



MONT ROSE COLLEGE®
OF MANAGEMENT & SCIENCES

Journal of Academic Reviews

VOLUME 6 - ISSUE 1

JUNE 2020



J.A.R

Journal of Academic Reviews

Volume 6 Issue 1 June 2020

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Editor's comment

Dr. Samson Oluseye Ojo

During this period of uncertainty, businesses and their management practices are really being put to the test with many employees engaging in presenteeism, some organisations, such as those in the hospitality, tourism, sporting businesses are facing an urgent need to restructure to survive. Moreover, the shutdown meant that income generated by the UK higher institutions from accommodation, catering, conferences, and international students has evaporated. With many office workers now operating from their homes, it means more than before, there is an increased risk of prolonged and excessive sitting. Although COVID-19 has captured the world's attention, we need to refocus our attention to other important aspects of our lives while efforts are underway in understanding the fingerprints of this monstrous monster.

In this issue, a collection of articles from across the disciplines and grounded by relevant philosophical traditions and methodological approaches systematically broaches topics dealing with how stability can be made to different areas of our lives and businesses.

These topics were carefully carved in alignment with all the disciplines we currently teach at Mont Rose College, and also to provide a unique distinction in the academic perspective and spectrum of the authors. This first issue of the sixth volume of the Journal of Academic Reviews follows the existing structure and covers the themes listed below:

Business and Innovation

- marketing, management (risk, operations, TQM), entrepreneurship, strategy, NPD, e-commerce, SMEs, logistics/supply chains, leadership, HRM, CSR, data mining, business psychology, business education, corporate finance, corporate governance, disruptive technologies, equity capital markets, ethics, microfinance, access to credit, credit unions, personal finance, training and development, recruitment and selection, social media, banking, consulting, aviation

Hospitality and Sustainability

- Tourism, leisure, climate change, sports and recreation, service quality, culture, dark tourism, social media, volunteer tourism, poverty reduction, digital world, Airbnb, Brexit impact on UK hospitality, events management, micro tourism, tourism in developing countries

Teaching and Education

- e-learning, curriculum development, assessment and attainment, school reform, health and child development, government policies, blended learning, pedagogy, massive open online courses, assessment and delivery, class attendance, finance in education, hospitality education

Health and Social Care

- NHS finances and performance (GPs, mental health, community services), NHS reform (ageing population, public health), social care quality, care home provision, domestic violence/abuse, alcoholism, adult healthcare learners, epigenetic factors, BME, prolonged pain

I would like to extend my unalloyed appreciation to all the contributors, the entire research team working tirelessly behind the scenes, and the reviewers (Mr Sarkis Nehme, Ms Tabassum Ferdous and Mr Mohammad Sameer). Finally, a special appreciation goes to Sayeda Zain (Co-Editor-in Chief) for the overall coordination of this project.

We welcome contributions from researchers with or without institutional affiliations, who are interested in any of the above fields of study.

Factors influencing presenteeism among UK higher education academic employees

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Abstract

This study examined the growing evidence of presenteeism in the academic staff of the UK Higher Education institution and the extent to which work demands, pay status, stress factor, employment loss factor, financial factors, and organisational policies impact on their physical and psychological wellbeing and work productivity. The study adopted the descriptive research design anchored on the analytical survey method from a positivist point of view. Data were collected via an online survey developed with Google Form using a convenience sampling technique. Findings revealed that the growing evidence of presenteeism among academic staff of the UK Higher Education institution is a causality of work demands, pay status and stress, and fear of job loss, which impact on workers' physical/psychological wellbeing and productivity. The study, therefore, recommended that concerns of job insecurity, fear of loss of income/employment should be of utmost priority in curbing presenteeism, more especially now with the on-going Corona-virus pandemic.

Keywords: presenteeism; work demands; organisational policies; personal factor; wellbeing; work productivity

Introduction

There is no gainsaying the fact that workers' commitment and loyalty to work is vital for organisational productivity. It is, however, argued that in situations where people continue to work while obviously distressed, it creates more dysfunctional than functional implications for both the individuals and the organisation. Such situations where people continue to turn up to work even when they are really not up to it is referred to as 'Presenteeism' (Simpson, 2019). Hence, these persons are present at work but unable to be fully engaged in the work environment. Gilbert and Karimi (2015) define presenteeism as situations where employees are at work, but their cognitive energy is not devoted to their work because they are physically present but mentally absent. In some cases, they will be going through the motions of work while their attention is focused elsewhere, and in other cases, they will not be working at all. Therefore, presenteeism depicts such behaviour whereby the physical presence of employees at work does not guarantee productivity due to work-related issues, physical, mental, and emotional health conditions, or personal, social, and emotional life issues.

Historically, the concept of presenteeism is said to have originated in the early 1990s, traced to Cary L. Cooper, a psychiatric Professor, and specialist in organisational management; who defined presenteeism as "people turning up to work, who are so distressed by their jobs or some aspect of the organisational climate that they contribute little or nothing to their work" (Lack, 2015, p.28). Subsequently, the tendencies of the act of presenteeism amongst workers started rising in industrialised nations of the world where workers pay/salary are based on the piece-rate system, specifically hourly pay (Mnookin, 2015). Afterward, scholarly interest in presenteeism grew, particularly in the advanced nations of the world, with some British and European scholars chiefly interested in studying the frequency of the phenomenon as a reflection of job insecurity and other occupational characteristics. In

the developing parts of the world, the study of presenteeism is regarded as a relatively new field, although the phenomenon is not a new problem in the workplace (Kinman and Wray, 2018; Lack, 2015; Gary, 2016). There are instances in developing countries with a high level of unemployment, overwhelming labour market, and job insecurity where workers would rather show up to work even when they are not up to it, dreading the loss of their job (Evert and Van de Vijzel, 2014). Growing evidence has revealed that factors such as the restricted right to sick pay, lack of job security, competitive nature of the organisation, the availability of replacement, work stress, increased workload, understaffing, and tight deadlines contributors to why most employees work while unwell (Aronsson and Gustafsson, 2005; Hansen and Andersen 2008; Miraglia and John, 2016; Miraglia and Kinman, 2017).

Mounting evidence shows that presenteeism can be damaging for individuals and organisations, with dire economic implications on productivity. With respect to individuals, Lack (2015) underscores the impact of presenteeism as deterioration of quality of life, damaged health, strained spousal/family relationship, increases in occupational accidents related to distractions, dysfunctional effects on colleagues like work backlogs, including transmissions of illness/virus. Gary (2016) notes that presenteeism accounts for a greater source of aggregate productivity loss in world economies compared to absenteeism. Wee *et al.* (2019) emphasise that productivity is the main catalyst of economic growth and meaningful living standard, but working while unfit causes more combined productivity loss considering that organisational productivity is strongly linked to employees' health as well as their socioeconomic characteristics. Gilbreath and Karimi (2015) avow that employees suffering from presenteeism are more prone to making more mistakes, are less productive, with little or no innovativeness, and render lower-quality services. Mnookin (2018) affirms that presenteeism more often worsens medical conditions, lowers the quality of working life, and leads to perceived decreased work efficiency as a result of reduced productivity, which has repercussions on the organisation's reputation/image, profit, competitiveness, and survival.

The findings of a survey carried out by the Chartered Institute of Personnel and Development (CIPD) on 600 UK businesses revealed that presenteeism is fast increasing, with more than one out of three employers reporting increased incidence among their employees in the past one year (Schreuder *et al.*, 2013). More recently, the CIPD Health and Well-being at Work Survey reported that presenteeism in the UK has more than doubled in the past decade, from 26% in 2010 to 86% in 2019, and this is more prevalent in jobs such as the education sector, social care, and welfare where attendance has a great influence on other people and on their primary needs. According to Kinman and Wray (2018), increased work intensity and presenteeism over the last decade among UK academics and the social care sector are due to their strong sense of duty and responsibility for the welfare of others. Therefore, it is the intention of this paper to examine the growing evidence of presenteeism in the academic staff of the UK Higher Education institution and the extent to which work demands, financial factor, health factor, personal factor, and organisational policies impact on their physical and psychological wellbeing and work productivity.

Methods

This is a descriptive study anchored on the analytical survey method from a positivist point of view. Data were collected via an online survey developed with Google Form using a convenience sampling technique. A college-wide email with a link to the structured questionnaire was sent to all the academic staff of an independent further education institution in London Borough of Redbridge. The first page of the survey was a participant information sheet and consent form, which study participants needed to complete prior to being directed to the questionnaire. Participants completed an initial section on socio-demographic information, age, gender, length of employment, and marital and employment status. The study was approved by the ethics committee of Mont Rose College of Management and Science.

Presenteeism was measured using a slightly modified version of the 13-item Stanford Presenteeism Scale which has been shown to have high test-retest reliability (Cronbach's alpha: 0.83) (Turpin *et al.*, 2004). Data obtained from the survey were presented using frequency distribution tables with their corresponding percentages. Collated data were analysed using the Pearson correlational tools with the aid of the Statistical Package for Social Sciences (SPSS) version 25.

Results

The results section is poised for the collation, presentation, analysis, and interpretation of data for the study, which were generated mainly from the structured questionnaire administered on the survey respondents.

Overall, 31 participants from the college completed the online questionnaire, and this shows a response rate of 91%. The results revealed a near parity in the gender of respondents with female participants put at 49.8% and male participants at 50.2%. This balance roughly corresponded with the larger population of academic staff employed in the UK higher and further education institutions at the time of data collection (Higher Education Statistics Agency, 2020). Over 80% of the respondents were in their prime productive age (31-40 years and 41-50 years). The majority of the respondents were married, 9.7% were single, 3.2% were divorced, while 19.4% did not disclose their marital status. In terms of employment status, 83.9% were on a full-time contract, 12.9% were on a part-time contract, while 3.2% preferred not to say. The majority (84%) of the respondents have had 1-5 years of working experience, 9.7% indicated 6-10 years of experience, 3.2% had 11-15 years of experience, and 6.3% more than 15 years of experience. Finally, the majority of the respondents (71%) did not have any health-related issues, 25.8% had a non-work-related health issue, while 3.2% had work-related health issues.

The reliability of the scales adopted is 0.637; this implies that the overall reliability of the instrument falls within acceptable criteria. The Shapiro-Wick test value for demographics is 0.705; $p > 0.000$; work-related stress is 0.791; $p > 0.086$; pay status is 0.750; $p > 0.000$; work demands is 0.737; $p > 0.001$; productivity is .804; $p > 0.000$, and Absence from work is .804; $p > 0.000$. The outcomes indicate that the data gathered and analysed for this study are normally distributed and justify the fundamental assumption for regression analysis. With respect to the Kaiser-Meyer-Olkin measure of sampling, adequacy was $0.516 > 0.5$, while the significance level of Bartlett's Test of Sphericity was $p < 0.028$. This is an indication that the sample size was sufficient.

Table 1: Correlations of presenteeism with variables of interest

		Presenteeism	Work-related stress	Pay status	Work demands	Productivity
Presenteeism	Pearson Correlation	1				
Work-related stress	Pearson Correlation	.668	1			
Pay status	Pearson Correlation	.603	-.136	1		
Work demands	Pearson Correlation	.509	.511	.421*	1	
Productivity	Pearson Correlation	.653	.585	.689*	.529	1
Demographics	Pearson Correlation	-.421*	.304	-.174	.043	-.267

*. Correlation is significant at the 0.05 level (2-tailed).

The correlations presented in Table 1 indicate significant relationships exist between presenteeism and work-related stress ($r = 0.668$; $p < 0.000$); between presenteeism and pay status ($r = 0.603$; $p < 0.000$);

between presenteeism and work demands ($r= 0.509$; $p<0.000$); and between presenteeism and productivity ($r = 0.653$; $p<0.000$).

The term 'R' with a value of .564 in Table 2 represents the correlation, which implies a moderate correlation. The value of R^2 is .318 indicates the extent of the total variance explained by productivity, work-related stress, work demands, demographics, and pay status on presenteeism.

The coefficient outcome presented in Table 3 shows significant contribution of variables. Demographics significantly contributes towards presenteeism ($\beta = 1.311$, $P<0.003$). Work-related stress contributes significantly towards presenteeism ($\beta = .743$, $P<0.000$). Pay status contributes significantly towards presenteeism ($\beta = .663$, $P<0.040$). Work demands contributes towards presenteeism ($\beta = .629$, $P <0.060$). Presenteeism contributes towards productivity ($\beta = .724$, $P <0.005$).

Table 2: Model summary of a linear relationship

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.564 ^a	.318	.182	.9612

a. Predictors: (Constant), Productivity, Work-related stress, Work demands, Demographics, Pay status

Table 3: Coefficients of the significance of presenteeism

COEFFICIENTS						
Model	Unstandardized Coefficients			Standardized Coefficients		Sig.
	B	Std. Error	Beta	t		
1 (Constant)	4.217	1.797		2.510	.000	
Demographics	1.311	.475	.446	2.472	.003	
Work-related stress	.743	.364	.264	1.401	.000	
Pay status	.663	.457	.193	.723	.040	
Work demands	.629	.274	.108	.540	.060	
Presenteeism	.724	.375	.204	1.119	.005	

a. Dependent Variable: Productivity

Discussion

Our investigation on the factors influencing presenteeism among UK higher education academic staff revealed that other than health-related issues, non-health-related issues have a more profound influence on presenteeism, which is linked to the productivity of colleges and schools of higher learning in the UK. Accordingly, the correlations analysis revealed that significant relationships exist between presenteeism and work-related stress, between presenteeism and pay status, between presenteeism and work demands, and between presenteeism and productivity.

