



A Focus Group Analysis of Playing Games for Better Productivity in Call Centre

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Abstract: This study investigates the potential impact of mental game playing on the productivity of call centre employees, with a focus on determining whether game playing has a definitive and lasting effect on performance. Using an exploratory design, a four-week on-site intervention was conducted with two groups: an intervention group and a comparison group. Productivity was measured through the average speed of answer, and variations were analyzed using Analysis of Variance (ANOVA). The findings reveal that the intervention group showed increased efficiency during the third and fourth weeks; however, their average productivity (37.7 calls per hour) remained lower than that of the comparison group (55.62 calls per hour). While these efficiency gains might be attributed to smoother workflow during mid-week, the results highlight the potential of mental games to enhance productivity, though further validation is needed. The originality of the study lies in its exploration of mental game playing during work breaks as a productivity-boosting strategy. Limitations related to the call centre context, the duration of the intervention, and the specific games used offer avenues for future research. The practical implications suggest that organizations may consider incorporating mental games into work breaks to improve employee performance, while the social implications emphasize the role of these activities in promoting both well-being and productivity in call centres.

Keywords: Mental game playing, Work breaks, Sustainable work environment, Call centers, Productivity

1. Introduction

The change in technology, the diversification in workforce and similar other changes are altering the dynamics of work (Cascio and Montealegre, 2016). To address the changing dynamics of work, introducing games at work can enrich social connection. This connection, is reducing with time, as face to face communication is diminishing and employees strive to strike the work-life balance they are looking for (Drago, 2015).

Game playing is associated with fun (Roberts et al., 1959) and the idea of game playing has recently been introduced in the work force for better productivity (Reinecke, 2009; Schlickum et al., 2009; Chiang et al., 2012). This research is an effort to integrate the idea of mental game playing as an intervention in breaks to observe the changes in productivity. The intention has been on introducing a 'fun activity' involving the use of brain during work.

The significance of play at work has been acknowledged by other researchers, who have relative but different areas of the topic. Play at work can reduce boredom and monotony, as in the case of factory workers where tasks were simple and repetitive over a long working day. When social interaction and fun is introduced, the monotony is also reduced (Roy, 1959), it enhances creativity, for example in case of software engineers interviews, where fun is

considered an important aspect of a programmer’s routine (Hunter et al., 2010), helps in problem solving, as in the case when scenario planning is mixed with play and an archetype is developed (Jacobs and Statler, 2006), reduces stress, as in case of a design company in Denmark (Sørensen and Spoelestra, 2012) and increases job satisfaction, as in case of feedback from employees where they thought that workplace should provide something ‘extra’ for motivation (Abramis, 1990).

Productivity has been defined in several ways but Djellal and Gallouj (2013) found four important perspectives of productivity

- Productivity is the ratio between outputs and inputs
- Productivity is economic efficiency, the ratio between output and costs
- Productivity is effectiveness, the ratio between outcomes and inputs
- Productivity is economic effectiveness, the ratio between outcome and costs

For the purpose of this thesis, productivity is defined in its true sense, the ratio between outputs and inputs and is measured by using objective methods such as calculating average speed of answer.

1.1 Call centers in the UK

Initially, in the 50’s, call centres were established to look into operator enquiries only. They continued to flourish in the 70’s and 80’s and in 1985, Direct line was the first company to sell insurance services via telesales. Later, the booming telecom industry led UK to be the second largest UK call centre industry-following the USA (Pearce, 2018).

In the 1990’s, however, the internet had an adverse impact on the growth of the call centres, attracting venture capitalist which is why the call centres had to be absorbed back into the administration jobs. In 2000s, companies started to outsource their call centre operations internationally; India, South Africa, and the Philippines, to name a few major destinations. The cost cutting measures at first seemed very lucrative to companies but due to language barriers and the fact that jobs were taken away from the UK surged backlash from the consumers. The matter of outsourcing call centres remains a controversial issue, however, many companies have reverted the call centres and integrated them back into the main UK based operational stream (Pearce, 2018).

UK call centres are now trying to achieve an online call centre set-up, which will enable anybody anywhere in the world to access the services. Even though offshore call centres are providing tough competition, UK call centres provide better services in terms of customer satisfaction and levels of complaint and hence is in a mature stage of its life cycle (IBISWorld - Industry Market Research, Reports, and Statistics, 2020).

