AVE reported in this study revealed that the loading for all constructs is higher than the threshold of 0.50. By implication, each construct examined over 50% of its items' variable. The discriminant validity of all the constructs was confirmed through the Fornell-Larcker Criterion of 1981 (Ringle et al, 2015). The Fornell-Larcker Criterion was utilised to compare the square roots of AVE of the entire construct as demonstrated by the values in the diagonal line in Table 1. The results of the square roots of AVE validated the scales used to measure the constructs in this study because none of the assumptions of discriminant validity was violated in this study. The structural model showing beta loadings and adjusted R^2 from one path to another is reported in Figure 2.

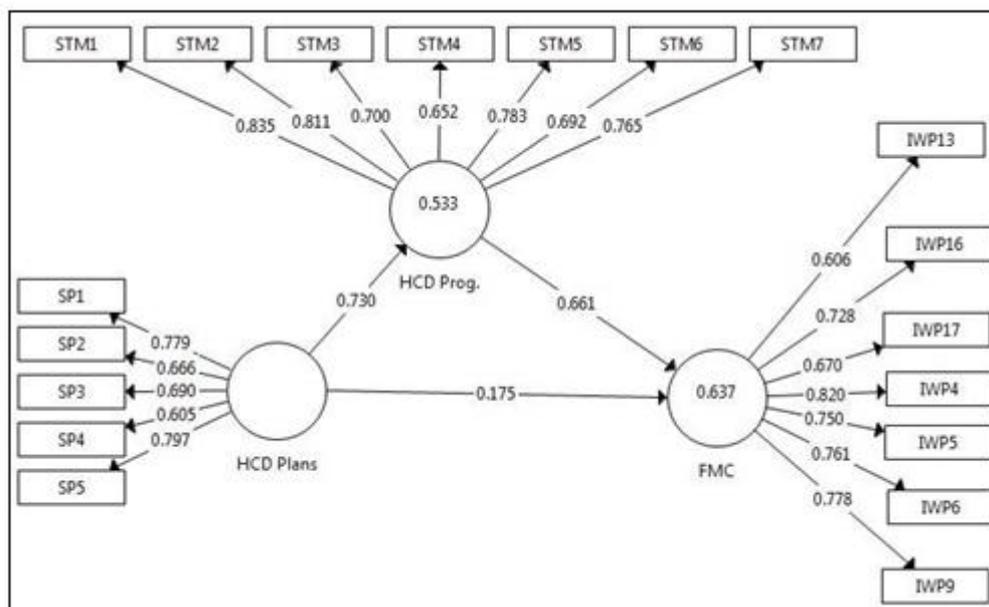


Figure 2. Variance Based Structural Equation Model

Figure 2, shows the outcomes of the variance-based SEM. The result indicates that the path loading from HCD plans to HCD programme ($r = 0.730$, $P < 0.001$) is positive. By implication, the outcome shows that there is a strong relationship between HC development plans and HC development programmes employed by the. Then, the R^2 value (0.553) indicates that HCD plans explain 55.3% variance in HCD programmes. The outcome in this analysis means that there is a positive relationship between HC development plans and HC development programmes employed by the University. Hence, an inference can be drawn from the path analysis that HCD plans are instrumental in determining the effectiveness of HCD programmes. Hence, the first hypothesis (H1) is supported since a positive influence was established between HCD plans and HCD programmes. This result was also in line with the study conducted by Mugabe (2013), which revealed that goal-directed and strategic HCD planning will lead to the successful implementation of HC development programmes. Therefore, without well-articulated HC development plans, there will be no success in the implementation of the HC development programme and ultimately affect faculty members' contributions. The conclusion reached from H1 corroborate Sofu (2014) on the ground that human capital development plans are results-oriented and strategic action towards the achievement of organisational goals. Therefore, HC development plans should include allocation and funding of resourceful activities to meet employees' development objectives. The position of H1 mirror the report of Council Research for Development (CRD, 2016) reported that HC development plans are critical factors for development programmes and innovation.

The path coefficient presented in Figure 2 revealed that there is a significant positive relationship between HCD programmes and faculty members' contributions ($r = 0.661$, $p < 0.001$). This result implies that HC development programmes have a strong positive effect on faculty members' contributions. The outcome in this analysis supported the second hypothesis (H2), which stated that there is a positive relationship between HC development programmes and faculty members' contributions. This result is in line with the study conducted by Alagarajal and Shunk (2015), which found that faculty members' contributions could be increased by adequate training and development. This result also supported a similar study conducted by Ismajli, Krasniqi, and Qosja (2015), since career development and advancement of human capital is directly proportional to the productivity of

faculty members. The value of R^2 (0.637) in Figure 2 indicates that HCD programmes explained 63.7% variance in the faculty members' contributions.

The structural model presented in figure 2 was also used to analyse the mediating influence of the HCD programme on the interplay between HCD plans and faculty members' contributions. The path analysis showed that there is no significant direct link between HCD plans and faculty members' contributions ($r= 0.167$, $p > 0.05$). Hence, HCD plans exert no significant influence on faculty members' contributions. This means is that HCD programmes fully mediate between HCD plans and faculty members' contributions. Therefore, the study results hypothesis three (H3) is supported on the ground that HC development programmes fully mediate between HC development plans and faculty members' contributions. By implication, HCD practices adopted by the university are effective in enhancing faculty members' contributions.

5. Conclusion and Recommendations

The study contributes to the extant literature on HC development practices by investigating the relationship between HC development plans and faculty members' contributions to a tertiary institution in Lagos metropolis. The strategies for HC development planning are fundamental in enhancing faculty members' contributions. The results prove that the path coefficients of all the constructs were significant. The hypotheses stated in this study were all confirmed judging from the p values. Evidence from the literature reviewed also showed that HC development plans have a significant effect on HC development programmes like training, career development, and development. Management should shift focus to ensure adequate funding and proper resource allocation to support the smooth implementation of HC development plans tailored towards better contributions from faculty members.

This study was based on the relationship between HC development plans and faculty members' contributions at a Tertiary institution in Lagos metropolis. The study also examined the place of HC development programmes as a mediator between HC development plans and faculty members' contributions. The reports submitted in this study are limited to empirical evidence found at a Tertiary institution in Lagos metropolis. Hence, a similar study may be replicated by investigating other industries in the Nigerian economy. The methodological limitation of this study was the use of a single case study. Further research may consider a multiple case study design, which is more suitable in inferring generalisation of the findings concerning the relationship that exists between/among variables under investigation.

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