Our investigation revealed that the growing evidence of presenteeism among academic staff of the UK Higher Education institution is a causality of work demands, pay status and stress, and fear of job loss, which impact on workers' physical/psychological wellbeing and productivity. A significant number of academic staff working in UK universities and colleges indicated that their employment is on temporary and hourly-paid contracts, which increased the risk of employee presenteeism. Work demands, features of the organisational climate the stresses of their job are much harder to handle; they focus on achieving the demands of my job despite health, financial and personal concerns, thereby influencing their behavioural pattern towards presenteeism.

The foregoing agreed with Gallie *et al.* (2017) five-year (2012-2017) skills and employment research report on “Fear at work in Britain,” which revealed that prevailing issue adversely influencing presenteeism in Britain institutions is the fear of loss of employment. The survey disclosed just over half of all employees (52%) reported anxiety about the loss of job positions, thus, susceptible to employee presenteeism.

Our survey findings also agreed with the investigations of Mnookin (2018) into mental health, presenteeism and organisational productivity, wherein it was discovered that employees in high-stress jobs who have little control over their workday are especially impacted by the negative effects of work and susceptible to workplace presenteeism. During a 4-year research period, 21,000 nurses in low-control, high-demand jobs were studied. Results indicated that the nurses had mental health deterioration greater than if they had led deskbound lives, after controlling for age, body mass index, chronic disease, education, marital status, and other variables. This deterioration adversely affected productivity as the nurses also had much lower ratings for physical functioning, vitality, and resourcefulness than those in less stressful jobs.

Also, corroborating with our findings, Simpson (2019), in his descriptive survey on “the rise of presenteeism in the UK workplace and its implications for productivity,” findings revealed that Job stress is more strongly associated with health complaints than either family or financial problems. Evidence pointed out that emotional stress, sleep deprivation other employees' personal characteristics, along with job and *organisational* factors, interact with the variables of a demanding work schedule and intermediary conditions workers fatigue and stress to cause degradation of the quality of services and products.

This study is not without limitations. Firstly, the data obtained were self-report, and causality cannot be established by the correlational design. Another limitation relates to the sampling strategy and the generalisability of the findings, as the sample size is too small for a quantitative study, which may not have captured the views and experiences of the wider UK population. Besides, employees who frequently work when they are unwell might have been motivated to complete the questionnaire to draw the attention of employers to their behaviour. Nonetheless, the key strength of this study is that it has highlighted key factors that might contribute to presenteeism, and it is expected to increase awareness of the grave consequences of presenteeism on employees' health and organisational productivity. As these findings may not be transferrable, line managers should make efforts to understand the underlying drivers of presenteeism in their respective organisations and provide work adjustments where necessary for optimal performance.

Conclusion

The findings of this study revealed that the evidence of presenteeism is significant with adverse impact given the cycle of lost productivity in the workplace, the consequent effects on the health and safety of individual workers, and the negative economic impact on UK Higher Education system vis-à-vis the prevailing insolvency and recent closure of some colleges and institutions of higher learning across the country.

The UK higher authorities, therefore, have a vital role to play in ameliorating these issues fuelling presenteeism among staff and undermining the productivity of the workforce. The concerns of job insecurity, fear of loss of income/employment should be of utmost priority in curbing presenteeism, most especially now that the on-going Corona-virus pandemic and its correlate of layoffs, downsizing and restructuring, is having negative effects on the mental health, financial and physical wellbeing of workers, which will invariably escalate incidences of presenteeism in the UK; as workers are under intense pressure to work regardless of their physical/mental fitness; due to the demands of their job, fear of loss of employment, pay/income loss as well as other significant personal factors. It is a time

more than ever where educational managers should instill confidence in their team members and help them to maximise their potential in contributing to the development of education in the UK.

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Failed corporate mergers – an analysis of buy and hold cumulative returns around merger announcements

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Abstract

This article presents a two-part empirical analysis of investors' returns around merger announcements that failed to materialise. Firstly, by looking at cumulative returns at the initiation and at the end of negotiations, and secondly, by analysing the impact of news flow during the negotiation period on share prices, with a presentation of the effects of antitrust's regulatory assessment on the likelihood of merger clearance. The results show that investors in both the acquirer and the target incur significant losses as a result of failed mergers. However, losses are more pronounced for hostile takeovers. The results also suggest the presence of profitable and opportunistic short-term strategies during offer periods.

Keywords: merger announcement, trading, cumulative return.

Introduction

Merger and acquisition activity can range from small bolt-on acquisitions to larger conglomerate combinations, from hostile mergers to much friendlier mergers where both acquirer and target mutually agree on the benefits of the combination. This article presents a background to merger activities both in the US and in the UK. It then reviews two stock market themes around mergers: stock price reaction and trading volume. This provides a solid background for the empirical analysis of investors' returns around merger announcements. The article concludes with a case study of the type of news that make stock prices move during a merger offer period.

Background

US Merger Activity

Historical M&A activities are often characterised using 6 distinct waves of mergers activities in the US. The **first wave (1895-1904)** was characterised by horizontal mergers, where producers consolidated their operations within industries. It is estimated that more than 1,800 smaller companies disappeared following such consolidation (Sudarsanam, 2010), with the remaining mega-firms such as General Electric, Eastman Kodak, and others having greater market power. The **second wave (1916-1929)** was characterised by mergers around product extension, market extension, and vertical mergers (i.e., backward and forward integration along supply chains). The **third wave (1965-1969)** was much shorter and saw the establishment of large conglomerates. During the **fourth wave (1981-1989)**, many firms engaged in both expansion and disposal, expanding presence in areas where they foresaw greater competitive advantage and downsizing of their businesses in less profitable segments. The emergence of technology and the search for sources of competitive advantage were key characteristics of the **fifth wave (1990-2000)**. During this period, many companies sought to augment their resources and competences.

We are now in the **sixth wave (2003 - present)** dominated by corporate governance and shareholder activism, and leveraged buyouts.

UK Merger Activity

In the UK, massive restructuring was seen in the manufacturing industry and in the financial services sector in the 1980s. The 'big bang deregulation' of the financial services sector in the City of London heralded the arrival of the US investment banks, which brought not only their huge capital raising capabilities but also their investment banking expertise and techniques in the areas of mergers and acquisitions. In the 1990s, the UK experienced a series of privatizations. Sectors such as water, electricity, and gas were privatized. Further deregulation of the telecom industry took place, increasing pressure on British Telecom to restructure. As a result, many firms undertook divestitures.

Stock price reaction and form of consideration in mergers

Research has shown that acquiring companies that use cash as consideration for merger experienced flat to positive abnormal returns. Conversely, companies using their stocks as a merger consideration experience negative abnormal returns of between -2% to -3% (Travlos, 1987; Andrade, Mitchell and Stafford, 2001). A common explanation for this negative stock price reaction is that acquirer uses stock as a form of payment when their stock is overvalued. Eckbo, Makaew, and Thorburn (2013) found that the probability of all-stock financed takeovers increases with measures of bidder overvaluation. Shleifer and Vishny (2003) claim that overvalued firms can increase shareholder wealth by using their stock as currency to purchase less overvalued firms. However, Fu, Lin, and Officer (2013) challenged this idea and showed that, in practice, overvalued acquirers significantly overpay for their targets as these acquisitions do not lead to anticipated synergy gains. Mitchell, Pulvino, and Stafford (2004) presents evidence that a significant part of the abnormal return on the acquirer's stock is due to merger arbitrage short-selling around the merger announcement. An assumption common to all these researches is that takeover bids are fuelled by expected synergy gains; thus targets are more likely to accept the overvalued stock as a currency for the merger.

Trading activity around merger announcements

Ascioglu, McInish, and Wood (2002) found evidence that both trading volume and positive returns of target companies are abnormally high before merger announcements.

Jayaraman, Frye, and Sabherwal (2005) provide empirical evidence on the level of trading activity in the stock options market prior to the announcement of a merger or an acquisition. They found a significant increase in the trading activity of call and put options for companies involved in a takeover prior to the rumor of an acquisition or merger, suggesting a considerable level of informed trading in the options market prior to the announcement of a corporate event.

Gao and Oler (2012) tracked trading activity in the days preceding acquisition announcements for target firms and found that abnormally high trading volume precedes significant price movement.

Framework for empirical analysis

This paper analyses cumulative returns that can be earned by investors involved in a merger arbitrage strategy. This strategy involves trading on the shares of the merging companies based on the probability that the merger will successfully be complete.

I use selected merger announcements that failed to materialise during the period 2014 to 2019, obtaining historical share prices from *Yahoo!* Finance and calculating the cumulative buy and hold returns until the companies announce that the proposed merger has been called off. The sample used can be found in *table 1*.

Table 1: Sample Acquirers and Target

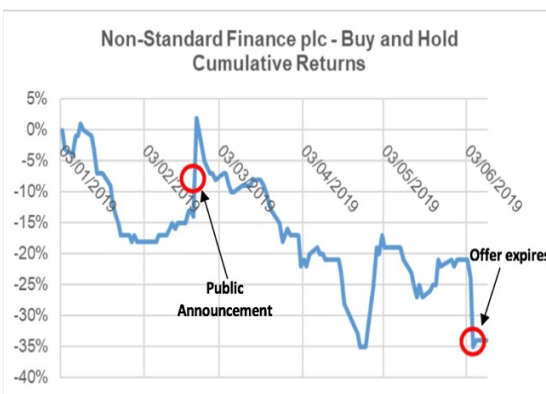
Merger Announcement	Termination of Talks	Acquirer	Target
28-Apr-14	19-May-14	Pfizer	AstraZeneca
28-Apr-18	25-Apr-19	Sainsbury's	ASDA
22-Feb-19	05-Jun-19	NSF	Provident Financial

The analysis does not intend to cover all failed mergers during this period 2014 to 2019, nor does it claim to cover the most crucial merger announcements. I made an arbitrary in selecting these companies in order to highlight opportunities for further research. Thus, the observations and conclusions of this paper could be materially affected by the sample selected.

Analysis and discussion

This section discusses the findings of the paper.

Pfizer – AstraZeneca



Pfizer, a US pharmaceutical company made an announcement that it has entered merger talk with AstraZeneca, a UK-based pharmaceutical company in a deal worth nearly £70 billion pounds.

It is not until 28 April 2014 that Pfizer confirmed to the public that it previously submitted a preliminary, non-binding indication of interest to the board of directors of AstraZeneca on 14 January 2014 which declined to pursue negotiations after limited high-level discussions. The discussions were discontinued on 14 January 2014 and Pfizer ceased to consider a possible transaction.

On 26 April 2014, Pfizer contacted AstraZeneca again to renew discussions, but yet again, AstraZeneca declined to engage. Pfizer made a final proposal to the board of AstraZeneca on 18 May 2014. This final proposal, as the others was rejected and on 26 May 2014, Pfizer announced that it does not intend to make an offer for AstraZeneca.

Key findings: Cumulative return significantly increase before the announcement is made public. Returns on Pfizer’s shares, in particular show evidence of increased speculation during this period. The large decrease in cumulative return just before the news is made public could also be evidence of price manipulation by sophisticated investors (e.g. hedge funds). The evidence overall suggests that private information is acquired before such information is made public and investors successfully traded on both Pfizer and AstraZeneca shares.

Non-Standard Finance - Provident Financial such as Vanquis Bank and Satsuma Loans) to create a leading UK non-standard finance provider with strong positions in credit cards, home credit, branch-based lending, and guarantor loans.

On 25 February 2019, the Board of Provident Financial plc expressed its disappointment at the unsolicited and highly opportunistic approach and

the decision by NSF (operating businesses such as Everyday Loans, Loan at Home) not to engage with the Board prior to the announcement. It rejected the offer on the same day. The two companies subsequently engaged in a heated public debate, accusing each other of a flawed strategy, regulatory breaches, broken promises, and underwhelming financial performance.

On 5 June 2019, following discussions with the regulatory authorities, NSF confirmed that it would not satisfy all conditions set by regulators. Accordingly, it decided to lapse the offer.

Key findings: Hostile takeovers are costly for investors in both the acquirer and the target. NSF shareholders, in particular, suffered the most, losing almost 25% of their investment from the public announcement to the expiration of the offer whereas Provident Financials' shareholders lost approximately 15% of their investment

Case study: a closer look at what makes price move during merger talks (Sainsbury's – Asda)

Background

On 28 April 2018, J Sainsbury plc and Walmart Inc. announced that they had agreed on terms in relation to a proposed combination of Sainsbury's and Asda Group Limited, a wholly-owned subsidiary of Walmart. Under the terms of the agreement, Asda Group Limited shareholders would receive £2.975 billion in cash and 42% share of the enlarged group, effectively valuing Asda Group Limited at £7.3 billion based on Sainsbury's closing price on 27 April 2018.

One rationale for the proposed deal was to “combine a complementary network of more than 2,800 Sainsbury's, Asda and Argos stores...”. However, various analysts anticipated that this deal would likely result in some disposals.

In this case study, I review and apply the Herfindahl-Hirschman Index (HHI) to assess the likely reaction of the Competition and Markets Authority (CMA) and the magnitude of potential store disposal.

Review

In 1982, competition regulators shifted toward using a new measure of market power called the Herfindahl-Hirschman Index (HHI). This common measure of market concentration is relatively easy to calculate and interpret. To

calculate the HHI, the market shares for competing companies are squared and then summed as shown below:

$$HHI = \sum_i^n \left(\frac{\text{Sales of firm } i}{\text{Total sales of the market}} \right)^2$$

The CMA's Merger Assessment Guidelines indicate that a market with an HHI exceeding 1,000 may be regarded as concentrated, and an HHI exceeding 2,000 may be regarded as highly concentrated.

