Post-Covid Lockdown Assessment of Blended Learning Approach for Distance Education in Ghana: implications for human resource managers and curriculum implementers

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Abstract

This study assessed the blended learning approach for distance education and its implications for human resource managers and curriculum implementers. The study used the descriptive survey design from the quantitative approach. A sample of 552 was drawn from a study population of 2208 postgraduate students pursuing their distance programme countrywide with public universities. Data was collected with a self-developed questionnaire and was analysed with Partial Least Square Structural Equation Modelling (PLS-SEM). It was found that there was a significant relationship between challenges with face-to-face and the usefulness of face-to-face, challenges with online learning intention and the usefulness of online intention (decision to continue or discontinue with online learning as against the traditional face-to-face mode). Also, there was a significant relationship between the challenges of online intentions and the usefulness of online learning; the usefulness of face-to-face and usefulness of online learning, and the usefulness of online learning and challenges with online learning. It was further found that challenges with both face-to-face sessions and online learning needed to be resolved to ensure successful blended learning for postgraduate distance learners. It was therefore recommended that the human resource managers and curriculum implementors should ensure that the right type of courses are taught on the online platform and the remaining courses are taught using the face-to-face mode. It was further recommended that more postgraduate study centres be opened to reduce challenges associated with face-to-face sessions. Also supports in terms of online tools, internet data and requisite skills should be provided to minimise challenges associated with online learning among postgraduate distance learners.

Keywords Blended learning · Face-to-face session · Online learning · Postgraduate learners

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1 Introduction

The emergence of the Covid-19 pandemic since the latter part of 2019 affected higher education institutions worldwide (Buheji & Buheji, 2020). Safety protocols such as social distancing, lockdown, among others, put in place by governments across the globe to curb and reduce infections led to the closure of educational institutions (Upoalkpajor & Upoalkpajor, 2020). Some higher education institutions in Ghana-University of Ghana, University of Education, Winneba, University of Cape Coast, and Kwame Nkrumah University of Science and Technology have resorted to online as an alternative to the traditional face-to-face interaction in their quest to continue the academic calendar while ensuring quality education delivery to students (Upoalk-pajor & Upoalkpajor, 2020). Thus, usage of online platforms to deliver educational content has flourished during Covid-19 than before (Oliver, 2020).

Over time, the reduction in the infection rate of Covid-19 has given some educational institutions the opportunity to either fully continue with dedicated online learning, revert to the traditional face-to-face approach, or adopt a blended approach (Nambiar, 2020). Blended learning relates to a combination of both traditional face-to-face and online modes of instruction (Kassner, 2013). Blended learning allows both teachers and students to collaborate, benefit from both traditional face-to-face and online classes, thus increasing students' engagement in instruction in a varied manner (Abbasi et al., 2020). Blended learning on the distance mode affords learners the opportunity to harness the benefits associated with the two approaches whiles using the merit of one approach to reduce the negative impact of the other (Paechter & Maier, 2010).

Segbenya et al. (2022) revealed that distance learners in developing economies are confronted with challenges associated with online learning including irregular electricity, requisite skills to participate in online learning platforms, internet facilities, and challenges with the availability and functionality of online tools. These challenges, therefore, serve as barriers to distance learners in developing countries to fully harness the benefits or usefulness of online learning (González-Gómez et al., 2016). Meanwhile, the traditional face-to-face approach where the distance learners will have to converge in a geographic area or classroom for teaching and learning to take place is also not without challenges (Ryan et al., 2016). These challenges include cost and risk associated with transportation to study centres, cost of accommodation, the possibility of missing out on lecture/classes, or reporting for face-to-face late (Segbenya et al. 2019). Thus, the blended approach where both face-to-face and online learning approaches are adopted could be very helpful for distance learners in reducing the challenges faced by these learners during and after the pandemic (Paechter, Maier, & Macher, 2010; Albelbisi & Yusop, 2019; Segbenya et al. 2019).

Meanwhile, the adoption of the blended approach places enormous responsibilities not only on distance learners and their facilitators, as earlier studies have revealed (Segbenya et al., 2022; Nambiar, 2020) but also on human resource managers and curriculum implementors. This is because human resource managers play a critical role in the admission of students and the recruitment of course facilitators (Segbenya & Ansah, 2020). Curriculum implementors also determine the curriculum to be taught and which aspect should be taught online and face-to-face (Makewa &

Ngussa, 2015). Curriculum implementors in this study are managers of distance institutions, study centre coordinators and course facilitators who directly developed and teach the contents of the academic programmes (Letshwene, & du-Plessis, 2021; Ng, 2018).

Existing studies on the impact of COVID-19 on education by Segbenya et al. (2022); Upoalkpajor & Upoalkpajor (2020); Buheji, & Buheji (2020) have all been centred on basic schools and undergraduate students and online learning. Little has therefore been empirically done during and after the COVID-19 lockdown in Ghana to seek distance postgraduate learners' perspectives on blended learning and the implications for human resource managers and curriculum implementors (Segbenya et al., 2022). Thus, there is dearth of research on blended learning at the postgraduate level in Ghana. Within this background, this study was carried to examine the post covid lockdown assessment of the blended learning approach adopted for postgraduate distance learners and their implications for human resource managers and curriculum implementors. The five hypotheses that guided the study were:

1.1 Hypotheses

H_{01}: Challenges with face-to-face tutorials sessions has significant relationship with usefulness of face-to-face.

H_{02}: Challenges with online learning has a statistically significant relationship with usefulness of face-to-face.

H_{03}: Challenges with online learning has significant relationship with usefulness of online learning in a blended distance education.

H_{04}: Usefulness of face-to-face has significant relationship with usefulness of online learning in a blended distance education system.

H_{05}: Usefulness of online learning has significant relationship with continuity of online learning in a blended distance education system.

