

Comparison of Chef Perceptions on Food Waste between Luxury Hotels and Casual Dining

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ABSTRACT

This study analyses the existing literature on the issues surrounding food waste within the hospitality sector to establish the knowledge gap. The primary focus is to identify chef perceptions of the reasons behind food waste within the kitchen and conclude if these perceptions vary when comparing different types of hospitality establishments through an operational standpoint. The semi-structured qualitative interviews, consisting of three chefs from luxury hotels and three from casual dining establishments uncovered four key research themes and additional gaps in the existing knowledge. The themes range from the chefs' influences, the degrees of management, consumer behaviours and product utilisation, which are highlighted through an in-depth discussion of the results, further sympathising with the existing literature. The limitations surrounding the research are promulgated, drawing to a conclusion of the study that brings all the findings together to apprise future empirical research in the area.

Key Words: Food waste, Perceptions, Management, Chefs, Hospitality

INTRODUCTION

Few studies have investigated the perceptions of hospitality employees (Okumus et al, 2020; Goh & Jie, 2019; Goh et al, 2022) , it is therefore important to gain an understanding from chefs who experience the food waste issue first hand and acknowledge their personal motivations towards the reduction processes surrounding food waste. The comparison of establishments will bring light to what type of enterprises are contributing more to the food waste issue, and why, and what sustainable practices are been executed within their operations to reduce food waste. Researchers have previously only touched on key themes such as, overproduction (Stotmann et al, 2017), financial dimensions (Gardner, 2021), and general unethical behaviours (Goh & Jie, 2019). Using qualitative interviews with chefs from a diverse range of locations and establishments will allow for an overview of different perceptions on the reasoning behind food waste.

LITERATURE REVIEW

Impacts of food waste

Food waste is still an occurring issue within the hospitality and food service industry. It has inimical impacts on the environment, the economy, and the overall security on food globally (Papargyropoulou, 2019). The Food Agriculture Organization (FAO) defines food waste as ‘the discard of food suitable for human consumption, before or after spoilage’, this usually occurs due to consumer and retailer habits. It is suggested that around 26% of all restaurant food waste is unavoidable, however there is still between 50-80% being wasted (Gardner, 2021). In terms of the financial dimension, the value of food waste generated globally costs close to \$940 billion each year according to the FAO.

With the hospitality sector continuously growing in size, and the noticeable increase in the trend of eating out, (Okumus et al, 2020) it is inevitably clear that the amount of food waste produced is on a drastic rise (Massow & McAdams, 2015). Additionally, within restaurants and hotels, there is limited data that distinguishes the volume of wastage during service and after service (Fieschi & Pretato, 2018) which makes it difficult to track. The challenges around quantifying these results can be due to a lack of managerial skills and set standards amongst sub-sectors within the industry (Corrado and Sala, 2018). With many of the sub-sectors consisting of small-to-medium sized enterprises, it could be implied that there are staffing restrictions regarding the monitoring of food wastage (Revell & Blackburn, 2007), demonstrating a lack of prioritization surrounding overall issue.

Hospitality employees and food waste

Hospitality food waste can be distinguished into two main groups of waste: food preparation and plate waste (Boruhan & Ozbiltekin-Pala, 2021).

Specific research has made it clear that there is a constant ethical struggle between using fresher ingredients to ensure guest satisfaction and having more food waste (Goh & Jie, 2019), and this ‘wasteful’ nature of hospitality operations has been politically recognised (WRAP, 2011). This ‘wasteful’ nature could be due to the fact that 35% of workers are aged 16-24 in the industry (Hutton, 2022). Younger hospitality workers are more likely to participate in unethical behaviours, (Goh & Jie, 2019) despite the growing awareness around environmental concerns amongst this demographic (Yamane & Kaneko, 2021). Researchers have reported a lack of ethics trainings being provided in hotels to best deal with such dilemmas (Yeh, 2012) as guest satisfaction related trainings such as culinary trainings are prioritised instead (Charlebois et al, 2015). For example, chefs will decipher what ingredients are edible and inedible for guests on the basis of it being aesthetically pleasing, and will dispose of these, even if they are perfectly safe to consume (Hüseyin et al, 2019). Contrary to the deliberate ‘wasteful’ nature, chefs may waste food unintentionally during service due to the physical and psychological stress from the high-pressure environment associated with commercial kitchens (Roosipõld, 2011). Additionally, a lack of trainings

surrounding the mitigation of food wastage led to poor decisions that both directly and indirectly contribute to food waste, such as using newer ingredients before the older stock is used (Charlebois et al, 2015).