- In a concentrated market, a horizontal merger generating an increase in HHI of less than 250 is not likely to give cause for concern.
- In a highly concentrated market, a horizontal merger generating a delta of less than 150 is not likely to give cause for concern.

Application

Using market share data as at 22 April 2018 from Kantar World Panel, I calculated the pre- and post-merger HHI.

Table 2 shows that the market for groceries, which is currently *concentrated* (HHI of 1521.86) would have become *highly concentrated* (HHI of 2014.76) should the proposed merger was cleared for completion. In fact, this would have resulted in an increase in HHI of 492.9, well above the maximum increase of 250 that would not give cause for concern. The proposed merger was highly likely to result in some store's disposal.

Table 2: Pre- and post-merger analysis

	Pre-merger		Post-merger	
	Market share (%)	Squared market share	Market share (%)	Squared market share
Sainsbury's - Asda Group			31.4	985.96
Tesco	27.6	761.76	27.6	761.76
Sainsbury's	15.9	252.81		
Asda	15.5	240.25		
Morrison's	10.5	110.25	10.5	110.25
Aldi	7.3	53.29	7.3	53.29
Co-Op	6	36	6	36
Lidl	5.4	29.16	5.4	29.16
Waitrose	5.1	26.01	5.1	26.01
Iceland	2.1	4.41	2.1	4.41
Symbols & Independent	1.8	3.24	1.8	3.24
Other Outlets	1.8	3.24	1.8	3.24
Ocado	1.2	1.44	1.2	1.44
HHI (Sum of squared market share)		1521.86		2014.76
Increase in HHI				492.9

Table 3: Target post-merger analysis of market shares for possible clearance

	Pre-merger		Post-merger	
	Market share (%)	Market share squared	Market share (%)	Market share squared
Sainsbury's - Asda Group			26.8	718.24
Market share differential			4.6	21.16
Tesco	27.6	761.76	27.6	761.76
Sainsbury's	15.9	252.81		
Asda	15.5	240.25		
Morrison's	10.5	110.25	10.5	110.25
Aldi	7.3	53.29	7.3	53.29
Co-Op	6	36	6	36
Lidl	5.4	29.16	5.4	29.16
Waitrose	5.1	26.01	5.1	26.01
Iceland	2.1	4.41	2.1	4.41
Symbols & Independent	1.8	3.24	1.8	3.24
Other Outlets	1.8	3.24	1.8	3.24
Ocado	1.2	1.44	1.2	1.44
HHI		1521.86		1768.2
Increase in HHI				246.34

Closing comments

The market share differential represented the market share that would have been given away (store disposal) for the deal to be approved. This differential was so high that it represented more than the entire market share of other groceries outlets. To be specific, the differential represented about

- 0.4 times the market share of Morrison's.
- 0.6 times the market share of Aldi; or
- 0.9 times the market share of Lidl or Waitrose.

Investors implemented a buy and hold strategy for this proposed merger would have lost some money. There were some signals (i.e. news announcement) that would have led to profitable short-term strategies.

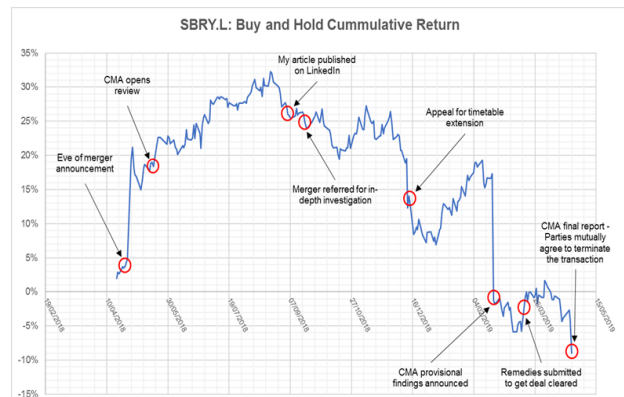
Assessment of the magnitude of disposals

Should the combined group had undertaken to strategically dispose of some stores for the HHI not increase by more than 250, it would have sold stores representing approximately 4.6% market share.

The potential number of stores disposal would have been so large that the rationale for the merger could have been destroyed. In fact, the market share of the combined group should have been around 26.8%, effectively lower than Tesco's market share at 27.6%. The deal would have resulted in a *market share compromise* of around 4.6%, as shown in table 3.

Sainsbury's investors cumulative returns

To have some insight into the cumulative returns throughout the year long process, from announcement up till the termination date, I have analysed all news announcements and their impact on cumulative return for an investor holding Sainsbury's shares.



Conclusion

This paper, as many others exposed the many trading opportunities surrounding mergers and acquisitions. As always, such opportunities can only be successfully exploited by astute investors who could anticipate twists and turns in negotiations. Such investors, most of which are hedge funds profit when their strategy succeeds, but typically go bankrupt when their strategy fails.

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Sustainability of the UK higher education institutions: A systematic review.

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Abstract

The UK higher education sector has gained increased attention as a driver of sustainable development with respect to people's development and economic contributions (Findler *et al.*, 2018). In a related argument, Salvioni *et al.* (2017) emphasised on the strong correlation between the social and cultural growth of global economies and the quality of the education system operates in each country. This suggests, therefore, that the educational system is an essential driver to explore, examine, generate, and communicate processes and procedures for sustainable change in the global economy. This is also evident in the growing research on governance and sustainability (Crow, 2010) as efforts towards building the economies of nations, and to generate new ideas for institutional growth. This study examined the sustainability of the UK higher education institutions through a systematic review of previous research on the topic. Findings provided evidence of the importance of compliance with governance frameworks as an essential requirement for sustainability, and this led to the ranking of different schools. Results also showed that higher education managers have the responsibility of incorporating sustainable practices into their daily activities as well as their academic curriculum to become better.

Keywords: Sustainability; higher education; corporate governance; social responsibility; sustainable practice.

Introduction

Higher education is one of UK's major assets, with the UK Higher Education institutions providing a grounding in learning to over 2 million students per annum, gaining a global reputation for quality that attracts over 400,000 international students annually; while bolstering UK export earnings to over £20 billion as at 2019 and renowned as a world-leading research power only second to the United States (Brendan, 2019; Gaskell, 2018).

Historically, higher education in the UK has come a long way, stretching back to the 11th century as higher education teaching began in the city of Oxford in 1096, but the major expansion of higher education in the UK occurred during the 1950s and 1960s (Salvioni, Gennari and Baselti, 2016). During the oil crisis of the '70s, higher institutions experienced under-funding problems losing out to other funding needs of healthcare, social security, etc. Hence, government funding diversified with ministries switching from regulatory money flows to block grants negotiated as contracts based on university portfolio and strategic planning (Gillard, 2018).

Learning and research funds were therefore granted on a highly competitive basis, forcing Universities in the UK to take a more entrepreneurial approach (New Public Management) to develop a strategic response for sustainability (Capentier, 2018). Hence, there were significant changes to the funding of higher education and to the wider operating environment in the UK. Students are contemporarily the principal direct funders making the higher education sector the survival of the fittest contest, mostly dependent on institutions ability to maintain standards that promote and protect the student interest

(Gaskell, 2018). This suffices to say that nowadays, the UK higher education has a more demand-led system where funding follows the student, and students follow the quality.

These developments increased expectations about the quality and sustainability of higher education in the UK, with robust expansion in the number of higher education providers leading to a highly competitive environment (Capentier, 2018). Hence, the growing concern for survival and struggle to stand out from competing institutions created much emphasis on the sustainability of standard practices in the UK higher education institutions built on a framework of rules, systems and processes of corporate governance (Kosta and Waheed, 2017). Sustainability for higher education institutions in the UK becomes a necessity not just to avoid the cost of deteriorating social, environmental, and economic systems but essentially to tapping new opportunities and creating meaningful value for continuous competitive existence.

Corporate governance is an institution's governance strategy that directs it towards achieving long-term success and longevity. Henard and Mitterle (2019) described it as the framework of specific checks and balances which comprises rules, structures/systems, relationships, and processes by which policies for tertiary education are developed, implemented, and reviewed. The argument is, therefore, that when adopted effectively by leadership, it imparts integrity, ethics, transparency, accountability, and culture across the institution.

As its strength, effective adoption contributes to high-quality higher education and the continued existence of the UK higher education institutions, builds public confidence, and safeguards the reputation of the UK higher education system. As its weakness, ineffectiveness in adopting and implementing the shared values in the practice of corporate governance has perceived implications further than the success and survival of the institution concerned, by potentially undermining the collective reputation of UK Higher Education institutions (Lanham, 2016).

Statement of problem

Higher education in the UK has witnessed sweeping changes over the last couple of decades, and in the phase of stiff competition in the UK tertiary education system, it appears institutions are struggling for meaningful existence as some find themselves on the brink of collapsing. Legislative changes and corporate governance frameworks compelled by the government on public and private tertiary institutions have been intended to enhance their administrative strategies. Paradoxically, the academic character, financial health, asset, and resourcefulness of these institutions and colleges of higher learning seem threatened by challenges of regulatory frameworks and disjointed funding in higher education.

It is therefore perceived that the corporate governance framework of rules, systems, and the process has major implications on the confidence in the quality, sustainability, and value of higher education institutions in the UK. Achieving real success/changes requires effective leadership and sustained effort adaptive to the framework of rules and implemented systems and processes, in line with the Governance framework for Higher Education Systems in the UK. It is, therefore, the focus of this study to examine how adaptation has contributed to the continued existence of model higher institutions in the UK, considering the prevailing insolvency and recent closure of some colleges and institutions of higher learning in the UK.

Research aim

This study is aimed at investigating the implication of corporate governance with particular emphasis on the framework of rules, systems, and processes adopted by leadership towards the sustainability of standard practices in higher education institutions in the UK.

Corporate governance and sustainability of standard practices in UK higher education institutions

Corporate governance is prevalent in the UK institutions of higher learning, mostly consisting of smaller boards of governors or trustees, as well as chief executive officers with financial and managerial responsibilities. Henard and Mitterle (2019) avow that the UK model for assuring quality and standards in universities/colleges is sound and well-established. Accordingly, each university has the responsibility for maintaining the quality of the education it provides and the standards of the qualifications it offers. Universities are their own awarding bodies, and they continually assess their systems and their courses to ensure that they are fit for purpose.

The foregoing suffices to argue that the assurance of standards and quality in the UK higher education system is led by the institutions themselves and externally checked by the Quality Assurance Agency for Higher Education (QAA). Lanham (2016) posits that by visibly adopting the corporate governance framework, governing bodies demonstrate leadership and stewardship in relation to the governance of their own institutions, and in doing so help to protect the institutional reputation and provide a level of assurance to key stakeholders, partners including the student community, and society more widely.

The “comply or explain” approach is the trademark of the UK corporate governance framework. Voluntarily, it sets out principles and practices which any organisation operating within the sector will need to apply in order to show that it conducts its business with due respect for the public interest. Hence, the framework is not a rigid set of rules rather; it consists of rules and principles underscored (Henard and Mitterle, 2019; Greatbatch and Tate, 2018; Lanham, 2016) as the provisions of:

- Institutional autonomy within an accountability framework
- Academic freedom and high-quality research, scholarship, and teaching
- Protecting the collective student interest through good governance
- The publication of accurate and transparent information that is publicly accessible
- A recognition that accountability for funding derived directly from stakeholders requires HEIs to be clear that they are in a contract with stakeholders who pay for their service and expect clarity about what is received.
- The achievement of equality of opportunity and diversity throughout the institution
- The principle that HE should be available to all those who are able to benefit from it.
- Full and transparent accountability for public funding

Accountability is an increasingly important element in the governance of tertiary education systems. Within the context of publicly funded tertiary education systems, the demonstration of “value for money” and relevant activities are undertaken with the tax-payers’ money is now widespread in most reviewed countries. This trend towards greater transparency and public accountability is developing parallel to the move towards greater autonomy. It reflects the recognition that there is a public interest in tertiary education, which needs to be reconciled with the benefits that institutional autonomy can bring.

According to Leal Filho *et al.* (2015a), public interest should be sustained in the areas of guaranteeing academic quality and standards, ensuring equitable student admission procedures and accessibility for students from poorer families, and ensuring appropriate use of public funds within institutions (i.e., internal efficiency). Accountability can be ensured through various means, including quality assurance frameworks, performance-related funding, market mechanisms, and participation of external stakeholders and governing bodies. Higher education in the UK is currently experiencing one of the greatest changes in the history of education due to the global pandemic. Part of the effort by the government is the partial lockdown, which sees most academic activities move to various online platforms rather than the usual face-face activities.

Despite the change, education managers are still being held accountable for the effective delivery of academic curriculums. Accountability in this regard refers to two distinctive performance outcomes: the first is related to performance outputs such as tests, exams, and other assessment results, while the

second approach focuses on improvement in the system of management. While the first approach is majorly quality based, the second approach is concerned with the improvement of quality.

One of the key arguments in the discussion of corporate governance and sustainability is the scope of the concept and according to the SusHEI model developed by Madeira *et al.* (2011), the concepts covers various academic dimensions such as university operations, research, teaching and learning, governance, awarding bodies, and other regulatory agencies. This connotes, therefore, that the subject of governance and sustainability in higher education is a multifaceted discourse that must be handled with deeper understanding and commitment.

Methodology

The systematic review approach was adopted to investigate the implication of corporate governance with particular emphasis on the framework of rules, systems, and processes adopted by leadership towards the sustainability of standard practices in higher education institutions in the UK. The dynamic nature of reviewing current literature is to enable this research to focus on the discourse of recent issues, thus recognise areas that are promising and those that require attention.