2 Literature review

2.1 Conceptual review

Face-to-face or online learning (blended learning) have several common features including student-student and student-instructor interactions, instructor support and mentoring, lecture/content delivery quality, course content and social networking tools. All other things being equal, the semblance within the two modes is likely to influence students to opt for any of the modes. Blended learning though not a new phenomenon however, it has gained prominence as a result of Covid-19 emergence. In recent times, many empirical investigations have been conducted into the blended learning mode so as to ascertain learners' preferences or otherwise. Successful implementation of educational programmes in higher education institutions depends on a large extent its usefulness to the students (Almaiah, 2018). Literature indicates that one of the factors influencing successful implementation of blended learning approach in high education institutions is students' acceptance. Students are

the major beneficiaries of teaching approaches be it traditional face-to -face, purely online or both. It therefore means that when students perceived teaching approach to be beneficial to them, it is most likely that they would embrace it. So, when students think that the online learning approach would not affect the quality of content delivery and when they find the online platform easy to use, they would accept it (Ho, Tsung-Hsien, & Binshan, 2010). However, if students feel the online platform would affect quality delivery, they would prefer the traditional face-to-face method. We argue therefore that if students weigh the two approaches to be similar in quality, they would gladly adopt it since they would not lose anything.

Studies have been conducted to explore factors that influence higher institution students' acceptance of the blended learning mode. A study conducted by Khan, Kamal, Illiyan, and Asif (2021) showed that learners had the least preference for online learning as compared to traditional face-to-face teaching. It could be inferred that the challenges students had with online learning influenced their preference for the face-to-face mode of learning. These challenges were not different from what Segbenya et al., (2022) revealed in their study: unreliable power supply, erratic internet connectivity, lack of collaboration, and motivation. It can also be said that there was the relationship between the usefulness of online learning and the intention to continue with online learning. If students realised how useful and fascinating online learning is, they would want to continue with it (Mahyoob, 2020).

Another study by Mahyoob (2020) revealed that the majority of students surveyed were not satisfied with continuing online learning because they could not fulfil the expected learning outcomes or performance. Their dissatisfaction was premised on the fact that they had challenges with online learning. For instance, respondents indicated that they could not use all the blackboard services for online learning, join online classes, participate effectively, and submit their assignments. They also revealed they were unable to complete their examinations online. The finding agrees with that of Aguilera-Hermida (2020), who found that learners had the least preference for online learning as compared to traditional face-to-face teaching. However, the finding was in contrast with a study carried out by Muthuprasad et al., (2021); Hasan and Khan (2020), who revealed that students were more comfortable with the online learning approach since according to the students it is more flexible compared to the traditional face-to-face interaction.

Bali & Liu (2018) conducted an investigation into face-to-face and online learning approaches and revealed that there was no statistically significant difference between online and face-to-face learning. The results further indicated that even though respondents were satisfied with face-to-face learning, most of them chose online learning over the face-to-face method due to its convenience, ease of time, and the opportunity to work at any time they wished. Moreover, online learning is proven to be cost-effective and flexible which enables them to work at their own pace (Zheng, Bender and Lyon's (2021). It is clear beyond reasonable doubt that face-to-face and online learning play a complementary role since they create opportunities for students to experience different learning contexts. However, Syarah et al. (2020); Kuset et al. (2021) and Kemp and Grieve (2014) found a non-significant difference in students' performance in the two modes of learning.
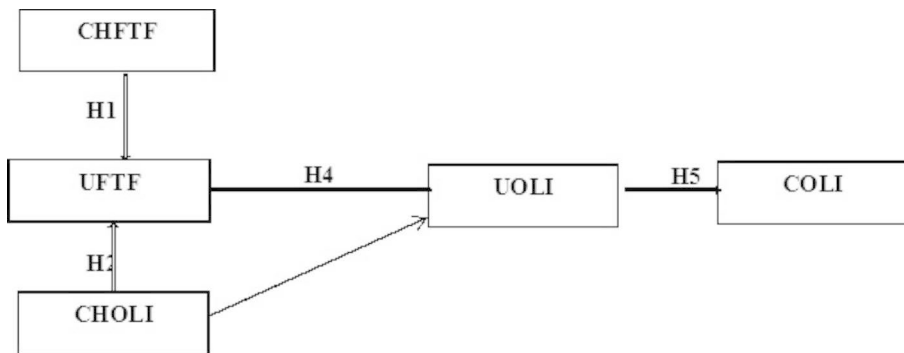
Fig. 1 Conceptual framework showing the relationship between the variables of the study.(***Key***: ***CHFTF***=challenges with face-to-face sessions, ***UFTF***=usefulness of Face-to-face sessions, ***CHOLI***=challenges with online learning intention, ***UOLI***=usefulness of online learning intention, ***COLI***=continuity with online learning intentions.)

2.2 Theoretical review

The researchers adopted technology acceptance models (TAM) to explore and explain the factors that influence blended mode acceptance among postgraduate students' population (Kemp, Palmer, & Strelan, 2019; Teran-Guerrero, 2019). The TAM attempts to explain students' willingness and the continuous use of technology in the teaching and learning process. Experts believe that certain factors influence students' attitudes towards the use of educational technologies in higher education institutions. Ali (2020) asserts that students' ***attitudes*** towards educational technology directly affect their learning process. Other factors such as ***affect*** and ***motivation*** have an influence on students' behaviour towards adopting online learning. ***Affect*** includes the user enjoyment and satisfaction with the prior use of a platform, the affect toward the use of technology, and the individual's emotional state (Kemp et al., 2019). ***Motivation*** connotes the perceived relevance of an activity that impacts behavioural intention. Research shows that there is a relationship between motivation and self-regulation skills and online learning. Albelbisi and Yasop, (2019) assert that when there's a lack of motivation, it could result in individuals spending extra time completing assignments, turning in late assignments, or overall poor-quality work.