1.2 Key performance indicators in call centers

Cheong et al. (2008) has extracted 10 key performance indicators in call centres from the literature which are as follows:

Table 1: Key performance indicators of a call centre adapted from Cheong et al. (2008)

KPIs	Definition and Calculation
Service level	<ul style="list-style-type: none"> • The percentage of calls answered within a specified number of seconds (calls answered within 20 seconds+calls abandoned within 20 seconds) (Total calls answered+total calls abandoned)
Average speed of answer	<ul style="list-style-type: none"> • The average time it takes for the call to be picked up by the call centre’s ACD (Total time in queue/total number of calls handled)

Average Time in Queue	• The total time in queue to reach an agent divided by the total number of calls answered (available from the ACD)
Average Abandonment rate	• The percentage or number of customers who disconnect the call while waiting for an agent (Number of hang-ups and dropped calls/Total number of calls offered)
Percentage of calls closed on first contact	• The percentage of calls that properly and completely address the customer’s needs in the first call (calls closed on the first contact) (total number of calls closed by all agents)
Adherence to schedule	• The average time the agent is in the seat as per workforce management schedule
Average talk time	• The elapsed time from when an agent answers a call until the agent dis-connect (available from the ACD)
Average after call work time	• The time an agent spends in completing a transaction precipitated by a phone call after the call is released
Employment turnover rate	• The percentage of agents who leave the call centre to work else where
Percentage of calls blocked	• The percentage of calls that got the busy (engaged) tone
Customer satisfaction	• The customers’ perceived views as derived from questionnaires • Average scores or rating of sampled calls based upon third party customer survey

For the purpose of this research, average speed of answer was provided by the call centre head for assessing productivity.

2. Data collection

For the focus group discussions, the following composition of the groups was achieved.

Table 2: Composition of the participants of the focus group discussion

	Players	Non-players	Call centre head/team lead	Total
Focus group 1/York	2	2	2	6
Focus group 2/Leicester	4	4	1	9

2.1 Sampling

For the focus group discussions, convenience sampling was utilized. The sample was divided into three strata; a group of non-players, a group of players and a team lead/call centre manager.

3. Analysis

The analysis for focus group discussions was carried out using QSR International NVivo 11.

There were similar 3 themes for objective productivity as well, emerging from the three questions about average speed of answer as a productivity metric. The table below shows an overview of the procedure. Statements with similar meaning were placed under a single code and similar codes were then placed under a broader theme. The audit trail of the themes is given at Appendix A.

Table 3: Themes and codes for objective productivity

Themes for objective productivity	Codes	No. of references made
Theme 1: Players efficient on Tuesday, Wednesday	Routine is best at mid-week	4
	Wrap times are averaged	4
	Type of manager	2
Theme 2: Players are efficient end of intervention	It became a norm for the players	4
	Fun	3
	Self-conscious of being measured	2
	Helps in reducing tiredness	1
Theme 3: Non-players were efficient than players	Games as bad distraction	5
	Non-game players got the break	3
	Game players gave more details on phone	2
	Extraneous variables	1

Theme 1: Players efficient on Tuesday, Wednesday

i) Routine is best at mid-week

When the participants were asked why they thought players were efficient middle of each week, one of the responses was that the routine for efficiency builds up middle of the week. Start of the week is marked by Monday, when work is not welcomed because of a preceding weekend and end of the week is the time when employees are looking forward to the weekend so middle of the week is the best for efficiency.

‘Participant 3: There is one point which is more prevalent is because they were over Monday blues but not yet in the weekend mentality and people are getting, this is the same thing, people are getting back in the swing of things form the weekend holiday so ya that is one of the reasons’

‘Participant 1: Ya I was thinking because Mondays and Fridays I’m more affected by out of work life because, if it is Monday and you are playing games, it’s always Monday or a Friday whereas in the middle of the week, you have more focus on your work because it is the middle of the week so maybe playing is more effective because you are not affected by something else, if that makes sense’.

ii) Wrap times are averaged

A second factor was that wrap times were averaged. This means that if an employee was not very efficient on Monday or Tuesday, he/she could work extra on another day to average out the slump in the efficiency. Even though the measure of efficiency considered in this research is average speed of answer, the employees referred to wrap times, as an influence in lack of efficiency.