Although a systematic review is rigorous and should not be seen as an end in itself, a summary of current evidence usually generated through it has been proven to contribute to evidence-based practice across several areas of practice (KU, 2020; Mallett *et al.*, 2012). This approach of understanding theoretical concepts is reliable, robust, transparent, and follows a fixed process which distinguishes it from traditional literature reviewing.

This research paper draws on the authors' experience of conducting research on corporate governance and sustainability in Higher Education. Scholarly studies were retrieved from academic databases, screened, and were manually selected based on a set of criteria. The articles included in this study were those that are relevant to the subject of inquiry and met the span of 10 years' criteria while those beyond were excluded. Five previous research studies were selected and reviewed. At the final stage, relevant data were extracted and collated to generate the findings.

While the approach followed in this study may not entirely apply the rigid steps of a systematic review, it complied with the core principles of rigor, current, transparency, and it can be replicated. The insight gained from the articles led to the identification, evaluation, and synthesizing of new research findings needed to create current evidence.

Findings

In the research conducted by Salvioni *et al.* (2017) on enhancing quality and image through sustainability practices, the researchers examined the relationship between effective integration of culture and social responsibility in determining the improvement strategy and sustainability of HE. The qualitative research used content analysis as the research instrument and investigated three groups of universities, which include the last 20/top 500, the last 20/top 100, and the top 20/top 500 in the academic ranking of world universities.

The findings of the research showed that the universities in the top ranks have a clear and proactive sustainable plan and follow through to implementation through specific activities. Apart from formulating and implementing sustainable practices, the top-ranked universities also provide and store formal reports of their activities (Cornell University Statement). Contrary to the actions of the top-ranked schools, there is evidence of reduced planning and integration for those ranked in the last 20 universities. The report concluded that the difference between the top-ranked and the low ranked is the consistency showed by the top-ranked in embracing the practice of sustainability culture in managing the schools.

In another study conducted by Kosta (2018) on the sustainability curriculum in the UK University sustainability reports, the annual UK sustainability report was examined with particular emphasis on

universities that are receiving public funding and listed on the Higher Education Statistical Agency. Findings from the research showed that only 46 universities out of 167 produced institutional sustainability reports and only 7 of these figures performed the STARS (Sustainability Tracking Assessment and Rating System) sustainability report.

The result was argued to be consistent with other research findings, which showed that the sustainability curriculum had not been adequately covered in the disclosure reports (Beveridge *et al.* 2015). The argument indicates that the sustainability curriculum agenda of most schools are not sound and that accounts for their inability to document their sustainability initiatives in meeting the STARS sustainability requirement. The report also emphasised that sustainability curriculum should be promoted in all higher education institutions to improve the student experience, to align institutional activities with the Teaching Excellence Framework (TEF).

Longhurst and Gough (2018), in a paper delivered at the sustainability in Higher Education Conference in Bristol highlighted the challenges students face after graduation, which drives the need to prepare them through sustainability curricula and research. This argument was supported by Wals and Blewitt (2010), who reiterated the commitment of higher education institutions commitment to sustainable development through the integrated approach. The approach focuses on re-orienting teaching, inclusive of research, learning, and building a better relationship between the institutions and the community in which they operate to see sustainability as a major driver of higher education.

In a contrary review, however, Leal Filho *et al.* (2015b) argued that despite the great potential in the practice of sustainability in higher education, it is often not a sought-after endeavor by most higher education operators. This argument is in line with the studies of Kosta (2018) and Salvioni *et al.* (2017), which provides that most higher education institutions do not incorporate sustainable development into their system.

Discussion

This study was aimed at investigating the implication of corporate governance with particular emphasis on the framework of rules, systems, and processes adopted by leadership towards the sustainability of standard practices in the UK HE institutions. Our investigation showed that despite the global emphasis on sustainability of standard practices in higher education, the UK institutions are still struggling for meaningful existence as some of them suffer premature extinction, evidenced by the recent closure of some colleges/institutions of higher learning in the UK. Findings confirmed that strategic response for sustainability in the UK higher education institutions is not proactive; while some of the institutions struggle with adaptation, most of them fail to integrate sustainable development into their system.

Nonetheless, this is not to say that it is all doom and gloom with the growing concern for survival and sustainability of standard best practices, but that the UK higher education institutions still have a long way to go for the sector to be strategically focused and more productive. The financial health, resourcefulness and academic character of these institutions can be enhanced with a proper commitment by leadership to foresightedly plan and implement sound sustainability programmes centred on an integrated approach to sustainable development.

Conclusions

This systematic review of the sustainability of the UL higher education contributed to the discourse on the topic. Analysing five previous research in the study highlighted the challenges schools face with respect to sustainable practices and curriculum, which also was a major performance indicator that influenced their ranking. The studies indicated that while the requirements seem enormous, the key is to incorporate sustainable practices into the culture of the school and also to have sustainability in the modules offered. This was discussed to enhance students' experience and improve their employability skills.

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Significance of technology in improving the market position of the hotel within the competition

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Abstract

This article will focus on what is the role that information and communication technology (ICT) plays in the hotel industry, how does this technology help the management of a hospitality organisation have more effective communication with its customers and how does it improve internal operation.

Key words: Information, communication technology (ICT), effective communication, market position, competition, hotel

Introduction

Information and communications technology (ICT) used in hotels across the world are beneficial for the functioning of the organisations as it allows them to access information regarding the preference of the customers and cater to their needs efficiently (Kharoufet *et al.*, 2018). Various aspects of ICT allow the hotel industry to influence the functioning of the hotels' internal operations in an improved way. ICT features allow hotels to perform better in providing service to their customers through the appropriate creation of products and services (Schegg and Stangl, 2017).

The efficiency of hotels in the competitive market economy is based on the quality of services that the hotels provide. Using ICT services, the hotel industry can improve the quality of products and services provided to the customers efficiently (Bowie, 2018). The scope of the hotel industry can be improved by utilising ICTs in their operational activities. ICTs allow the organisation to improve its business performance in a competitive market economy by providing appropriate information regarding its business operations to the target demographic (Bloom *et al.*, 2014).

Organisational background

Megaro is one of the sophisticated hotels located in the UK, King's Cross Station area. The luxury boutique accommodation that is capable of providing its customers with unique and quality services attracts customers from a wide range of economic backgrounds. Based on the location of the hotel, it is observed that the major clientele are corporate individuals who utilise the hotel as a stop while traveling through the Eurotunnel for business purposes. The Megaro provides accommodation facilities to the tourists who frequently use The King's Cross Station and St Pancras station as these provide the tourism industry of the UK with a favorable transport network. The hotel performs its internal operations using several ICT factors within its business operations to cater to the needs and requirements of its customers efficiently (Themegaro.co.uk, 2019).

This article is to present the effect of information technology on the accommodation rate of Megaro as well as the impact of technology on accommodation that is being developed all over the world.

The hospitality and the hotel industry's primary business function are to cater to the needs and requirements of the customers. Communication plays an important role in the hospitality industry to fulfill their business objectives effectively (Chu, 2014). The utilisation of ICT in the hotel industry can be recognised through the success of communication between different stakeholders of the hotel industry.

ICT allows hotels to identify the needs of the target customers and create appropriate products and services that will improve their business operations in the competitive market economy (Lovelock and Patterson, 2015). The successful interaction between customers and hotel management can be beneficial for both parties, as it will allow the customers to identify accurately the type of products and services it has to offer to them (Daniel, 2018). The impact of ICTs in this industry is also evident through the increase in the accommodation rate of different hotels in the travel and tourism sector (Francis and Baum, 2018). This article will provide extensive knowledge about the scope of ICTs in the hotel industry by studying the impact ICT has on Megaro Hotel's business operations.

The accommodation rates increase or decrease due to the brand image of the hotel, pricing strategy and lucrative offers communicate to their target customer base (Liu *et al.*, 2017). ICTs allow the hotel industry to provide information to its target customers through different means (Haluza and Jungwirth, 2015). This enhances the business of the organisations and improves the accommodation rate of the hotels.

The present trend of the hospitality industry of the UK has been analysed. In addition to that, the challenges of Megaro have also been analysed. Further, the impact of communication on the operation of the hotel has also been critically analysed. On the contrary, the challenges of communication technology on hospitality management have also been discussed. Lastly, the ways of mitigating technological challenges have also been discussed.

The current trend of digitalisation in the hospitality Industry

As per the literary underpinnings of Choi *et al.* (2017), due to the advancement of technology, the management of the hospitality organisations improves the quality of the services, so that the revenue earned by the organisations can be increased. The management of Megaro has launched a mobile application so that the customers can book their rooms as per their convenience. Thus, it can be mentioned that digital communication helps to reduce the rush of customers during peak hours. According to Choi (2017), the digital communication process helps to maintain an effective relationship between the customers and the management, e.g., the management of Megaro has launched an online Chat Box so that the customers can resolve their quarries at the right time. On the contrary, in the global economy, the hospitality industry is improving at a rapid rate. The overall rate of GDP in the UK has increased by 10.2% due to the performance of the hospitality industry. As per the World Tourism Organisation (WTO), by 2030, the overall profit margin of the tourism sector will be increased by 4%.

Due to digitalisation, the profit rate of the hospitality industry is expected to increase by \$305 Billion by 2025. Thus, it has been proved that the implementation of digital communication within the hospitality industry has increased its competitive advantage in the market.

Because of technology, communication has tremendously improved among the management and the customers, which facilitated increasing the customer's retention rate. In 2018, one in five hotel bookings is down through Smartphones so that rush of the customers can be avoided. Thus, digital technology helps the hospitality industry to provide better facilities to the customers. In addition, 88% of travelers are using Smartphones while fulfilling their needs. In the UK, the rate of Smartphone users has increased by 70% and 80% in the USA. It has been noted that the rate of internet websites has increased by 10% in the hospitality industry (Fobes.com, 2019).

Impact of Information and communication system on hotels

As per the comment of Heo (2015), in the hospitality industry, the communication system needs to be improved so that the relation between the management and the customers can be accomplished effectively. The management of Megaro has launched a 24/7 feedback system so that the issues of the customers can be resolved efficiently and promptly. In addition to that in Megaro Hotel the management has launched Mobile Integration so that the customers can use their phone while check-ins, for unlocking the rooms and ordering room services. The impact of information and communication system on hospitality organisations have been mentioned below:

Service quality

Effective information and communication systems help the management to provide better service quality to the customers so that the competitive advantage of the organisations can be increased. For instance, Marriott Group of Hotels are using AI-enabled Chatbox in nearly 5,000 hotels globally so that they can conduct activities like reservations, checking of account balance, and Redemption of vouchers. On the contrary, cosmopolitan groups of Hotels have launched a robot known as Rose so that they can assist the customers 24*7 hours (Forbes.com, 2019). Similarly, in the context of Megaro, it can be stated that by implementing ICT, the fallen reputation of the hotel will get restored. More customers and visitors are likely to receive services. Check-ins and ordering room services will be enhanced. Moreover, communication gaps between employees will get reduced.

In addition to that, the management of Megaro has launched an "Internet of Things" (IOT) system on the doors and windows in order to enhance the security system of the customers. Thus, it can be mentioned that technology and information systems not only improve the quality of service but also help to enhance the security of the customers. As per Kharouf (2018), the application of technology within the organisations affects the privacy of the organisations because the professional hackers alter the information or hack it.

Developing relationship

As per the report of Forbes, the management of hospitality organisations uses the Internet of things so that they can harness the data related to the satisfaction level of the customers. The data of IOT implies that a particular customer visits the hotel after every year; then, at the end of the year, the centralised system can send a booking option to the customers. Moreover, they have also launched a centralised system in which they can store relevant data of the customers, which in turn helps them to improve the quality of service (Shemi *et al.*, 2014). Lastly, the IOT system is also being used by the hospitality organisation for harnessing information regarding the customers, such as food selection, excursion, and in-room amenities. On the contrary, Kundu and Chatterjee (2018), has mentioned that due to digital technology divide is being created among the customers because they do not have the same capacity to use the technologies.

Improves the competitive advantages

According to Kundu and Chatterjee (2018), the implementation of technology and communication helps to improve the market position of the organisations. In addition to that, it also helps to create a positive image in front of the customers. For instance, companies like Megaro have launched their company page on social media sites like Facebook, Twitter, and Instagram so that the customers can contact them instantly (Sharez *et al.*, 2011). In addition, the company can also launch an online booking portal so that the customers can book rooms as per their convenience. Instead, the customers can present their viewpoints on the website of the hotels so that their market position can be enhanced (Khier *et al.*, 2018).

Recommendation

The steps that the management of the organisations need to follow in order to mitigate technological issues have been discussed below:

Skills development programme

It has been mentioned earlier that due to technological implementation, the members of the organisations fail to use the equipment effectively, which in turn affects the overall output of the ventures. Hence, suggested that the management of the organisations need to train the employees effectively so that their technological skills can get enhanced. The training sessions need to be fixed as per the need of the employees (Quinton *et al.*, 2019).

Lastly, it is suggested that after implementing the training sessions, the management of the organisations need to take an evaluation test after one month in order to understand the efficiency level of the training sessions (Vaishnavi and Kuechler, 2015).

Application of Password and Firewall

The IT section of the organisation needs to implement a password within the IOT enabled gadgets so that outsiders cannot access the information stored within the system (Roper, 2018). In addition to that, at the time of setting the password complex characters need to be used so that the users cannot predict it. In addition to that, other users use free Wi-Fi connections should not be used because the devices can be easy. Lastly, it has been noted that firewalls need to be implemented within the systems in order to save the data effectively (Tarute and Gatuatis, 2014).