Based on the theoretical and conceptual review, a conceptual framework has been developed showing the relationship between the variables of the study as well as the interconnectedness of the hypotheses guiding the study (See Fig. 1).

3 Methodology

The study employed the descriptive survey design from the quantitative approach and sampled 552 from a study population of 2208 graduate students pursuing their distance programme with public universities from study centres across all regions countrywide. The sample represents 25% of the study population which gave a better representation as compared to the 336 suggested by the Cochran formula for sample

Table 1 Demographic characteristics of respondents

Demographic Characteristics	Frequency	Percent
Gender		
Male	284	51.4
Female	268	46.6
Total	552	100.0
Category of academic programme		
Education	220	39.9
Business	256	46.4
Others	76	13.7
Total	552	100.0
Level of academic programme		
1st Year	187	33.9
2nd Year	365	66.1
Total	552	100.0

Field survey (2022)

determination (Segbenya et al., 2021). Sampling techniques deployed for the study was multistage sampling technique, including stratified and simple random techniques to sample the respondents to the research instrument. The simple random was used to ensure that all 2208 postgraduate students had an equal chance of being selected to arrive at the 552 respondents. The stratified sampling component was also used to cater for ensuring respondents selected fall under both male and female categories, education and business programmes, and both first and second-year categories.

3.1 Measures

Data were collected with a self-developed questionnaire measured on a four-point Likert scale: strongly disagree, disagree, agree, and strongly agree. The two parts of the questionnaire comprised demographic characteristics of respondents for part one and part two focused on the variables captured under the research hypotheses. Reliability and validity values were above the minimum threshold, suggesting that the instrument was good to use. Data were analysed with Partial Least Square-Structural Equation Modelling (PLS-SEM) for testing of the hypotheses.

4 Analysis and findings

The initial part of the presentation of the results in this section is the demographic data of the respondents for this study and the second part focused on the presentation of the main findings for the study's five hypotheses.

4.1 Demographic data

The demographic characteristics of respondents in terms of gender, category of programme and level of academic programme formed the preliminary analyses of the results. The results as presented in Table 1 indicate that majority of respondents were male postgraduate students (51.4%), pursuing business masters programmes (46.4%) and were in their second year (final year) of their academic programmes (66.1%).

Fig. 2 Figure 2: An algorithm for confirmatory factor analysis
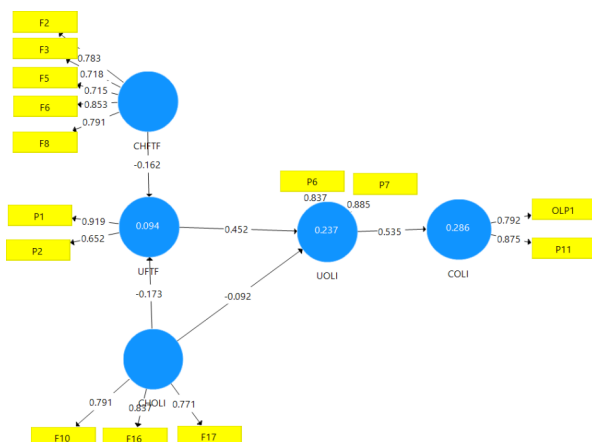
Table 2 Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
CHFTF	0.834	0.858	0.881	0.598
CHOLI	0.723	0.738	0.842	0.640
COLI	0.602	0.608	0.821	0.697
UFTF	0.601	0.680	0.772	0.635
UOLI	0.702	0.706	0.852	0.742

Source: Field survey (2022)

4.2 Measurement model

Confirmatory factor analysis by the PLS algorithm was primarily carried out to estimate the internal consistency measure of the model. Individual items forming the variables or factors of the study was used for the measurement, and this can be seen in the reflective model presented in Fig. 2. From Fig. 2, the minimum loading of 0.652 and above for each item measuring the factors was achieved, as suggested by Hair et al. (2017) and Segbenya et al. (2022).

Source: Field survey (2022).

4.3 Measure for internal consistency for the analysis

The PLS path model's internal consistency measures for this study were done with four main indicators- rho A, Cronbach's Alpha, Composite Reliability and Average Variance Extracted (AVE) (Hair et al. 2017) and the results are presented in Table 2. The results in Table 2 show that a Composite Reliability value ranged between 0.772 and 0.881 for all the factors. The Average Variance Extracted (AVE) values were between 0.598 and 0.742, above the minimum threshold of 0.50 recommended by Kline (2015). A rho-A value ranged between 0.608 and 0.858 was achieved for all factors of the study. Additionally, a Cronbach's Alpha value between 0.601 and 0.832 for all variables was also obtained. The results suggest that all the variables

Table 3 Heterotrait-Monotrait Ratio (HTMT)

	CHFTF	CHOLI	COLI	UFTF	UOLI
CHFTF	**0**				
CHOLI	0.818	**0**			
COLI	0.405	0.366	**0**		
UFTF	0.406	0.435	0.836	**0**	
UOLI	0.333	0.301	0.828	0.812	**0**

Source: Field survey (2022)

Table 4 Inner VIF Values

	CHFTF	CHOLI	COLI	UFTF	UOLI
CHFTF				1.898	
CHOLI				1.898	1.088
COLI					
UFTF					1.088
UOLI			1.000		

Source: Field survey (2022)

achieved the minimum threshold recommended by Hair et al. (2017) and that the model achieved both reliability and validity standards of analysis.

4.4 Discriminant validity

A discriminant validity using the Heterotrait-Monotrait Ratio (HTMT) as suggested by Henseler, Ringle and Sarstedt (2015) was carried out with the purpose of establishing the uniqueness of each variable in the study. The result as presented in Table 3 suggest that all diagonal loadings for the same variable were zero and between variables of the study were below 0.85 thresholds (Henseler, Ringle & Sarstedt, 2015), suggesting that discriminant validity was achieved for the PLS path model.