‘Participant 1: It can happen, you see if you are playing a game, you are quite distracted from the game on one of your break, where you can get told off whereas when it comes to wrap you can be distracted from the wrap where you get told off for that as well so you need to up the stats so by Wednesday you get back to the swing of things or it could be you are back from a holiday or a long weekend’

‘Participant 4: So, if you’ve got an average for a week, there is no wrap on Monday, Tuesday, Wednesday or Thursday, you can do it on Friday and improve average for the month (laughter)’

iii) Type of manager

A less common factor was the type of manager an employee had, so if the manager knew that on Monday or Tuesday, the employee is not meeting targets, it could just ask the employees to wrap the calls quickly.

‘Participant 9: The thing is it could also be the kind of manager you choose so if you have a manager that is going around people to gather the wrap, then he tends to do that, if he sees that wrap is going longer for a person then he goes and sees that person because sometimes an employee wants to wrap but it is always talking and you can’t get over that talking’

Theme 2: Players are efficient end of intervention

i) Games as norm for the players

When participants were asked why players were efficient at the end of the intervention, the most common answer was that by the end, game playing became embedded to the routine and was considered a norm or something usual.

‘Participant 4: Because they were in a routine, hmm maybe that is understandable because the first week maybe, uhhhh what is happening, second getting used to it and by the end it gets normalized.’

‘Participant 6: Yes, so it takes a while for it to bed in for the people to have it standing which is suggesting it is more permanent than it being a complete change from the next day, somebody plays the game and the next day he is more efficient, it is kind of embedding so it takes a while to show some factors building momentum’

‘Participant 1: People may have left like they played all they could and just focused on work’

ii) Fun

A second factor was that by the end, the employees started to enjoy playing the games.

‘Participant 2 (laughing): They already had the idea what the games are, they did not need to play anymore because they had already played with their friends’

‘Participant 1: They got accomplished with their level of something’

‘Participant 3: Yeah, I’d say that, we played more, we played in the lunch time and we had 10 extra minutes’

iii) Self-conscious of being measured

The less common reason was that by the end of the intervention, the players felt that they had played to an extent that they now need to focus on the metrics.

‘Participant 4: More focus on stats due to the studies, so they already know that they are measured on it so they are trying to you know more conscious by the end, alright.’

‘Participant 1: So they played all they could at times, so the only thing they would worry about is the stats to be improved, so they have all the games around them but they are focusing on taking the calls and improve the stats now’

iv) Games help reduce tiredness

There was one account where a participant said that game playing also helped to reduce tiredness.

‘Participant 2 : Ya what it said in the research that helped with tiredness so I was thinking, you know, if you are less tired, ofcourse you are going to be more efficient but if.....you know you’ve got that bit more of energy to carry on with normal work and everything like that’

Theme 3: Non players were efficient than players

i) Games as bad distraction

When participants were asked why they thought that non-players were efficient overall than the players, the most frequent reason given was that although games were fun, but it did distract from work, which did bring efficiency a bit low.

‘Participant 2: I think because they were competitive with playing games and everyone else not playing games were competitive with their work’

‘Participant 3: Maybe they are just more relaxed in playing games and less, I’m not speaking extreme but just a bit more relaxed....saying yeahhhh I’ll do that, bla bla bla....done’.

‘Participant 4: Because they were more competitive while playing games and not in their work.....ok so their focus is more towards playing games and not their work’.

ii) Non-players got the break

The second reason that they provided was that playing games was not a break; it was a fun activity but not a restive period. They thought that the non-players had more time for rest/break.

‘Participant 4: Ya so I’ve got one long day, I’ve got the first half of my day, I’ll go out, I’ll listen to music, chill out, then I’ll come back and finish the second half of the day. If I’m playing games and not left the building, I’ve been here all day so that’s why, I think maybe.....if your results say game players were more efficient, I would have asked why. I was more efficient (smiling again)’

‘Participant 3: It does make sense, if you do something else and go back, specially if you have a specific break for it, not your lunch break, a break from work, do something else but if you, but a specific so mainly you go for 10 minutes for an extra break so you need another extra 5 to 10 minutes breaks to go back to the same level of focus you had previously.....so its not good (laughter)’

iii) Players gave more details on the phone

The less common factor was that there might have been a drop in the efficiency of the players because the games made them more engaging and they might have engaged with the customers more, hence the increase in time taken

to end the call.