Conclusion

From the study conducted above, it can be understood that ICT application in Megaro would prove beneficial to their business operations. Communicating their business strategies to their customers and external stakeholders through appropriate marketing plans will prove effective in increasing the brand value and equity of the hotel. The study also provides extensive knowledge regarding the concept of information and communication technology that could be beneficial for the business operations of Megaro and the hotel industry across the world. From the study, it can be observed that the implementation of ICT in hotel business operations, several issues are inevitable. Strategies that could improve the business operations of the hotel industry through the usage of ICT have been suggested in the research, including strategies that would allow the organisations to mitigate the issues that hinder them from implementing ICT efficiently.

After conducting the research on the impact of ICT in Megaro, it can be concluded that the use of ICT can bring major changes and can enhance the overall image and reputation of the hotel that has been previously affected. The hotel administration also realizes the future impact of technology. This research has helped in gaining insight into the ways by which ICT can be implemented.

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The triple impact of the Cruise industry: Is it sustainable?

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Abstract

With the latest news (BBC, 2019) of the Cruise ship MSc Opera crushing into a wharf in Venice, and the mayor calling for reform, the industry has been again put under the spotlights. Research shows that the cruise industry has enjoyed unprecedented growth for the past twenty years while other parts of the hospitality and the tourism industry have been hit by events such as terrorism, natural disaster, and a significant recession. However, some suggest this growth has been at the expense of the sustainability of the society, the environment, especially and with some economic costs as well. This paper shows that although the industry undoubtedly contributes to the economy of the destinations, the liners themselves keep the lion's share. Concerning the environment, these ships may add less to Co2 per person per km² but could still be considered a substantial direct and indirect contributor. Socially, even though they can enhance cultural exchange, shorts spike of "overtourism" could have annoying consequences on the destinations.

Keywords: Cruise industry, sustainability, environment, society and economic

Introduction

The vast oceans and distant lands have always fascinated human beings since the dawn of history. There are various stories of people traveling to a distant land by sea to trade, discover new lands, or even to wage wars. However, with increasing peace and prosperity, people began to set off to the sea, mainly for pleasure and sightseeing. According to (Brida, 2010), the origins of cruise tourism can be traced to the early 1960s, and this period coincides with the decrease in the use of transoceanic ships as well as the beginning of the direct flights between America and Europe. Since then, the industry has grown steadily and bigger.

Cooper *et al.* (2017) show that the cruise industry has enjoyed a unique growth for the past twenty years, averaging over 8% per year, from 3.6 million passengers in 1990 to 21 million in 2013 (Page, 2015). According to the (FCCA, 2018), the year 2017 recorded 25.8 million global ocean cruise passengers, which is, in turn, is a 4.5 percent increase over 2016's figure of 24.7 million. 27 million, which is an increase of 10%, was also forecast for 2018. Annual occupancy percentage figures even exceeded 100. This passenger growth is evidence of unwavering consumer interest in the industry and also the fact that demand continues to outstrip supply.

This growth naturally poses questions of sustainability. Sustainability has been defined by the Bruntland Report (1987) as a "development that meets the needs of the present without compromising the ability of future generations to meet their own demand." The approach to sustainability here is based on the concept of the "Triple Bottom-line."

This phrase was first coined by John Elkington in 1994. His view was that companies should have three different and separate bottom lines. One is the profit or what is normally called the "bottom line." The second is the bottom line is "people account" measuring how socially responsible an organisation is in its operations and the third one is the bottom line of an organisation's "planet" measuring of how environmentally it is. The triple bottom line consisting of three Ps: profit, people, and the planet; therefore, it aims at measuring the financial, social, and environmental performance of the entity.

This a kind of a balanced scorecard. It is only when organisations measure their social and environmental impact in addition to their economic impact that they can be considered responsible or sustainable (The Economist.com, 2009)

This article explores the triple issues of Economic, social, and environmental sustainability in the context of the Cruise sector of the hospitality industry

The environment

This can be explained as the natural world as a whole or a particular geographical area, where different life forms and natural objects interact. This can especially be affected by human activity. The more than 25 million people who enjoy the sights and sounds on a cruise ship may not think about the pollutants emitted from their vessels or the wastes discharged into the environment. Even though some developed countries such as the USA has a strong regulatory policy framework, it may not necessarily be so in most of the developing world destinations. Smaller countries may not have the right resources to regulate it themselves, and some may even choose not to regulate it because they consider that *biting the finger that feeds them*.

The environmental impact of cruising has been well documented, and it does not do a comfortable reading for those who are concerned about the industry and the environment. (Watson, 2015). Two main constituents of the environment will be considered here:

Air Pollution: The National Geographic (2019, n.p) explains air pollution as a mix “of particles and gases that can reach harmful concentrations both outside and indoors. Its effects can range from higher disease risks to rising temperatures” It gives examples of air pollutants as soot, smoke, mould, pollen, methane, and carbon dioxide. Benis (2010) lists some air pollutant in the industry and their effect as follows:

Nitrogen oxide: Chronic lung diseases

Particulate matter: Decreased lung function, kills vegetation

Hydrocarbons: Lung and eye irritation

Carbon monoxide: Poisoning, and greenhouse in combination with other gases

Sulphur dioxide: Source of acid rain

The latest mega cruise ships tend to burn a lot of fuel, burning, approximately (250,000 liters a day) of highly polluting marine fuel, which is often a residual fuel that has been described by Brubaker, (1992) as being, obnoxious and have a pungent smell. These ships release a high level of these noxious substances into the air. A typical port city can hold several ships doing just that at the same, with the environmental implication (Vidal, 2016). Even though Becken and Hay (2007) pointed that cruise ships do pollute less than airplanes considering the amount of CO₂ per km, the fact remains that they generate a considerable amount of direct and indirect air pollution.

Also, tourists often have to fly to the ports of departure, for example, in America, (35% of the market and the ships start from Miami to the Caribbean) and to do so; they often drive to the airports (Business Research & Economic Advisors, 2018). When they arrive at a tourist destination, these cruise tourists often are chauffeured around in buses, which consequently creates an additional carbon footprint. A huge cruise ship with its passengers could cause more pollution than twelve thousand cars per day (Klein, 2011). Evidence also shows that a cruise ship can emit more particulates than a million (or 5 million vehicles according to some estimates) in a day.

Also, the "Independent" (2019), citing an investigation by Channel 4 *Dispatches*, claims the Levels of pollution on some cruise ships' decks are worse than in the world's most polluted cities; thus, these ships do even pollute their passengers.

Water Pollution:

According to Benis (2010), due to factors such as trip duration, provisions needed, and the number of passengers on board, most modern cruise ships could be considered as small floating cities. And just like them, a cruise ship produces significant amounts of waste. However, since cruise ships stay at sea most of the time, it is impossible to dispose of their waste on land as cities on the ground. According to the same writer, Cruise ships produce seven different types of waste, including plastics, food, greywater, hazardous substances, non-plastic trash, sewage, and oil. There are various rules concerning the discharge of materials at sea (Hickman, 2007). Some are allowed far from shore only and others near the coast. Bins (2010), however, mentions that there is evidence of the rules having been ignored. The effects of plastic on the ocean are numerous, ranging from choking of marine creatures and pollution of beauty spots to the frightening revelation that plastics have now entered the food chain. To make things worse, some of these plastics could take hundreds if not thousands of years before they could disintegrate if at all.

The fightback from the industry

No critical evaluation of the sustainability issues is possible without considering how the industry is fighting back these issues. The industry is aware of its brand image being affected as well as tighter regulations and therefore has started rightly fighting back these issues. For example, according to the "Guardian", In December 2016, the Princess Cruises was fined a record £33 million after it caught and subsequently prosecuted for illegally discharging oil and contaminated waste and covering it up.

Fighting Air pollution:

According to the Guardian (2018), the new International Maritime Organisation's guideline that will come in force in 2020 will oblige a reduction in cruise ships sulphur emissions from 3.5% to 0.5%. To ensure this limit is respected, scrubber technology is now being employed on ships. This technology involves using seawater to clean the engine exhausts. Even though this reduces air pollution, it causes water pollution instead

Better technology is the use of liquefied natural gas, which several cruise companies such as the Royal Caribbean Cruises have already invested to power their ships, but this only gives a marginal reduction. Some companies are, therefore, also looking at fuel cell technology, which converts chemical energy into electricity.

Fighting Water pollution

Hickman (2007) points out that action is taken to reduce these issues. Ships have sewage treatment plants on board (Advanced Wastewater Purification) and are releasing clean water into the sea (Scanship, 2019).

The number of objects falling overboard is decreasing since a 1988 ban on throwing plastic (Hickman, 2007). Waste compactors are used to store refuse, and they are emptied when reaching the next port. Some ships are using desalination plants too to produce their drinkable water, thus reducing the impact they have on local freshwater production as well as reducing the need to carry all the water needed, which reduces energy usage and pollution (Grant, 2014).

The economic factor

Economic sustainability could be explained as the ability to employ, activities and practices that may support long-term economic growth while taking care that they do not negatively impact the social, environmental, and cultural aspects of the community. The contribution of the industry here is double-edged.

The Positive contributions

The economic impact of the cruise industry can be very substantial. Every ship brings a lot of business and money to its destination. Companies take many forms, such as re-supplying water, food and beverage, fuel, and anything else the ship might need (CLIA, 2018).

Then, there is the money tourist bring into the local economy through travel, shopping, entertainment, restaurants, bars, and sightseeing, which creates thousands of jobs, contributes to local and national taxes, which can potentially benefit the whole country. According to the data by Business Research & Economic Advisors (2018), this alone represented just under 406 million United States dollars in the Bahamas, for example. This figure equates to about 3% of the GDP. The cruise industry is also the source of over 9,000 jobs (the second highest in the Caribbean) with total earnings by employees reaching 155 million United States dollars. This corresponds to an average income of \$17,000 per person, the highest amount in the Caribbean (Business Research & Economic Advisors, 2018).

Cruises are also an important source of foreign currency reserves for the destination. A third Bahamas' foreign currency reserve comes from this source. This allows the country to import goods from the USA or to pay for oil without having to exchange their own money first, thus saving the exchange rate fees.

Positive contributions

However, evidence also shows that only a tiny fraction of the money paid by cruise passengers benefits the host nations. Klein (2011) highlighted this in his case study of Belize in which he explained that cruise companies keep 50% the tour revenue, leaving little for the onshore businesses. Dwyer and Forsyth (1998) also pointed out that any extra spending by the tourist results in higher revenue for the cruise companies rather than the local economies.

Another issue is that specific parts on the tour trails may benefit, while the rest of the area may not see any benefit at all. Finally, Wall and Mathieson (2006) also pointed to the seasonality factor. This means that even though cruise ships work all year, their visit to specific locations depends on seasons; consequently they deprive those communities out of season the necessary income.

The social-cultural factor.

This pillar of sustainability includes the impact of organisations or their activities on people and society. The cruise companies have a considerable social effect on their destinations, mainly due to the size of their operations and can have substantial positive and negative effects on the local population.

The Negative contributions

At every arrival at the port, thousands of passengers have the possibility of disembarking, thus flooding the area where they are, but leaving within a very short time (CLIA, 2018). For example, there were 1.86 million passenger arrival in the Cayman Islands in 2018 (CLIA, 2018) for a local population of 62,348 (World Population Review, 2018).

At the same time, cruise companies are operating within their own rules and regulations in a very fluid environment. The fact that they navigate in international waters most of the time means that they are mostly free of control, but at the same time, they must obey the law of every port they reach (Brida and Zapata, 2010).

Then the impact on the local population needs to be analysed. Klein (2011) explored a few examples of this impact, where a ship can offload thousands of passengers in a very short time, with problems occurring when several ship dock at the same time. Skagway, a small-town of 1,000 people in Alaska can see more than ten times this number going through its streets in a single day, disrupting the local way of life. This sort of arrival can lead to changes in the fabrics in society, where non-traditional shops and habits can take precedent on the local culture creating a westernisation of the culture (Klein, 2011). Grey (2017) also gave the example of Barcelona, which receives a record number of passengers. This has led to a rise in living costs in the old city, pricing out the locals, as well as a change of the type of businesses establishing themselves, from traditional to international brands.

Another example is Venice, which was nearly classified as an endangered heritage city by UNESCO (Grey, 2017) because of ships unloading their many passengers, leading to overcrowding of sightseeing sites, as well as because of the environmental impact on the lagoon through pollution and generation of waves. The response was to re-direct the biggest ship to a nearby port to minimise their effects (BBC, 2017).

The Positive contributions

Niatu (2007) made references to some positive effect on the cruise industry on the local populations in areas such as social skill upgrading. For example, as a result of the arrival of cruise tourists, inhabitants of Vanuatu have improved their education and language skills to communicate better with them. Taxi drivers have developed new skills as guides, which made them more confident and brought them higher wages.

Secondly, evidence also shows that such tours have helped the destination create a stronger cultural bond with their own cultures, as they have developed a deeper interest in their traditional customs because of the desire of tourists to learn from them and their preparation to teach. A good example is the traditional basket weaving, which has seen a rebirth due to cruise tourists (Niatu, 2007).

Conclusion

The Cruise industry has continued to grow and in the course of this growth have to face substantial sustainability issues in the areas of the economy, society, and the environment. The evidence here and elsewhere show that the industry contributes to air and water pollution due to its nature and activities. Evidence also shows, the actors in the industry are becoming aware of the effect of this on their images and even the tightening regulation and are therefore taking some steps, although tentatively towards rectifying some of the issues. The scorecard for the economic problems also shows that the industry is a lifeline to some of their favorite destination. Here, again, the industry could still improve the benefits through more investments and spending a more significant part of their income in such destinations rather than their corporate headquarters' in the West. Socially, there are some mutual benefits also for some of the destinations. However, "overtourism" is a constant risk which could be addressed through expansion instead focusing just on the already well-known destinations

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The issues causing inconsistencies with feedback for HND assignments and role of Rubrics to improve it.