In a food waste research survey, it was pointed out that 45% of food waste in restaurant catering units was due to improper meal preparation (WRAP, 2013). This issue can be avoided to an extent by using correct forecasting tools, though some chefs would rather rely on personal experiences (Pirani & Arafat, 2016) to ensure consumer demands are fulfilled, even if it means surplus food is being produced. Chefs play a necessary role in the operations of a restaurant, and so it is of importance to make sure they are able to work efficiently, conforming to all aspects of the job, to keep profits high and food wastage low (Wu et al, 2022).

It is essential to look at competences of chefs when understanding reasonings behind food waste, as it is these factors that establish consistency and engagement. Only a limited number of articles elucidate competences of chefs, however it is still understandable that mastering cooking is not what guarantees a chef's occupational success (Pratten and O'Leary, 2007). It is other competences such as product knowledge, communication and managerial skills, ability, food concepts, and sales marketing that encourages a successful chef (Birdir & Pearson, 2000; Harrington et al, 2005). Ko and Hsiao (2008) exhibit culinary knowledge to be the most important factor, and Cooper (2012) stated that a lack of management skills amongst chefs, specifically trainees has been the key challenge that the hospitality industry has faced in kitchen culture. With 'soft skills' such as problem-solving, communication and interpersonal skills affecting the company's performance (Nikadimovs & Ivanchenko, 2020). However, with social sustainability (relating to employee practices) gaining importance within restaurants, the effects of practical application have begun to rise, which further optimizes chefs' skills and processes (Cantele & Cassia, 2020). Competences such as product knowledge, abilities and management skills may influence how chefs view food waste, such as how to repurpose food products.

Over-production

Despite the fact, once food has left the kitchen, another issue becomes apparent, plate waste: a term used to describe served food that is left uneaten (Kuo & Shih, 2016). In the UK alone, it is estimated that 30% of food waste comes from plate waste within the food service industry (The House of Commons, 2017). Substantial plate waste is one of the main drivers of food waste within restaurants (Sakaguchi et al, 2018) and is caused by irresponsible consumer behaviour, poor quality, and weak portion control (Ramsay, 2021). With many managers admitting to serving larger portions in an attempt to enhance customer appeal (Williamson et al, 2017) it becomes transparent that maximising customer satisfaction is superior to minimising costs and generating less food waste (Filimonau & Todorova, 2020). With consumer demands being at the forefront of operations, it can be difficult to predict how much food will be needed for service, which often results in more food being prepared than is actually required (Gardner, 2021). This becomes a serious concern given that

managerial commitment is what determines successful sustainability initiatives within hospitality establishments (Chan, 2011).

It is important to state that food and beverage establishments deal with numerous touchpoints of food that involve multiple departments in the processes of purchasing, storing, preparing, cooking, and serving. Thus, enlightening the many opportunities at different stages for food wastage to occur, such as the over-preparation of food by chefs (Bharucha, 2018) to anticipate consumer demands (Filimonau et al, 2020). Therefore, food waste is being produced consistently, and the search for an effective solution to the reduction of it is concerning (Alonso-Almedia et al., 2017). Not only does food waste have negative impacts on ethical and environmental factors, it also consequently costs hospitality businesses around £682m each year (Gardner, 2021).

Internal and external initiatives

Having surplus food at the end of service due to over-production is a concerning factor, however there are some external alternatives that help with reducing this. 'Too good to go' is a digital platform that aims to prevent food waste, by enabling outlets to sell 'magic bags' containing food products at a discounted price, that would otherwise be thrown out at the end of the day (Palumbo & Secondi, 2022). Donating to charities and food banks can be another alternative although there are perceived barriers, as many assume their establishments can be held liable should any issues occur. As long as it is fit for human consumption and complies with food safety legislation, food can be donated (WRAP). Examples of internal actions that mitigate source reduction include: redesigning menus, controlling portion sizes and service styles to reduce food wasted by guests (Lorenz et al, 2017). Furthermore, overproduction can be reduced by better aligning the quantity of food produced to that required by using a participatory approach (Strotmann et al, 2017). This will also help raise awareness on the issue within the workplace, and encourage contributions for more sustainable practices (Wilson, 2019).

The Knowledge Gap

Still, food wastage is under-researched as the majority of studies approach the issue from the ethical and financial angle, rather than focusing on the perceptions of chefs, to gain better understanding of the practical doings behind the food wastage issues. There has been limited attention on the role of hospitality employees as associates to reduce food wastage. These limited studies have specified a lack of support amongst hospitality management towards inaugurating sustainable initiatives in reducing food wastage (Goh et al, 2022). This limitation requires further investigation and new data from the hospitality sector to confirm if it is the reason food wastage is on the rise. This research aims to close this gap and examine the perceptions (attitudes, perceived challenges, and social norms) of chefs towards food

wastage, taking into consideration the different types of establishments and their mitigation processes in order to complete a comparison on what enterprise type accumulates the most waste and why.