‘Participant 5: Maybe the people who were actually playing the games were more efficient and wrote down, I don’t know, more detailed notes and they just took more time, you can’t say that they were not efficient’

‘Participant 6: From talking to customer’s point of view in our back side I was thinking more likely to be jolly and engaging customer. It might be that you are efficient in a more bawling type of way, if you are doing admin tasks where it sounds so monotonous but if you’ve got to do something to interact with the customer’

iv) Extraneous variables

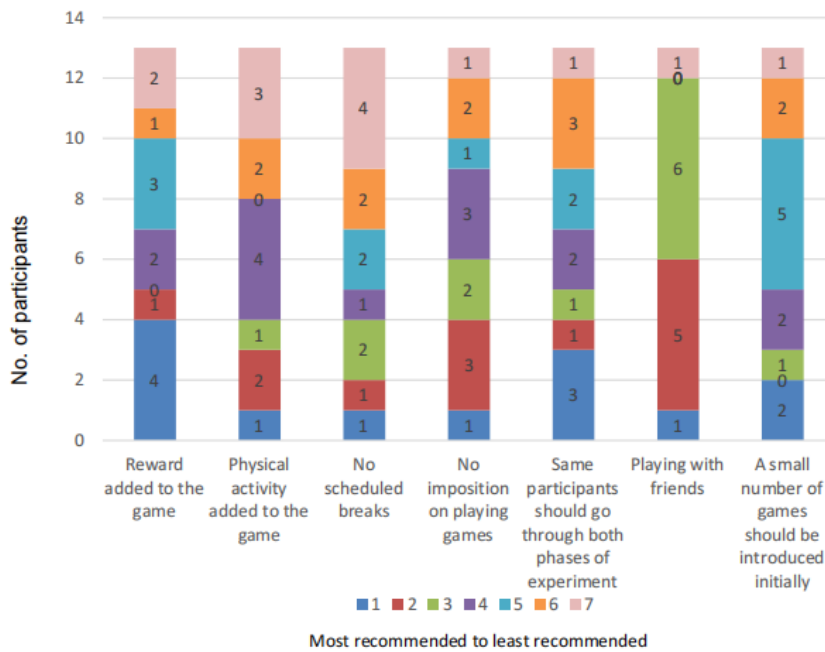
A participant even said that variables such as festive season could have affected the performance of a player as well.

‘Participant 10: So yes like throughout the day, it’s not that you just play the games, they’ll be more like how busy it is, what time of the year it is....so that has an effect too’

Results for recommendations from participants of the focus groups:

The second activity contained several recommendations that the participants were asked to rank in order of preference. They were also asked to give their own recommendations where possible. Seven recommendations were written down on cards sealed in an envelope. The participants were provided with folders and asked to rank them in order from the most recommended point to the least.

The following graph indicate the rating of each recommendation:



The blue area is dominant at ‘reward added to the game’ which means this is the most recommended factor for organizing games in the future. At number 2 we have the red area and this is most dominant for ‘Playing with friends’ so this came out as the second most recommended point. At number 3, we have green area. This is also dominant for ‘playing with friends’. At no. 4 is the purple area. This is greatest for ‘physical activity added to the game’. At no. 5 is the turquoise area. This is greatest for ‘a small number of games should be introduced initially’. At no. 6 is the orange area. One of the least recommended point was ‘same participants should go through both phases of experiment’. At no. 7 is the pink area with least preference. ‘No scheduled breaks’ came in as the least preferred recommendation.

When the participants were asked why they placed reward added to the game as top priority, they said it is always good to have some money, tea break or sweets as rewards. When they were asked why playing with friends is a priority recommendation, they said that they needed somebody to challenge them and it is also good for social bonding. Physical activity added to the game was a middle priority and participants wanted games like darts added to the activity. When asked why ‘no scheduled breaks’ is a least priority recommendation, they responded that it is just not possible to have breaks in their own time. It will disrupt the work organization of the call centre.