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Abstract: This article presents empirical research completed through conducting interviews of academicians and students in a small scale. Feedback is an essential factor in the educational sector and one of the most powerful influences on learning and attainment. Hence, the effectiveness and suitability of the feedback are crucial. But diverse backgrounds of the assessors with different levels of teaching and assessing experiences, qualifications, passion for the profession, and English language proficiency become a challenge for students to follow the feedback. Therefore, students struggle to follow and make the necessary improvement in their assignments. This study finds that how effective the use of Rubrics would be as an alternative option of giving feedback. Finally, this study suggests different ways in which feedback can be improved to enhance its effectiveness in formative and summative submissions.

Keywords: Feedback, effectiveness, Improvement, assignments, HND programmes, analytical Rubrics, consistency

Introduction

Feedback refers to a method of using the information to reflect on an output of a system with regard to the input (NECSI, 2019). Feedback, an essential factor in the educational sector, is described as a way of informing students on the learning progress in formative or summative assessment activities (Pearson, 2018). Its application is crucial in guiding and directing students in reaching set targets or goals (Centre for Innovation Research and Teaching, 2017). Sambell, McDowell, & Montgomery, (2013), evaluated that feedback is central to learning and development. Ferguson (2011) reflects, it is a vital approach in facilitating students as independent learners in order to develop an ability to monitor, review, evaluate and enhance their own learning performance (as cited in Mamoon-Al-Bashir, Kabir, & Rahman, 2016).

According to Bloxham & Boyd, (2007), it is frequently provided as written comments to offer developmental guidance and is potentially one of the most crucial strategies to advance a learner's performance. Using feedback helps people to learn, Race (2001), emphasised that providing students with feedback on what they have done should be a mechanism for further development. Hence, it should be timely, constructive, and feed-forward (Pearson, 2018) to encourage a profound approach to learning (Biggs, 2003).

However, the National Student Survey 2007 and 2011 report indicates that students are showing greater concerns on how academic performance is communicated to them (Higher Education Funding Council for England, 2007; 2011 cited in Holmes & Papageorgiou, 2009; Mamoon-Al-Bashir, Kabir, & Rahman, 2016). The Report shows across all subjects, on average, 62% of students agreed feedback was satisfactory which is the lowest score compared to other teaching and learning aspects such as course structure, resources, and assessment arrangement with satisfaction scores varying from 72% to 88%.

Higher Education practitioners are being criticised for shortfalls in developmental feedback (The Higher Education Academy, 2013). Sambell, McDowell, & Montgomery, (2013), evaluated that a teacher's perception of feedback as time-consuming and unrewarding is one of the difficulties associated with the quality of feedback practice in Higher education. Various educational authors advocate good feedback practice such as sandwich feedback in which negative comments are sandwiched between positive comments (Faculty focus, 2011). These strategies can prove ineffective even though they might contribute

to the institution's decorum (Race, Brown, & Smith, 2005). Carless (2018) suggests that other factors should be considered as one rule does not fit all circumstances in feedback practice. Hence, to find a more effective way in providing a practical solution to quality feedback practice, it is crucial to identify and evaluate several factors contributing to its inconsistencies.

Moyer, Weckman, Martin & Cutright, (2015), pointed out that the application of 'rubrics' can solve feedback inconsistencies. Rubrics are an assessment and feedback tool, usually in the form of a matrix or grid. It is perceived to be a coherent marking criteria tool to give explicit information on grading, student performance, and areas requiring development (Brookhart, 2013). According to Queens University (2019), rubrics could be either holistic (single criteria, one-dimension) or analytical (two-dimensional showing levels of achievement arranged in rows and columns). For the purpose of clarification, the feedback referring to is the one provided in formative or summative assessment. This research will evaluate factors causing inconsistencies in feedback practice and critically explore whether the development of analytical rubrics could possibly improve feedback consistency and quality in the HND programmes of my institution.

This research will review the literature relating to feedback, consistency, assessment literacy, and analytical rubrics. Following this using a primary data collection method, structured/semi-structured interviews were conducted with the institution's stakeholders (students, lecturers, and management) on issues relating to inconsistency in feedback across the HND programme. The data collected is used to evaluate whether the introduction of analytical rubrics in the HND programme could possibly resolve these issues.

Methodology

As recommended by the British Educational Research Association (BERA, 2011) observed the ethical guideline fully for the study. In the process of anonymous data collection, GDPR and BERA have safeguarded confidentiality and fairness. All the Individual stakeholders who were involved in this research were treated fairly, respectfully, and with dignity. Participants have given voluntary consent to participate, and it was ensured that they understood the necessity and process of this study in which they were engaged. It was verbally explained and also written in the consent form how and where this information would be used. Participants have been allowed enough time to read, understand, and sign before attending interviews. Research interviews have taken place in a separate room individually, and they all were free from any kind of influence and guidance.

The qualitative data collection method has been applied through structured and semi-structured interviews where different stakeholders of the institution such as Lecturers, members of the Management team, and students of different HND programmes participated.

Studies on Procedural issues relating to feedback inconsistency:

A teacher's attitude towards inconsistencies in feedback practice reflects concerns from two perspectives. Bloxham & Boyd, (2007), argued that if students are provided with greater support, it encourages them to be more dependent on the teacher, which results in the student's inability to develop critical and analytical thinking skills (Sambell, McDowell, & Montgomery, 2013). Hence, feedback should be designed to enable the student to identify their own performance without the teacher giving detailed information on where they require improvement. On the other perspective, some teachers believe it is the responsibility of the students to seek help proactively and engage in tutorial sessions for more feedback and clarification (Heron, 2010). If then students do not seek further help, a teacher may feel that such students lack commitment or motivation. The teacher may develop an attitude of not providing any systemised support, thereby reducing the amount of time used in communicating to a student, which subsequently reduces the quality of feedback (Wiggins, 2012), and consequently lowers feedback ethics and standards (The University of Shieffield, 2019). This inhibits transparency because not all learners clearly understand the feedback (QAA Scotland, 2017).

Bloxham & Boyd, (2007), emphasised that both teacher and student must engage in assessment literacy whereby they both have the capability of making sense of assessment. Teachers must have the knowledge and skill to analyse and use evidence in interpreting results to improve students' learning and enhance course effectiveness while students must be able to apply feedback in improving their own learning and performance. From a socio-cultural point of view, teachers come from different backgrounds with entrenched but possibly less effective modes of expression Chetwynd & Dobbyn (2012). Likewise, students come from various backgrounds (Gibbs & Simpson, 2004), with little or no knowledge of the subject and/or assessment criteria (Sambell, McDowell, & Montgomery, 2013). The use of suitable language in oral/written feedback is also essential (Wilson, 2008) in enabling the student to establish key areas for improvement (Centre for Innovation Research and Teaching, 2017). Hence, the appropriateness of communication in feedback is crucial to ensure a meaningful and useful conversation between both parties.(Gravells, 2016)

Looking into evidence from Hounsell, (1997), Chanock, (2000), Hyland (2000) study (cited in Gedye, 2006), shows that the majority of students do not understand feedback language and find it unclear to follow; often students misunderstand a teacher's comments and find them incomprehensible. A student will act on comments only if they can put meaning to them (Bloxham & Boyd, 2007), which may be difficult because the feedback may be written in a way that is unclear or ambiguous (University of Bedfordshire, 2012). Gibbs & Simpson, (2004), argued that non-specific feedback could frustrate and demotivate students as well as reduce their ability to apply the comments to improve their work. Furthermore, Nicol & Macfarlane-Dick, (2006), highlighted that the feedback process should contain motivational elements.

On the part of exhibiting professional knowledge, teachers are viewed as master practitioners with deep knowledge in assessment tasks and the terminology of the discipline (Nicol & Macfarlane-Dick, 2006). Carless, (2018), noted that when a teacher uses complex words/sentences to comment on a student's performance, such a student may find it too complicated or un-meaningful. Bloxham & Campbell, (2010), suggested that this can be due to the confusing and obscure language of the discipline. Hence, the teacher should take the trouble to explain complex instructions in a language that can be understood by the learner (University of Bedfordshire, 2012), to ensure fair feedback practice (University of Aberdeen, 2016). Thus, feedback should be phrased with a view of connecting the language of the expert to the learner to provide constructive guidance in enhancing achievement (Hattie & Timperley, 2007).

Nichol and Macfarlane-Dick, (2004), Yorke (2003), Irons (2007) emphasised that the most beneficial thing a teacher can do is to provide formative feedback to improve a student's work. However, Balck & William, (1998), argued that not all teachers could engage in the use of the feedforward mechanism to point out developmental needs to students. Moreover, Carless, (2018), claimed that feedback must be given in a timely fashion if students ought to benefit from it. Providing students with detailed and sufficient comments on their performance is essential.

However, despite the fact that the timeliness and frequency of such comments are crucial (Stanford University, 2013) it is often seen as a great problem in education. It is no more a secret that teachers do intensive and immense administrative work (Bloxham & Boyd, 2007). Teachers lament on the issue of time (Wiggins, 2012). Moreover, the ratio of teachers to students is decreasing, thereby reducing contact time or opportunity to provide sufficient, detailed, and relevant feedback (Higgins, Hartley, & Skelton, 2002).

The concept of feedback mechanism in learning

In educational assessment, the concept of feedback is viewed as a communication tool between lecturers and students (senders and receivers of the message) via a medium (usually in a written format) (Wilson, 2008) The adoption of feedback as a communication mechanism reflects Shannon Weaver's (1949) linear model of communication.

This model makes an assumption about the role of communication in the feedback process. The three levels of communication problems identified in the model are technical, semantic, and effectiveness. According to the model, an item of information is inherently meaningful when external hindrances (noise) are removed whilst transmitting the information (encoding) to ensure receipt of the message (decoding) without any problem (Gravells, 2016). In application to educational assessment and feedback practice, a clear, uninterrupted description of goals and expectations is crucial in the feedback process to ensure the learning and development of students.

Principles of the feedback process

The heart of teaching and learning is embedded in the quality of the interaction between the teacher and the learner (University of Bedfordshire, 2012). Sadler, (1998) identifies six resources effective teachers use in the feedback process; (as cited-in Gedye, 2006),

- “Super Knowledge of content
 - Attitudes towards teaching and learning
 - Skills on constructing assessment tasks
 - Deep knowledge of standard and criteria
 - Evaluate skill in making judgments
 - Expertise in Framing feedback statements.”
- (Sadler, 1998, pp80-82)

According to Sadler, a teacher must demonstrate their confidence in providing criteria- based evaluative comments whilst engaging in a careful explanation of appropriate level or standards to be achieved by the students in a clear and understandable manner. It is also crucial to ensure empathy towards the learners by setting realistic targets for improvement.

Balck & William (1998:48) recommend 4 essential elements of feedback which are:

- “Data on the actual level of some measurable attribute
- Data on the reference level of the attribute
- A mechanism for comparing the two levels and generating information about the gap between the two levels
- A mechanism by which the information can be used to alter the gap.”

In other words, assessment tasks and goals must be clearly defined with expertly framed high-quality feedback to support the learner’s understanding. Furthermore, Nicol, (2006) based on (Race 2019), defined principles of feedback as: ‘valid, reliable, authentic and transparent’ and suggested that good quality feedback is information that empowers the students to discover their own performance and self-regulate it. Nicol proposed that to identify ‘quality’ in the feedback process, it must be relative to assessment criteria, it should provide students with an opportunity to act on it, and it should underline areas regarded as priorities and give developmental advice.

The quality assurance framework (QAA, 2015; QAA Scotland 2017; UK Standing Committee for Quality Assessment, 2018) emphasised high-quality in teaching, learning, and assessment. Furthermore, The QAA for Higher Education, (2013), recommendation in relation to quality feedback includes consistency, closing the feedback loop, sufficient time, and an appropriate communication approach. In reference to this, the seven principles proposed by Nicol & Macfarlane-Dick, (2006), in the Reengineering Assessment Practices project (REAP) also highlight these areas for a quality feedback process. In consideration of establishing underpinning ethical standards and fairness, Sadler, (2009), proposed that every student deserves timely quality feedback and also to be able to clearly identify the basis by which the quality of their work is judged.

In spite of various claims on the influence of feedback in promoting positive learning outcomes (Balck & William, 1998; Hattie & Timperley, 2007), highlighted that feedback form, delivery, and context are important. Lew, Alwis, & Schmidt, (2010), concluded that the application of 'feedback' alone is not sufficient in improving performance, but the quality of feedback is essential to 21st century Higher Education. Sambell, McDowell, & Montgomery, (2013), pointed out that the absence of feedback consistency disengages students from becoming informed judges. Likewise, the lack of clarity in feedback can result in affective variables that severely influence the learning and achievement of a student (Christenson, Reschly, & Wylie, 2012).

If then, quality feedback is aimed to target the individual's developmental needs, yet, with so many cohorts, administrative demands, insufficient time and the attitudes and prejudices of teachers, how can teachers in Higher Education ensure consistency while maintaining equity, standardisation, good ethical practice and fairness in assessment feedback?

Application of analytical rubrics for robust, transparent processes and procedures in the HND feedback mechanism

In general, rubrics are viewed as a performance-based scoring tool in the form of a continuum matrix. Analytical rubrics are a two-dimension grid showing achievement level in columns and assessment criteria in rows (Jonsson & Svingby, 2007). It is designed to evaluate learning outcomes in a vast range of assessment activities at different levels and provides a clear description of performance on various levels (Berkeley Centre for Teaching and Learning, 2019) by enabling the teacher to communicate assessment standards to students (Yale Poorvu Centre for Teaching and Learning, 2019). The attributed feature of analytical rubrics is beneficial to the holistic assessment approach whereby multiple elements and assessment of performance are judged.