METHODOLOGY

A convenience sample of six participants took part in semi-structured qualitative interviews, varying of online zoom meetings and in person sessions. The participants consisted of three chefs from luxury hotels and three from casual dining establishments. This allowed for a range of perspectives to be taken into consideration to assist with identifying commonalities and differences between the types of chefs, which abled the researcher to draw out implications (Baker, 2012). Hotel and restaurant chefs were selected to take part, as they are heavily involved with all processes of food wastage, from stock ordering, food preparation and plate waste, so have reliable experiences to discuss. The researcher conducted semi-structured interviews, as they allow flexibility for open-ended questions which prompted the participants into permitting deeper and more meaningful answers. This provided significant crucial insights into the different establishments and how they operate. Furthermore, it enabled the researcher gain an in-depth exploration on the perceived thoughts and experiences of the chefs (DeJonckheere & Vaughn, 2019; Brinkmann & Kvale, 2014). To guide the data collection, a protocol of initial questions relating to the synthesis of the literature was designed. Probing was used in all of the interviews to further expand on the initial key focus points and shed attention on the pertinent issues that arose from the individuals. Thematic analysis using the approaches of Braun and Clarke (2012) have been exerted to analyse the essential data to bring understanding to any shared behaviours and experiences amongst the variation of chefs and their establishments. The themes were then used to draw on commonalities and differences between all of the collected data and the aforementioned research to conclude and summarise the theories and overall topic. This analysis has allowed the researcher to elucidate themes and draw on comparisons through the interpretation of the data to assist in answering the study question (Vaismoradi et al, 2016). Each participant from luxury hotels will be quoted (LH1, LH2, LH3) and casual dining participants (CD1,CD2,CD3) in the discussion.

RESULTS AND DISCUSSION

Four significant themes emerged from the research findings as key stimulants of food waste in luxury hotels and casual dining establishments from the chef's perspective (Influences, management control, consumer behaviour, and product utilisation). The themes derived from the data analysis are presented in the table below:

Table 1- Themes derived from the data analysis

Number	Themes
1.	Influences <ul style="list-style-type: none"> • Integrated morals / Upbringing • Experience • The workplace
2.	Management control <ul style="list-style-type: none"> • Type of establishment • Trainings • Processes
3.	Consumer behaviour <ul style="list-style-type: none"> • Demand • Irresponsibility
4.	Product utilisation <ul style="list-style-type: none"> • Budget and time constraints

1. Integrated morals Vs. Influence of establishment

It was surprising to discover that the influence on an individual's upbringing, significantly affected their views towards food wastage, which is something that has not been previously mentioned in the existing literature. All 3 participants working in casual dining restaurants explained that their perceptions towards food waste were established throughout their upbringing and were taught to:

"Never waste any food" (CD1)

"Always have a clear plate before being excused" (CD2)

"Appreciate the food you have in front of you" (CD3)

which is why they continue to personally reduce over-production within their establishment whenever they can. 4/6 of the participants said that their establishment has had no impact on their perceptions towards waste, and if it wasn't for their upbringing, they would be just as wasteful as the other chefs within their establishments, as there were not any mitigation processes. Extrapolating on the fact that the background of a chef is more important to becoming a successful chef than the impact of an establishment. Participant LH3, CD4 and CD5 mentioned food waste is inevitable and:

"Part of the food preparation process" (LH3, CD5)

"As much as you want or try to save, you will always encounter it" (CD4)

LH1 had the opposite answer, exaggerating how much the establishment had influenced their perception on food waste due to the strict budget. LH1 explained that every ingredient is utilized and incorporated into other dishes on the menu. This focus on utilisation has optimized their skills and processes, sympathising with the literature (Cantele & Cassia, 2020). The other 2 participants working in luxury hotels said the constant over-production of food has led to a diminished concern around the issue as these conditions have become embedded into their daily job, highlighting a lack of ethics trainings within hotels (Yeh, 2012).

2. Degree of Management Control

Management of stock in hotels was poor overall in comparison to casual establishments as chefs in hotels seemed to have:

“Next to no time to focus on stock due the immense service workload” (LH3)

and

“More leverage” (LH2)

on how much they could prepare before service due to the uncertainty around business levels. For example, LH1’s sous chef would over-prepare ingredients for certain dishes due to their lack of management knowledge and poor forecasting skills, which led to much of the food being disposed of before it was needed for service. Evidently the lack of management skills is a key challenge within the kitchen (Cooper, 2012).