4.5 Multicollinearity

The existence of multicollinearity according to Segbenya (2012) could influence validity of the results obtained by the path significance test. Thus, the presence of multicollinearity was checked with the use of the variance inflated factors (VIF) as suggested by Hair et al. (2017) with threshold values below 3.3 suggesting that the reflective model was a multicollinearity-free model. The results shown in Table 4 suggested no multicollinearity issues since all the inner values were below 3.3 thresholds.

4.6 Structural model and hypotheses testing

Testing for the significance of the hypotheses for paths analysis was done with the Bootstrapping sequence of 5000 samples utilised in the PLS bootstrap procedure as recommended by Hair et al. (2017) and Segbenya et al. (2022). The results can be seen in Fig. 3.
Source: Field survey (2022).

Fig. 3 Bootstrapping results for path analysis
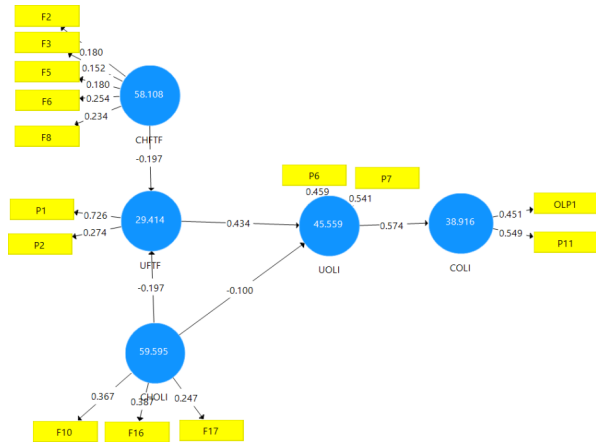
Table 5 Path Coefficients

	R Square				R Square Adjusted			
COLI	0.286				0.285			
UFTF	0.094				0.091			
UOLI	0.237				0.234			
	Beta	**Sample Mean**	**Standard Deviation**	**T Statistics**	**P Values**	**Confidence Intervals**		**f²**
						2.5%	**97.5%**	
1 **CHFTF -> UFTF**	-0.162	-0.161	0.060	2.707	**0.007***	-0.272	-0.039	**0.015**
2 **CHOLI -> UFTF**	-0.173	-0.173	0.060	2.857	**0.004***	-0.296	-0.045	**0.017**
3 **CHOLI -> UOLI**	-0.092	-0.096	0.040	2.284	**0.023***	-0.171	-0.009	**0.010**
4 **UFTF -> UOLI**	0.452	0.458	0.041	10.960	**0.000****	0.383	0.535	**0.246**
5 **UOLI -> COLI**	0.535	0.537	0.032	16.908	**0.000****	0.475	0.600	**0.401**

Source: Field survey (2022); **p<0.000, *p<0.05 supported

4.7 Results of path analysis

Table 5 presents the detailed results for the path significance determined from the PLS bootstrapping sequence. The first part of the results highlights the R^2 (R-square) values supported by the adjusted R^2 values, as presented in Table 5. The R^2 values explained the variance in the dependent variable predicted by the independent variables (Hair et al., 2017). Thus, the structural model explained about 0.286variances in the continuity of online learning intention (COLI), 0.094 variances in the usefulness of face-to-face interaction (UTFT) and 0.237 variances in the usefulness of online learning intention (UOLI) among postgraduate distance learners.

| Table 6 Performance index values and total effects (UOLI)	Total Effect (Importance)	Index Values (Performance)
CHFTF	0.073	58.108
CHOLI	0.170	59.595
UFTF	0.452	29.414

Source: Field survey (2022)

The second part of the results presented in Table 5 shows the significance of path analysis results for the variables of the study in terms of testing for the five hypotheses of the study. The path analysis results suggested that all the five hypotheses guiding this study achieved statistical significance. Thus, there was a statistically significant negative relationship between challenges with face-to-face sessions (CHFTF) and the usefulness of Face-to-face sessions (UFTF) at (β=-0.162, t=2.707, p=0.007) for hypothesis one. Also, there was a statistically significant negative relationship between challenges with online learning intention (CHOLI) and usefulness of face-to-face session (UTFT) at (β=-0.173, t=2.857, p<0.004) for hypothesis two; and challenges with online learning intention (CHOLI) and usefulness of online learning intention (UOLI) at (β=-0.092, t=2.284, p<0.023) for hypothesis three.

For hypothesis four, the results show that there was a significant positive relationship between the usefulness of Face-to-face (UFTF) and the usefulness of online learning intention (UOLI) at (β=-0.452, 10.960, p<0.000). Furthermore, the model also established a statistically positive significant relationship between the usefulness of online learning intention and continuity of online learning at (β=0.535, t=16.908, p<0.000) for hypothesis five of the study. The effect sizes obtained for each of the significant paths were also favourable based on Cohen (1988) suggestion that an effect size of 0.010 to 0.401 was acceptable. The unidimensional nature of the confidence intervals for the variables for all significant paths also revealed valid and reliable significance. Additionally, the significant results were further strengthened by the confidence level of 95%, with a minor error margin of only 5% indicated by the statistics obtained from the upper and lower boundaries, respectively.