According to the Berkeley Centre for Teaching and Learning (2019) analytical rubrics can be written to articulate descriptors of competence and knowledge. Hence, if applied correctly, it ensures consistency in scoring and feedback for teachers whilst enabling clarity in assessment standards for students (Andrade, 2000). Furthermore, as the assessment is used to judge competency and feedback to describe performance level (Jonsson & Svingby, 2007), learning outcomes on rubrics can be structured to describe performance levels with a reasonable basis to support the teacher's decision. However, (Centre for Open Educational Resources and Language Learning, 2010), emphasised the need for the conscious use of language and criteria descriptors when developing rubrics to ensure appropriateness and the quality of feedback. Andrade, (2000), suggested that assessment criteria should be aligned to prompt direction, learning objectives, and standards.

In conclusion, Wolf & Stevens, (2007), evaluated that consistent use of rubrics improves teaching, contributes to good assessment and feedback practice, establishes accountability and serves as a crucial source for programme evaluation and enhancement whilst promoting student learning and development.

This literature has provided in-depth insight into factors causing inconsistencies in feedback practice, which has been beneficial in evaluating and reviewing the research questions in order to ensure appropriate and relevant interview questions to meet research objectives. Furthermore, having reviewed the relevance of analytical rubrics, it is crucial that when developing this tool, the assessor reflects on the previous issues relating to inconsistency in feedback in order to design a robust matrix.

Findings and learning:

The main objective of this research has been to identify the issues causing inconsistencies with feedback for HND assignments and to discuss whether the application of rubrics can improve the process. The interview explored three themes, firstly quality of feedback, how feedback could be improved, and lastly, opinions on the use of rubrics. The issues, objective, and purpose of the research were explained before getting the consent for and conducting the interviews. For the purpose of this research three different stakeholders

were interviewed, four students, four lecturers, and four senior management staff. The findings are explained below.

The information below was compiled from students', lecturers, and senior-managements interviews and presents the summary of the common key issues raised and their proposed solutions.

Feedback issues identified by students

- The feedback received is very brief and insufficient
- Sometime vague or unclear feedback
- Too long and very hard to understand and comprehend
- Lateness in providing feedback
- Lack of acknowledgment of effort to motivate students in improving
- Sometimes, there is no feedback apart from mentioning the grade
- No specific guidance on what and how to improve
- Biased feedback (sometimes feedback provided on the basis of preference)

Suggested solution from students

- Feedback should be clear with enough information so as to enable the student to understand and improve accordingly.
- Use of simple and constructive sentences.
- To receive the feedback when the assignment is still fresh in their memory.
- To provide detailed information by identifying the specific areas which require improvement. Appreciating a student's contribution, to motivate them more and not judge their work based on their personality

Findings from lecturers' and management interview

Feedback issues identified by lecturers

- Administrative workload and lack of time to give accurate and sufficient feedback
- Managing large cohorts (40-50 students in a class)
- Student language skill (as the majority of the students are from non-English speaking countries)
- Nonchalant attitude of students.
- Issues relating to assessment malpractice.

Suggested solution by lecturers

- Reduce/ remove some paperwork to create more time for feedback.
- Supporting Tutors should be allowed to check and provide feedback.
- Academic skills for new students.
- Students should be intrinsically motivated to learn and produce their own work.
- Establishing a Rubrics template as a feedback tool to reduce marking time.
- Rubrics will help to ensure feedback uniformity to address the issues.

Feedback issues identified by management

- Level of teaching and assessing skills and experiences of lecturers.
- Workload and time management
- Reluctance or laziness.
- Large number of students in a class
- Lack of training and assessing qualification.
- Students' insincerity

Suggested solution by management

- Training, workshop, and seminars for lecturers
- Reduce workload for lecturers.
- Reduce the class size or engage supporting tutors to provide feedback alongside lecturers to reduce workload.
- Organised and more punctual tutorial attendance

Students' perception and response on analytic rubrics

From the interviews, it was gathered that the teaching and management staff were familiar and well aware of rubrics and their application. However, some of the students were not clear about rubrics at the beginning. So, I explained to them the function and application of rubrics. A sample of a rubrics template was also shown and explained to the students before the interview. The information below came from the interview with students.

Where guidance, clarity, and lecturer's bias are issues, the students see rubrics as a technique to resolve these concerns (Catherine Hack, 2013). According to the students, it will enable them to understand assessment criteria clearly, plan, and judge the quality of their work as well as providing direction for performance (Arter & McTighe, 2001). Being analytical, a detailed, fair, reliable, and transparent feedback method will be established (Judith, 2000), which will indirectly motivate students. Brooks, (2006), suggests that motivation is key in facilitating learning.

Teacher's and Senior management's response to application of rubrics

The members of teaching staff, although favoring rubrics, highlighted that it will not reduce other administrative work yet, but the amount of time spent providing feedback will be reduced, supporting Stevens & Levi's views (2013). The issue of unclear and unengaging feedback will be minimised while a clear instruction which identifies goals and targets will be provided to students (Arter & McTighe, 2001). As students are concerned with delayed feedback, the application of rubrics will improve the timeliness of feedback and also facilitate learning (Balck & William, 1998).

According to the management, one of the advantages of rubrics is that pedagogical tools are embedded in it. Rubrics increases the teacher's awareness of their own teaching style and strategies. This allows them to impart knowledge and information clearly as well as providing the opportunity to communicate expectations to students in a timely and informed manner (Stevens & Levi, 2013).

Conclusion and Recommendation

This research paper has presented findings from a qualitative study examining issues relating to feedback inconsistencies in HND programmes. The study was conducted in response to students' concerns, internal and external verifiers' reports, and also to evaluate if analytic rubrics will provide solutions to the identified issues.

The literature has analysed the importance of good feedback, factors contributing to effective feedback, and the need for it to be developmental in order to enable the students to progress. The responses from the interviews emphasised the importance of providing developmental feedback for students' progress. This research finding suggests that there are inconsistencies and a lack of association in both formative and summative feedback. These findings were applicable to all assessment types, including reports, essays, presentations, portfolios, written tests etc. Such inconsistencies were not encouraging and raised issues of fairness in how learners received feedback. Principles of feedback may also offer a useful conceptual framework to explore greater integration.

For any discussion to be productive, control will have to be rebalanced between students and tutors in the process of assessment. This would need lecturers to abstain from trying to assess 'everything' and be more specific about what they can feedback on with accuracy and validity. There are little differences in answers among students. Students claimed that often feedback is vague, e.g., "discussion does not meet the requirements of the assessment criteria." But no specific outline on what needs to be included, thus making feedback unproductive and restrictive to learners' progress.

Feedback should support understanding, facilitate students to minimise the performance-gap, and support feed-forward for future improvement. If it is not, then such 'feedback' functions only to rationalise the score/grade awarded.

While this research has highlighted complications between lecturers and students in developing a shared understanding of assessment criteria, there is a need for tutors to clearly communicate assessment standards through well-articulated feedback to support the student's understanding. Based on the literature and research findings, into the power and principles of feedback (Hattie & Timperley, 2007; Nicol, 2006; Black & William, 1998; Race, 2019) it was concluded that the application of analytical rubrics could bring a practical solution to feedback quality and consistency while maximising lecturers' time. The appropriate application of this research - will help the institution to minimise the feedback-related issues significantly.

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Influences on workplace sitting time in office workers: A literature review

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Abstract

High occupational sitting time has been implicated with adverse health and economic consequences, such as presenteeism and absenteeism. Interventions that include the use of active workstations prompts to stand, lunchtime physical activity have been proposed, but a successful uptake and implementation of these strategies are being undermined by non-adherence. Therefore, the aim of this review was to understand the perceived influences on workplace sitting. Thirteen articles were identified following a thorough literature search of numerous databases such as PubMed, Web of Science, CINAHL, Cochrane Library, and PsycINFO for studies published between January 2010 and January 2020. Four core themes were identified as factors influencing workplace sitting time: personal preferences, environment, job requirements, and workplace culture. Future research should develop a variety of behaviour change strategies to identify preferences for individual, organisational, and policy intervention methods that may be used to change the sitting behaviour of office workers.

Keywords: sedentary behaviour, sitting, office worker, barriers, facilitators, workplace

Introduction

Recently, a new paradigm has emerged in the field of physical activity research (Katzmarzyk, 2010). Several epidemiological studies have revealed that engaging in excessive sedentary behaviour could have a negative impact on a number of health outcomes (Dunstan *et al.*, 2010; Gibson *et al.*, 2017; Healy *et al.*, 2011; Petersen *et al.*, 2014; Teychenne, Costigan and Parker, 2015; Thorp *et al.*, 2012; Warburton, Nicol and Bredin, 2006; Wilmot *et al.*, 2012), irrespective of the amount of time spent in moderate-to-vigorous physical activity (Katzmarzyk *et al.*, 2009). Sedentary behaviour, derived from the Latin word *sedere*, means 'to sit' (Henson *et al.*, 2016) (p. 214), and can be defined as any waking behaviour characterised by an energy expenditure ≤ 1.5 METs, while in a sitting, reclining or lying posture (Tremblay *et al.*, (2017). Historically, there has been some confusion between Sedentary behaviour and physical activity, with sedentary behaviour referred to as equivalent to a lack of physical activity (Barnes *et al.*, 2012). However, it should be noted that these two are two separate constructs. For instance, it is possible for a person not to engage in any moderate-to-vigorous physical activity, and yet to have low levels of sedentary behaviour due to demands from an occupation that requires lots of standing and walking, such as a waiter or nurse (Henson *et al.*, 2016). On the other hand, it is equally possible for individuals to meet or exceed the recommended physical activity guidelines, yet still spend a large proportion of their day engaged in sedentary behaviour (van der Ploeg and Hillsdon, 2017). Saunders *et al.* (2014) have illustrated four different ways by which different categories of Sedentary behaviour may co-exist with different volumes of physical activity (Figure 1).

Excessive sedentary behaviour primarily takes place in three domains, which are work, leisure and travel (Davis *et al.*, 2011; Owen *et al.*, 2010; Owen *et al.*, 2011) and sedentary behaviour is on the increase, particularly in developed countries, such as the United Kingdom (Clemes, O'Connell and Edwardson, 2014), Sweden (Hagstromer *et al.*, 2010), United States (Matthews *et al.*, 2008), and Norway (Ekblom-Bak *et al.*, 2015).

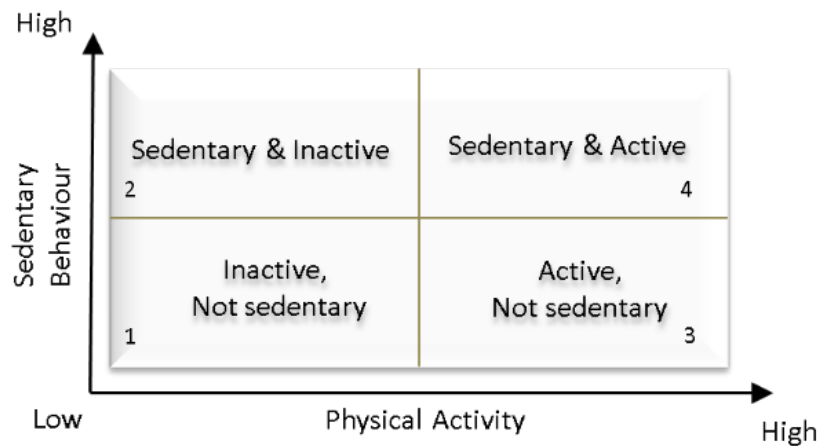


Figure 1: Sedentary behaviour and physical activity as distinct constructs

Individuals are classified into four different groups based on physical activity and sedentary behaviour: (1) People who spend a small amount of time engaged in sedentary behaviour, but who do not meet the physical activity guidelines; (2) People who spend a lot of time lying down, in a reclining position or sitting, and also doing no or insufficient physical activity; (3) People who meet the physical activity guidelines and have limited sedentary behaviour. Modified from *People who spend a small amount of time engaged in sedentary behaviour, but who do not meet the physical activity guidelines*; and (4) *People who meet the recommended physical activity guidelines but also spend a lot of time lying down, in a reclining position or sitting* (Saunders, Chaput and Tremblay, 2014).

Research has blamed the increase in sedentary behaviour on factors such as decreases in physical activity levels, increased pursuits of sedentary leisure at home, and an increase in the number of jobs in which people are seated (Brownson, Boehmer and Luke, 2005). Evidence from a World Health Organisation's report shows that 60% of the world population is in employment, spending 60% of their waking time at work. It follows, therefore, that workplace interventions could be used to influence the health behaviour of a large percentage of the adult population (WHO, 2008). The workplace has also been identified as one of the main places in which high sitting volumes are accrued, with one study reporting that 82% employees' working time was spent sitting (Hall *et al.*, 2015), and more than 69% of non-working hours were spent in sedentary behaviour (Hall *et al.*, 2015; Parry and Straker, 2013). There is sufficient evidence to suggest grave health consequences of sedentary behaviour. For instance, Hu (2003) reported that individuals' risk of developing obesity and diabetes increases by 5% and 7%, respectively, for every two-hour increase in daily sitting at work. Buckley *et al.* (2015) suggested that sedentary living, including time, spent sitting at work, as one of the most common causes of morbidity and mortality due to cardiovascular disease, diabetes, and some cancers. It has also been associated with mental health issues, including but not limited to depression (Teychenne, Ball and Salmon, 2010) (Zhai, Zhang, and Zhang, 2015). Apart from these health consequences, the high occupational sitting time has also been implicated with negative economic consequences, such as higher health-related productivity loss, known as presenteeism, and absenteeism (Brown *et al.*, 2013; Puig-Ribera *et al.*, 2015). According to the Centre for Mental Health (2017), absenteeism among employees was reported as 6.8 days per person in 2015, which accounted for losses of £10.6 billion, while presenteeism accounted for losses of £21.2 billion. It seems clear, therefore, that occupational sitting time is a problem with health and potential economic consequences.