Discussion on recommendations

1st Priority- Rewards added to the game

Rewards is an important element to enhance motivation in game playing. In a study where children were tested on two factors, level of challenge and reward system using a digital game, it was found that the reward system encouraged the children to play for longer sessions. This effect however, diminished after some time (Ronimus et al., 2014). Because the call centre employees wanted different type of rewards, it just seems that the rewards should be rotated during game play so that the effect does not diminish. The rewards associated with game play will indirectly encourage productivity as well.

Rewards can help in engaging the individual with the game (De Neef, 2011). It can be inferred that rewards in call centres should be linked to their work in a meaningful way. For example, a higher customer satisfaction rating might lead to an extra tea break. Or it could be that improving on average speed of answer could lead to a 'half day' on any chosen working day.

It also depends how much rewards are important for a group. For example, there may be a low motivated group for playing games and with the introduction of the rewards, their motivation can enhance. On the other hand, there can be a highly engaged and motivated group and if a reward is added to the game, it might backfire (Birk et al., 2016). So, it is particularly important that in a call centre, where work is highly individualised, rewards must also be individualised accordingly.

2nd Priority-Playing with friends

Having support at the workplace from colleagues helps with job satisfaction and can improve performance (Henttonen et al., 2014; Lim, 1997)

In a system where knowledge integration is required in a large-scale IT set up, it was found that within teams, bonding and bridging was important (Newell et al., 2004). Also having a good laugh with colleagues has altogether a positive effect on psychological well-being and performance of employees (Scheel et al., 2017). Going beyond the workplace, is another concept of a 'third place' for socializing in the form of multiplayer online gaming spaces. This type of informal socializing also helps to bring social bonding out of working hours (Steinkuehler and Williams, 2006; Trepte et al., 2012)

Another important factor in introducing games in the workplace is its design. Playing socially does improve participation in exertion games, however care should be taken to see how the games are designed and integrated into the routine (Mueller et al., 2009). Call centre work deals with customers of different attitudes and employees need to know how to socially and emotionally handle them. In a study where games were used to promote social and emotional learning (SEL), various games were used such as board games or role plays. It was found that the games enhanced collaboration, the employees learned something, and it was an entertaining experience as well (Hromek and Roffey, 2009).

Employees in this study not only highlighted the integration of the games but also the integration of social bonding through games. They highlighted that they liked playing games but prefer playing with colleagues.

Least priority- No scheduled breaks

The workflow involved in a call centre is driven by the volume of calls and work is routinized which leaves little room for employee discretion (Taylor et al., 2002). In this study, the employees have indicated; that amongst tight schedule, an employee's discretion to have breaks in their own times is not possible. (Hyman and Summers, 2004) describes several problems in the UK that restricts employee's discretion. One of them states that policies are introduced to cater to the needs of the business rather than the employees. An employee is expected to follow similar kind of pleasant discussions with customers, jumping from one page to another, making sure everything he/she does is accurate and on time (Taylor and Bain, 1999). Hence the work processes within the call centres are based on individual performance which is controlled by a hi-tech environment (Townsend, 2004)

It is clear why the employees have listed 'no scheduled breaks' as the least priority because they already knew that in such a highly controlled work environment where 'Taylorism' (the idea of viewing humans as machines) is at its best, it is not possible to have breaks according to employee's discretion. However, this is not what they prefer. The employees have indicated that if there is a possibility of having one's own break at one's own time, it will be welcomed. This synchronizes with their concept of games not being imposed at certain times. But they also understand that it is a highly mechanical work environment and having breaks in one's own time just might not be possible.

3.1 Limitations

A post study feedback or a longitudinal study could help better understand the factors which shape the dynamics of working in call centres. In addition, there could be deviations in opinions or personal preferences, as the human side of the study must be taken into consideration as well. In such a case one cannot treat the perception of human beings as a natural law and hence this study has its own limitations in drawing conclusions as a definite law of science. Further to this, the presence of call centre heads in the focus group discussions might have given way to confirmation bias or group think, which means that the rest of the members try to conform to the answer of a single member.

5. Conclusion

In the current study, participants were asked reasons for this result and then asked for recommendations, following an inductive approach. Most of the participants said that game playing became a norm in the routine and hence productivity increased at the end. Some participants also said that the players were focused more on fun initially and then at the end they worried about their performance.

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Appendix 1