4.8 Importance performance map analysis (IPMA)

PLS Importance Performance Map Analysis (IPMA) was further conducted to give further emphasis to the PLS estimates of the structural model variable relationships. The IPMA gave additional information on the performance and relevance of each latent variable in the model (Hair et al., 2017). Ringle and Sarsted (2016), as well as Segbenya et al. (2022), posit that the total effects represented the sum of direct and indirect effects; thus, the unstandardised effects were drawn upon by the IPMA to enable a "ceteris paribus" interpretation of predecessor constructs' impact on the target construct. This meant that the size of the total unstandardised effect increased the performance of the target construct's performance when there was an increase in certain predecessor construct's performance. Thus, the relevance and importance of the relationships indicated in the model were determined with the PLS IPMA analysis separately for the usefulness of online learning (UOLI) and the results can be referenced from Table 6.

Fig. 4 Importance and Performance Map of OLI
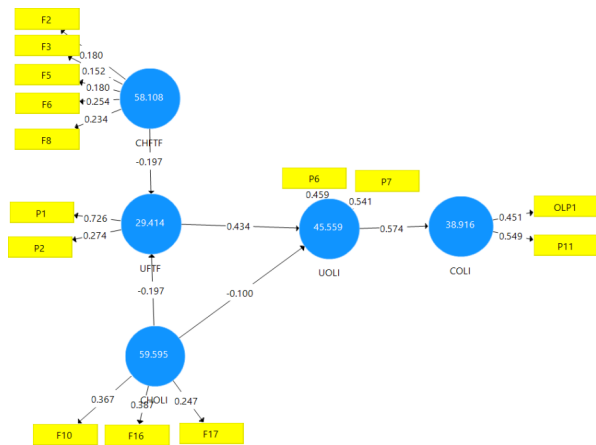
Fig. 5 Importance and Performance Map of OLI
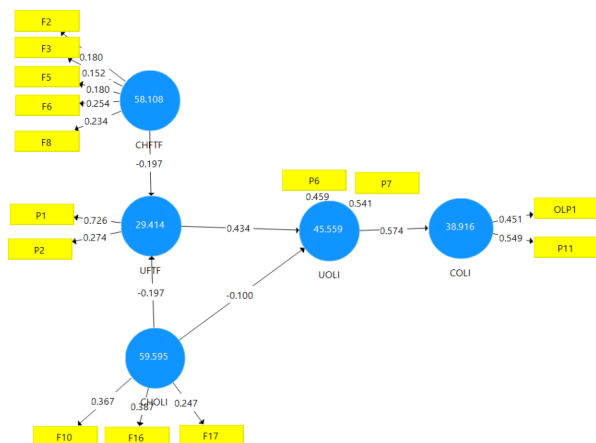
The results, as shown in Table 6, revealed that challenges with online learning (CHOLI) had the strongest and highest value in terms of *performance* (59.595). However, CHOLI was not the most relevant in predicting the usefulness of online learning (UOLI) in the model since the total effect (*Importance*) of CHOLI was the second lowest with a value of 0.170. Rather, the most important predictors of the usefulness of online intention/learning among distance postgraduate learners in the model was rather usefulness of face-to-face (UFTF) of 0.452. Figure 4 further highlight the importance and performance map of the usefulness of online learning.

Source: Field survey (2022).

4.9 Graphical representation of the PLS IPMA path results

The results presented in Fig. 5 is the pictorial view of the PLS path model for IPMA conducted. Ringle and Sarstedt (2016) and Segbenya et al. (2022) recommended that analysts and readers pay attention to the differences between the graphical PLS-SEM results and the graphical representation of IPMA as totally different PLS outputs. The

differences advanced were firstly, that the performance values of each latent variable of the IPMA shown instead of the R^2 values of the endogenous latent variables shown in the PLS path model. The second difference was that the IPMA results highlighted the unstandardised and recalled the outer weights of the measurement models (formative and reflective) and not the standardised outer loading or weights. Thus, in this study, the results of the beta values highlighted in the outer model in Fig. 5 revealed each item's importance to the construct and not the loading. The inner values also determined the performance values of the constructs in the individual construct in relation to the endogenous variable and not the total variance explained.

Source: Field survey (2022).

5 Discussion and implications

The study's findings for the first hypothesis that there was a significant negative relationship between challenges with face-to-face sessions (CHFTF) and the usefulness of face-to-face (UFTF) needs further deliberation. The results mean that a percentage increase in the students' frustrations herein termed as challenges associated with face-to-face sessions will lead to the same percentage decrease in the usefulness of the face-to-face sessions for postgraduate distance students. Thus, the usefulness of face-to-face tutorial sessions as a component of the blended learning on the distance programmes during the emergence of the Covid-19 can only be heightened or sustained if challenges associated with the face-to-face tutorial sessions are reduced to their barest minimum. Some of the challenges that postgraduate distance learners face regarding face-to-face include financial, institutional, instructional, and work and life balance. These challenges can influence distance learners' punctuality and regularity to face-to-face and consequently affect their academic performance on the distance mode. The results of this study thus, corroborate the findings of Bali & Liu (2018) that face-to-face challenges for distance learners affect their appreciation for face-to-face tutorial sessions.

The findings for the study's second hypothesis that a significant relationship between challenges with online learning (CHOLI) and usefulness of face-to-face (UFTF) needs to be explained further. The findings suggest that a percentage increase in challenges with online learning among postgraduate distance learners will lead to the same percentage increase in appreciation for face-to-face tutorial sessions. Challenges with online learning such as internet connectivity, cost of data bundle and regular electricity have the propensity to reduce students' likeness for online learning among postgraduate distance learners. Thus, such challenges with online learning make distance learners gravitate towards the traditional face-to-face tutorial component of the blended learning adopted by distance education institutions during the Covid-19. Alternatively, a decrease in distance learners' difficulties with online learning will lead to decrease appreciation for face-to-face learning and increase students' appreciation for online learning during a pandemic. Thus, Mahyoob (2020) findings that challenges associated with online learning among distance students in developing economies have compelled distance education institutions to continue

using the traditional face-to-face facilitation mode to deliver their distance education programmes were upheld by this study.