Currently, there are no set of government guidelines to achieve this in the United Kingdom. In order to achieve the expert consensus recommendation of the daily accumulation of 2-4 hours of standing and light physical activity at work will warrant the development of strategies that can be used to displace sitting with standing (Buckley *et al.*, 2015; Mansfield *et al.*, 2018). Some of the interventions that have

been proposed include lunchtime physical activity, prompts to stand, or move, the use of active workstations, face-to-face communication, walking meetings, and many more. While some of the strategies outlined seem to show a high level of effectiveness in reducing workplace sitting time (Alkhajah *et al.*, 2012; Evans *et al.*, 2012; Koeppe *et al.*, 2013), non-adherence is a barrier to successful uptake and implementation of a workplace intervention to breaking up sitting time, as access to an intervention does not translate to compliance, and besides, people have varying reasons for sitting excessively. Thus, this review seeks to understand the perceived influences on workplace sitting.

Article identification process

A review of some of the factors identified in qualitative and questionnaire-based studies that may influence sitting behaviour was conducted. This was achieved by conducting a thorough literature search using a range of databases such as PubMed, Web of Science, CINAHL, Cochrane Library, and PsycINFO for studies published between January 2010 and January 2020. The keywords used were “barriers,” “facilitators,” “enablers,” “workplace,” “sitting,” and “sedentary,” and this led to the identification of 13 articles. The themes that emerged from the findings of the literature search were categorised and illustrated as barriers and facilitators to breaking up sitting in the workplace in Figure 2.

Factors influencing workplace sitting time

Personal Preferences

A recent workplace study, which investigated the perceptions of barriers among young professionals, reported feeling pressure to sit to work due to large commitments even though employers did not confine them to a sitting position (Cole, Tully, and Cupples, 2015). A study estimated the percentage of the workforce that smoke to be between 80-90%, and it was reported these employees would go for cigarette breaks rather than any workplace sitting reduction intervention (Renton, Lightfoot and Maar, 2011). A similar study in which both the perceptions of young professional employees and their managers were explored through interviews, blamed participants’ perceived sense of autonomy in decision making as a barrier to breaking up sitting time. Most people favoured staying sedentary to be able to focus on work during working hours, with the intention to offset prolonged sitting in the workplace with physical activity outside of work (Cole, Tully, and Cupples, 2015). Low motivation among desk-based workers to break up sitting has also been identified as a reason for prolonged sitting elsewhere (Munir *et al.*, 2018). However, several enabling strategies have been suggested, which include providing access to cordless phones to ease the pressure of having to sit when dealing with high call volumes. Additionally, the introduction of competitions aimed at reducing prolonged sitting time in the workplace could be beneficial (McGuckin, Sealey, and Barnett, 2017). It is evident, therefore, that despite working in sedentary jobs, employees have the freedom to decide whether to remain sedentary or to choose to break up prolonged sitting time. To help employees make the right decision, a workplace intervention targeted at motivating employees, and emphasising the benefits of breaking up prolonged sitting is warranted.

Environment

A lack of facilities to break up sitting has also been highlighted by a number of studies (Cole, Tully, and Cupples, 2015). For instance, the absence of a canteen in the workplace could be a possible hindrance to free movement from employees’ desks (Cole, Tully, and Cupples, 2015). Consequently, there was a suggestion that workplace environments should be redesigned. However, this requirement was more popular with younger employees, of whom 10% favoured workplace redesign than with the older employees, of whom only 5% favoured redesign (Nooijen *et al.*, 2018). If office workers had access to an

unrestrictive working environment that permitted a high level of flexibility, employees would be encouraged to engage in more face-to-face communication and personal meetings with their work colleagues rather than depend on email or telephone conversations (Nooijen *et al.*, 2018). Furthermore, access to a height-adjustable workstation has also been identified as a potential solution as it enables users to alternate between sitting and standing without moving away from their desks or leaving their work (Niven and Hu, 2018). In addition, a genuine reason to regularly break up work could be to take a print out from centrally located printers (Cole, Tully, and Cupples, 2015). Evidence from these studies suggests that employees might be able to break up their sitting time, provided their environment is designed to promote sitting less and standing more. Thus, future interventions should consider modifying the workplace environment to encourage desk-based employees to break up their sitting time.

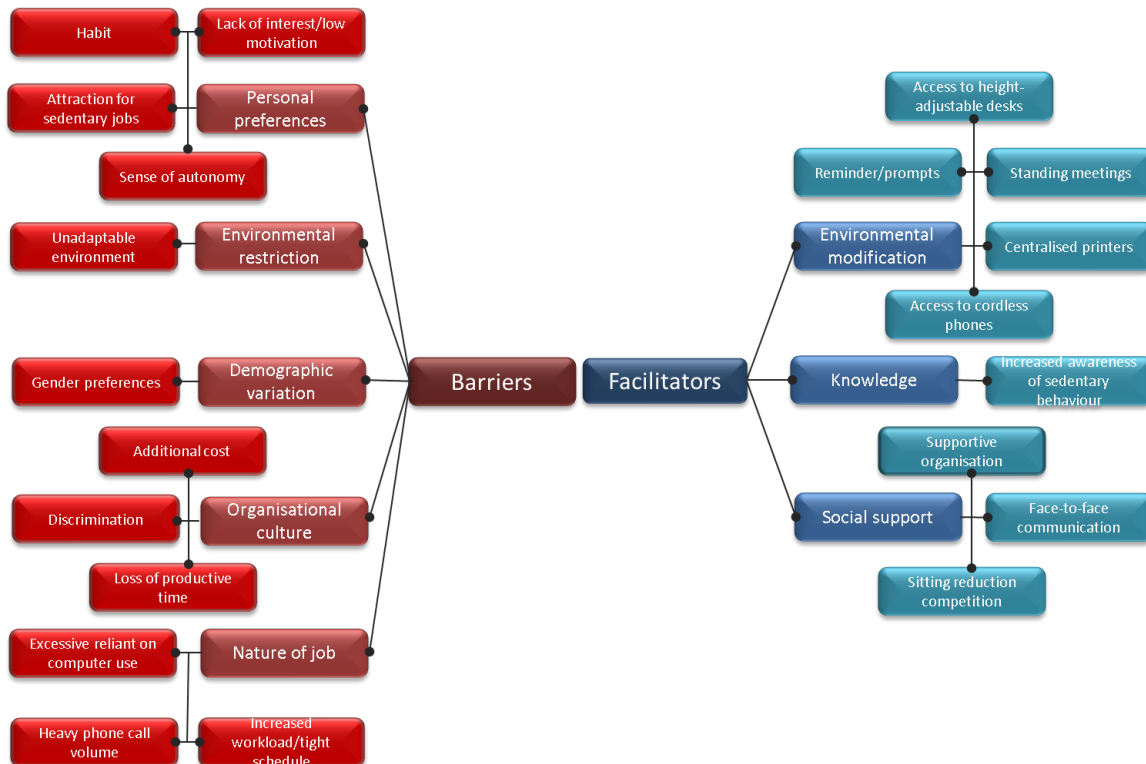


Figure 2: Perceived influences on breaking up workplace sitting

Job requirements

The nature of jobs has been identified as one of the reasons for a prolonged sitting time at work. For instance, in one study, participants said their work relied solely on computer use, especially tasks involving the use of spreadsheets and online systems, which gives zero tolerance to distraction as it requires full concentration, while some computer programming cannot be carried out off-screen (Hadgraft *et al.*, 2016). In another study investigating barriers from the point of view of call-center employers, several barriers were identified, including that clients require employees to be on the phones at a particular point in time (Renton, Lightfoot and Maar, 2011). The performance of such employees is often monitored using various key performance indexes, thereby making scheduling flexibility very difficult and limiting participation in such interventions (Renton, Lightfoot and Maar, 2011). Besides which, a heavy call volume is often received each day, and some of the inquiries need employees to sit down and access information, thereby restricting walking while on a call (Renton, Lightfoot, and Maar, 2011).

Tight work schedules and increased workloads have also been identified as one of the reasons for prolonged sitting time, with many employees too engrossed in their work to meet deadlines (Hadgraft *et al.*, 2016). This means that breaking up sitting may not be feasible, as a priority is not given to getting up and moving around (Blackford *et al.*, 2013; Mackenzie, Goyder and Eves, 2015). It is also believed by some employees that getting up and moving around might result in the loss of productive work time (Hadgraft *et al.*, 2016). In a study by George *et al.*, (2014), problems of time constraints and work commitments were identified. The majority of the participants complained that they barely got five minutes out of their one-hour break, as they often try to catch up with their workload. The effect of this goes beyond participation in the workplace, but also affects them at home, as they become too tired to engage in any form of physical activity (Blackford *et al.*, 2013). Access to opportunities and/or reminders for breaks in sitting was identified as one of the most favored facilitators in one qualitative study (Nooijen *et al.*, 2018). This type of strategy might be useful in addressing the problem of forgetfulness, although there is also a tendency for employees to ignore prompts when they are totally engrossed and are in the middle of an important assignment (McGuckin, Sealey and Barnett, 2017). Despite all the evidence blaming prolonged sitting time on employees' commitments to meet deadlines due to heavy workload, there is justifiable evidence to suggest that prompts might be helpful in raising employees' consciousness to how much time they have spent in prolonged sitting. Therefore, it is recommended that future studies should include this strategy in any workplace intervention to break and reduce sitting time, with a special focus on getting employees to comply with the prompts.

Workplace culture

Evidence shows that both work colleagues and employers or managers play a crucial role in deciding the behaviour exhibited by individuals working in the office. A study reported the perception of a culture of expectation, in which the people in management roles are of the opinion that employees need to be in a seated position before work can be done (Cole, Tully, and Cupples, 2015). In one study, participants expressed feeling weird if they were allowed to engage in any form of physical activity such as stretching, standing up, moving around or taking other forms of a break, other than coffee breaks or lunch breaks authorised by their employers (Hadgraft *et al.*, 2016). In another study in which employers' opinions were sought regarding barriers to promoting physical activity and taking regular breaks in sitting among call centre employees, some of the managers expressed concerns about the possible feeling of discrimination and harassment if they were to be told to move more (McGuckin, Sealey and Barnett, 2017; Renton, Lightfoot, and Maar, 2011). A lack of interest was also mentioned, with many employees attracted to the sedentary nature of the job (Renton, Lightfoot, and Maar, 2011). Furthermore, when someone breaks up sitting to engage in physical activity or to reduce sitting time, work colleagues may feel that such a person is not committed to his/her duties or responsibilities when not at their desk (Mackenzie, Goyder and Eves, 2015; Munir *et al.*, 2018). In addition, other limiting factors, including an additional cost for employers in relation to equipment, time lost from breaking up work to exercise, and liability insurance, were also identified (Hadgraft *et al.*, 2016). To counteract this barrier, evidence from some studies suggests that breaking up sitting in the workplace should be made acceptable, and entrenched within the organisation culture, something that could be endorsed through the use of a top-down approach (George *et al.*, 2014; Nooijen *et al.*, 2018). This can be achieved and demonstrated by educating (McGuckin, Sealey and Barnett, 2017) and involving team leaders and managers (De Cocker *et al.*, 2015), which will then ensure that workers do not worry about frequent interruptions to sitting at work.

Although the aforementioned barriers need to be considered, one major barrier that has been identified is the perception of excessive sitting as a habit. According to a qualitative study, the most recurrent barrier to breaking up sitting was the employees' perception of sitting as a habit (Nooijen *et al.*, 2018). This suggests that the problem of a sedentary lifestyle in the workplace should be viewed and addressed through the lens of behaviour change strategy. Other frequently occurring barriers found among younger employees compared to older employees were a feeling of discomfort (34% vs. 25%,

confidence intervals not reported) and tiredness (30% vs. 16%, confidence intervals not reported) when in a standing position. However, these barriers were found to be more frequent among employees with higher sedentary time (Nooijen *et al.*, 2018). It is worth noting that most of the evidence available is from qualitative studies with small sample sizes, meaning it is difficult to generalise the applicability of these factors (Cole, Tully, and Cupples, 2015). This means that it is yet to be clarified whether any demographic influences on barriers and facilitators to sitting interruption might exist (Cole, Tully, and Cupples, 2015). If perceptions of barriers to breaking up sitting time were to vary based on age and gender, it would be logical to expect that sitting time would also differ based on age and gender.

Conclusion

This review has shown that excessive sedentary behaviour occurs in the workplace through prolonged sitting. It has identified that there are different factors that might be barriers and facilitators to reducing and breaking up prolonged sitting in the workplace. However, these barriers may differ from person to person, which could have caused the problems of adherence that have been noted. Therefore, it is of importance to develop a variety of behaviour change strategies to investigate and identify preferences for individual (McGuckin, Sealey and Barnett, 2017), organisational, and policy intervention methods that may be used to enhance engagement and participation (Blackford *et al.*, 2013), as a 'one size fits all' strategy to changing behaviour will be very unlikely to succeed (Gilson, Straker and Parry, 2012).

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ISSN 2059-5441 (Online)

ISSN 2059-5433 (Print)



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