This study also found that there was a statistically negative relationship between challenges with online learning (CHOLI) and the usefulness of online learning (UOLI) for the study's third hypothesis guiding the study. The explanation for the significance recorded in the relation between the two variables suggests that the higher the challenges with online learning among postgraduate distance learners, the lower their interest in continuing with online learning on the distance mode. Thus, continuity and higher appreciation of online learning as a component of blended learning in the distance mode depend on how providers of distance education can resolve students' challenges associated with the online mode of learning. The findings, therefore, are in tandem with the findings of Khan, Kamal, Lllivan, and Asif (2021) that unresolved students' challenges with online learning could be blamed for the low level of appreciation for online learning in developing economies.

The study further found for hypothesis four that face-to-face sessions significantly related to the usefulness of online learning among postgraduate distance learners. The explanation for this result is that a percentage increase in the use of face-to-face sessions can lead to the same percentage increase/improvement in the usefulness of online learning. Generally, distance learners would have preferred one over the other. However, the results suggest that distance education institutions can use the face-to-face session as a launchpad to enhance their online education for blended learning. A successful and well-coordinated face-to-face session could be used to prepare students for online learning, and the challenges with one method/approach could be minimised by the other. Thus, effective blended learning where learners are satisfied with both face-to-face sessions and online learning could enhance students' performance on the distance mode. Therefore, the findings of this study agree with that of Kemp and Grieve (2014) successful blended learning in the distance mode largely depends on the usefulness of both face-to-face sessions and useful online learning approaches.

Lastly, the findings for the fifth hypothesis showed a strongly positive and significant relationship between the usefulness of online learning and the continuity of online learning among postgraduate distance learners that needs further explanation. The findings suggest that a percentage increase in the usefulness of online learning will result in the same percentage increase in distance learners' decision to continue with online learning. Thus, until online learning becomes useful to distance learners, its continuity cannot be guaranteed. Thus, to improve upon the dedication/loyalty of distance learners for online learning, distance education institutions would need to ensure that students derive the maximum benefits from the online education provided. Alternatively, a reduction in the usefulness of online education for distance learners would make it very difficult for distance education institutions to continue with online education for students. The results agree with the findings of Hasan and Khan (2020) that deriving the maximum benefits from online education has the propensity to influence students continuous support for online education, especially during any pandemic.

5.1 5.1 Practical implications for HR managers and curriculum implementers

The significant relationships between variables measuring blended learning for distance education after post covid lockdown have several implications for human resource managers in developing economies like Ghana. The two main components of the blended learning examined were face-to-face sessions and online learning, and their usefulness within the blended learning approach depended on the ability to reduce challenges associated with them. For this reason, the role of human resource managers and curriculum implementers in distance education institutions is crucial for the successful running of blended learning. The implication of the findings for HR managers and curriculum implementers will focus on the two blocks of the blended learning-face-to-face session and online learning.

Human resource managers and curriculum implementers need to play a critical role in reducing challenges associated with face-to-face sessions (Bali & Liu, 2018). The use of hired and franchised facilities of other non-tertiary institutions hosting distance programmes of distance education institutions pose several institutional challenges, including the suitability of furniture, washrooms, among others, during a face-to-face session at these facilities (Grieve, 2014).Thus, HR managers need to ensure that conducive facilities that promote comfort for learning are hired/provided or built for face-to-face learning for their postgraduate learners.

Additionally, face-to-face tutorials also demand that students spend on transportation with the associated risks to commute to their study centres for academic work. Some distance learners also travel a long distance to their study centres and must pay for accommodation for a day or two to be able to participate in face-to-face sessions (Segbenya & Anokye, 2022). Furthermore, successful face-to-face sessions are dependent on the availability of committed and competent part-time/hired academic staff referred to as facilitators (Segbenya & Anokye, 2022). Thus, human resource managers and curriculum implementers are to ensure that part-time facilitators hired are committed and competent for the successful delivery of course content in the face-to-face mode.

Another challenge with face-to-face tutorial sessions is the dependency or the use of print media or modules/course pack for teaching and learning (Segbenya et al., 2019). Thus, delays in supplying these modules could distort the academic calendar and hamper smooth face-to-face sessions for distance learners (Segbenya & Anokye, 2022). Thus, HR managers and curriculum implementers have the peculiar and arduous task of ensuring early or timely production and supply of course modules. These modules should be free from typographical errors to facilitate easy understanding among learners.

HR managers and curriculum implementers also have responsibilities toward resolving challenges associated with online learning among distance postgraduate learners. This component of blended learning also comes with several challenges. Key among these challenges is the cost of data for online learning (Almaiah, 2018; Segbenya et al., 2022). Distance learners mostly struggle to pay their school fees, and the additional cost of buying internet data/bundles for online learning poses a financial burden on distance learners (Segbenya et al., 2022). Thus, HR managers

will need to ensure that distance learners and their facilitators can have access to zero-rated subscriber identity modules to be able to participate in online learning.

A closely related challenge to the cost of internet data is the availability and functionality of online gadgets among facilitators and students to participate in online learning. Without the availability and functioning of online tools, online learning intention would be mirage or fantasy (Mahyoob, 2020; Segbenya et al., 2022). Thus, HR managers will have to ensure that possession of these online tools would serve as a condition for hiring facilitators or distance learners. Additionally, due to low Information Communication and Technological skills, it is also possible to possess the online tools and still be unable to use them for online learning due to a lack of adequate competence or skills on how to use these online tools (Khan, Kamal, Illiyan, & Asif, 2021; Segbenya et al., 2022). Hence, HR managers of distance education institutions need to either provide basic skills on how to use online tools to participate in online learning or ensure that online participation skills become a prerequisite for admitting online learners and hiring part-time course tutors. Another challenge with online learning, which affects the continuity on the online component of blended learning on the distance mode, is the availability of consistent internet facilities for effective online learning (Segbenya et al., 2022). Thus, the support of managers in this perspective will be very necessary.

Human resource managers and curriculum implementors also need to evaluate their academic programmes and courses offered to determine which courses or components of the course contents should be taught online or face-to-face (Letshwene, & Plessis, 2021).This is because calculation subjects such as (Mathematics, Accounting among others) can be very challenging when taught on online platforms without an online board for calculations and demonstrations.

5.2 Theoretical implication

The findings of this study have theoretical implications for the running of blended learning approach. The findings showed that for blended learning approach to be successful, students who are major stakeholders must accept the learning mode. Students' acceptance and intention to continue with a particular learning mode is premised on the fact that students would not have serious impediments as they adopt the approach. Students' attitudes and motivation towards particular learning context depends on what they make of it. If the students feel that the disadvantages outweigh the advantages of a particular mode, they will not accept it. Therefore, HR managers and curriculum implementers should pay attention to the theory of Technology Acceptance Model if they want to experience hustle-free blended implementation.

5.3 Policy implications

The results obtained from the performance analysis of the variables of the study had policy implications. The study revealed that the two blocks of blended learning-face-to-face sessions and online learning can only be useful to distance postgraduate learners depending heavily on how distance education institutions minimise the challenges associated with online learning and face-to-face sessions. Thus, HR manag-

ers, and curriculum implementers need to pay attention to important factors such as challenges and usefulness of online learning and face to face sessions to ensure the continuity of online learning and face-to-face sessions for successful blended learning during pandemics.

6 Conclusion and recommendations

This study assessed the post covid locked down blended learning among postgraduate learners and the implications for human resource managers and curriculum implementors. It can be concluded that a successful implementation of blended learning model is hinged on factors that influence students' acceptance. It was established that the usefulness of the blended mode and challenges associated with the blended mode influenced students' intention to continue or otherwise. Thus, the study established that there was a relationship between challenges with face-to-face and usefulness of face-to-face; challenges with online learning intention and usefulness of online intention; challenges of online intentions and usefulness of online learning; usefulness of face-to-face and usefulness of online learning; and usefulness of online learning and challenges with online learning. These findings have implications for both the human resource managers and curriculum implementors.

Thus, it is recommended that management of the distance education institutions should partner with their human resource managers and curriculum implementors to ensure that postgraduate courses offered on the distance mode are really examined to know which of them should be taught on online or on face-to-face mode. This will help to reduce challenges that distance learners have with blended learning during face-to-face or online learning. Calculation, sciences and practical-related courses or components of courses offered could be taught face-to-face while the remaining components or courses are taught using the online platforms.

It is also recommended that more postgraduate study centres be opened or established closer to learners to reduce the distance they have to cover to attend their face-to-face component of the blended learning. Course facilitators are very instrumental for both the face-to-face and the online components of the distance learning programmes for postgraduate students in Ghana. It is therefore recommended that competent facilitators who have the requisite skills for teaching on both face-to-face mode and online platform be hired for teaching at the postgraduate level.

Providers of postgraduate distance programmes in Ghana should partner with telecommunication companies in the country to provide zero-rated SIM (subscriber identity modules) for distance learners on their postgraduate programmes to enable them fully to participate in the online lectures. Additionally, management and human resource managers will also need to develop the skills and competence of both the learners and the facilitators to be able to participate and use the online learning platforms. It is also recommended that the management of institutions providing distance education in Ghana support both distance learners and facilitators to acquire online learning tools or facilities to be able to participate in online learning.

Thus, managers' ability to ensure reduction in the challenges confronting both face-to-face sessions and online learning components of the blended learning intro-

duced by distance education providers in Ghana during and after the COVID-19 is a catalyst for successful blended learning in Ghana.

6.1 Limitations and future research directions

This study was limited to postgraduate distance learners in one country, which limited the generalisation of the findings of the study with circumspection. Thus, further studies could consider undertaking a similar study but involving postgraduate facilitators to get their perspective on blended learning. Future studies could also consider a qualitative or a mixed approach. Finally, the sample could be expanded to include other higher education institutions offering distance education models.

List of abbreviations

CHFTF	Challenges with Face-to-Face sessions
UFTF	Usefulness of Face-to-Face sessions
CHOLI	Challenges with Online Learning Intention
UOLI	Usefulness of Online Learning Intention
COLI	Continuity with Online Learning Intentions
CFA	Confirmatory Factor Analysis
HTMT	Heterotrait-Monotrait Ratio
PLS	Partial Least Squares
PLS-SEM	Partial Least Squares Structural Equation Modelling
SEM	Structural Equation Modelling
SIM	Subscriber Identification Module (SIM)
TAM	Technology Acceptance models (TAM)
VIF	Variance Inflated Factor

References

Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I. (2020). Perceptions of students regarding E-learning during Covid-19 at a private medical college. *Pak J Med Sci., 36* (COVID19-S4)), S57–S61. https://doi.org/10.12669/pjms.36.COVID19-S4.2766.

Aguilera-Hermida, A. P. (2020). College students' use and acceptance of emergency online learning due to COVID-19. International Journal of Educational Research Open, *1*.

Albelbisi, N., & Yusop, F. (2019). Factors influencing learners' self –regulated learning skills in a massive open online course (MOOC) environment. *Turkish Online Journal of Distance Education*, *20*, 1–16.

Ali, W. (2020). Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. Higher Education, *10*(3).

Almaiah, M. A. (2018). Acceptance and usage of a mobile information system services in University of Jordan. *Education and Information Technologies*, *23*(5), 1873–1895.

Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-to-face learning courses. Journal of Physics, 1–7.

Buheji, M., & Buheji, A. (2020). Planning competency in the new normal–employability competency in post-COVID-19 pandemic. *International Journal of Human Resource Studies*, *10*(2), 237–251.

González-Gómez, D., Jeong, J. S., Rodríguez, D. A., & Cañada, F. (2016). Performance and perception in the flipped learning model: an initial approach to evaluate the effectiveness of a new teaching methodology in a general science classroom. *Journal of Science and Education Technology*, *25*(3), 450–459.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616–632.

Hasan, N., & Khan, N. H. (2020). Online teaching-learning during covid-19 pandemic: students' perspective. *The Online Journal of Distance Education and e-Learning*, *8*(4), 202–213.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135.

Ho, L., Tsung-Hsien, K., & Binshan, L. (2010). Influence of online learning skills in cyberspace. *Internet Research*, *20*(1), 55–71. https://doi.org/10.1108/10662241011020833.

Kassner, L. (2013). *Mix it up with blended learning in k-12 schools: A review of literature*.

Metropolitan Educational Research Consortium, Virginia Commonwealth University.

Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen ? Undergraduates' opinions and test performance in classroom vs. online learning. *Psychology*, *5*, 1–10.

Kemp, A., Palmer, E., & Strelan, P. (2019). A taxonomy of factors affecting attitudes towards educational technologies for use with technology acceptance models. *British Journal Education Technology*, *50*, 2394–2413.

Khan, M. A., Kamal, T., Illiyan, A., & Asif, M. (2021). School students' perception and challenge towards online classes during Covid-19 pandemic in India: an econometric analysis. *Sustainability*, *13*, 1–15.

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York City, USA: Guilford Publications.

Kuset, S., Kezban, O., Emine, S., & Sebnem, G. K. (2021). Evaluation of the impact of distance education on children in preschool period: teachers' opinions. *Near East University Journal of Education Faculty*, *4*(1), 78–87.

Letshwene, M. J., & du Plessis, E. C. (2021). The challenges of implementing the curriculum and assessment policy statement in accounting. *South African Journal of Education*, *41*(2), 1–10. https://doi.org/10.15700/saje.v41ns2a1978.

Mahyoob, M. (2020). Challenges of e-Learning during the Covid-19 pandemic experienced by EFL learners.Arab World English Journal, *11*(4),351–362.

Makewa, L. N., & Ngussa, B. M. (2015). Curriculum implementation and teacher motivation: a theoretical framework. *Handbook of research on enhancing teacher education with advanced instructional technologies* (pp. 244–258). IGI Global.

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID – 19 pandemic. Social Sciences & Humanities Open 3, – 11. https://doi.org/10.1016/j.ssaho.2020.100101

Nambiar, D. (2020). The impact of online learning during COVID-19: students' and teachers'perspective. *International Journal of Indian Psychology*, *8*(2), 783–793.

Ng, S. B. (2018). Challenges to curriculum implementation: reducing the gap between the aspired and its implementation through change management. *Asia Pacific Journal on Curriculum Studies*, *1*(1), 14–19. https://doi.org/10.53420/apjcs.2018.3.

Oliver, R. (2020). Exploring strategies for online teaching and learning. *Distance Education*, *20*(2), 240–254.

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of and experiences in e-learning: Their relation to learning achievements and course satisfaction. *Computers & Education*, 54, 222–229. https://doi.org/10.1016/j.compedu. 2009.08.005.

Ryan, S., Kaufman, J., Greenhouse, J., She, R., & Shi, J. (2016). The effectiveness of g online learning courses at the community college level. *Community College Journal of Research and Practice*, *40*(4), 285–298.

Segbenya, M. (2012). *Importance of employee retention for the attainment of organisational goals in Ghana Commercial Bank, Kumasi*. Masters degree, University of Cape Coast.

Segbenya, M., Oduro, G. K. T., Ghansah, K., & Peniana, F. (2019). Proximity and choice of College of Distance Education (CoDE) of the University of Cape Coast for further studies. *International Journal of Educational Management*, *33*(5), 112–134.

Segbenya, M., & Ansah, J. (2020). Influence of human resource management practices on organisational performance at Atwima Mponua Rural Bank Limited. *Journal of Business and Enterprise Development*, *9*, 118–127.

Segbenya, M., & Anokye, F. A. (2022). Challenges and coping strategies among distance education learners: implication for human resources managers. *Current Psychology (Pre-print)*. https://doi.org/10.1007/s12144-022-03794-5.

Segbenya, M., Oppong, N. Y., & Baafi-Frimpong, S. A. (2021). Effect of COVID-19 on the acquisition of employable skills among national service personnel in Ghana. *Journal of Work Applied Management*, *13*(2), 215–225.

Segbenya, M., Branford, B., Minadzi, V. M., & Somuah, A. B. (2022). Modelling the perspective of distance education students towards online learning during Covid19 pandemic. *Smart Learning Environments*, *9*(13), 1–18.

Syarah, E. S., Ilza, M., & Nurbiana, D. (2020). Understanding teacher's perspectives in media literacy education as an empowerment instrument of blended learning in early childhood classroom. *Jurnal Pendidikan Usia Dini*, *14*(2), 1693–1702.

Teran-Guerrero, F. N. (2019). Acceptance of university students in the use of Moodle e-learning systems from the perspective of the TAM model. *Revista Ciencia UNEMI*, *12*(29), 63–76.

Upoalkpajor, J. N., & Upoalkpajor, C. B. (2020). The impact of COVID-19 on Education in Ghana. *Asian Journal of Education and Social Studies*, *9*(1), 23–33.

Zheng, M., Bender, D., & Lyon, C. (2021). Online learning during COVID-19 produced equivalent or better student course performance as compared with pre-pandemic: empirical evidence from a school-wide comparative study. *Bmc Medical Education*, *21*, 495. https://doi.org/10.1186/s12909-021-02909-z.

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