Results from LH2 and CD4 proved that having smaller portion sizes increased the number of empty plates, confirming the literature on the fact that irresponsible portion control causes a higher amount of plate waste (Ramsay, 2021). It is important to note that all participants had product specification sheets and recipes for a lot of their dishes, in order to keep portions consistent, but still a lot of plate waste was being accumulated.

LH3 shared that stock orders were often incorrect, and the stock room was often left in a mess, which led to many ingredients becoming unconsumable. These results disagree with the literature (Revell & Blackburn, 2007) as it is evident that management within hotels is worse than small-medium enterprises, as costs and restrictions are disregarded to a greater extent. However, one hotel was on a strict budget which meant there was consistent management of the stock to make sure the budget was never jeopardised.

It was made clear that although the participants personally tried to reduce food wastage, it was not a crucial aspect of their job (2/3 in luxury hotels and 2/3 in casual dining) as the issue had never been orally conveyed to them in their trainings or practices. This extrapolates the fact that unethical trainings are lacking within the industry (Yeh, 2012).

It became apparent that the establishments who implemented stricter processes and expectations were more knowledgeable on how to utilise their surplus food. Additionally, these participants were more focused on their role due to higher levels of guidance and experience received. All participants were of a similar age, and it was clear that it was experience gained, rather than the age of the chef that influenced their knowledge. LH2 and CD6 said their higher levels of experience within the kitchen increased their concerns around reducing waste,

“The more experience I have gained, the more I have begun to care” (LH2)

“Working alongside the head chef over the years has extrapolated my tendency to mitigate food waste” (CD6)

The strict management led LH2 to perceive wastage of food differently, as was trained on how to effectively manage produce. Exhibiting that culinary knowledge is the most important competence of being a successful chef (Ko and Hsiao, 2008).

Poor guidance from management led many chefs to make mistakes, with many of the participants explaining human error from Front of House would affect dishes at least once or twice throughout service. New chefs also make mistakes as trainings have not been properly given, which interrupts an already stressful environment, leading to additional waste. Concurring a lack of skills amongst trainees is a key challenge that the industry faces (Nikadimovs & Ivanchenko, 2020).

3. Consumer Behaviours/ Characteristics

Concurring with the literature (Sakaguchi et al, 2018), results found that consumer behaviour majorly affected the overall wastage within establishments. Casual dining establishments specifically, experience customers sending food back due to dishes not being what they expected. Groups tend to order excessive amounts of food which also consistently get sent back as it becomes cold, additionally it was pointed out that consumers who were health conscious and/or of an older demographic would order big portions and waste the majority of it. Proving consumer irresponsibility is a key driver of food waste (Ramsay, 2021).

The majority of respondents commented that food waste reduction was an important process that they tried to implement whilst cooking but expressed that demand of service hindered their abilities to do so as the pressure shifted their focus onto guest satisfaction. With CD4 explaining:

“Food wastage will always come second to ensuring customers receive the best possible product on their plate”

and CD5 said

“It is a high-pressure working environment, reducing waste is not at the top of your mind, it is pleasing the guest”.

This confirms the literature as maximising customer satisfaction is superior to reducing waste (Filimonau & Todorova, 2020) additionally stressful environments do create an increase in the unintentional disposal of food (Roosipõld, 2011).

The participants indicated that kitchen practices contributed between 10-20% of the total food waste in luxury hotels and between 5-12% in casual dining establishments, with damaged fresh produce accounting for the vast majority. These percentages emerged as an estimation of daily food waste coming directly from the chefs. It is clear from the results that luxury hotels were the highest producers of food waste, with LH1 and LH3 explaining that over-prepping made sure any guest requests were adhered to, extrapolating the difficulty of predicting demand (Gardner, 2021). However, casual establishments were still able to ensure consumer demands were being met by initially prepping a certain amount and continuing throughout service to:

“Reduce the amount of food leftover at the end of shift”.

4. Product Utilisation

Utilisation was found to be one of the main factors that decrease the overall impact of food waste, but only one establishment implemented this reduction tool within service. LH1 explained all products were utilised within other dishes, for example, trimmings from salmon would be infused into a mousse that is served alongside the salmon dish. The other chefs explained that utilising a product was too time consuming given their small team of chefs and lack of necessity to use it in their dishes, demonstrating that re-designing a menu would alleviate excess food (Lorenz et al, 2017). However, utilisation is implemented across the establishments when cooking staff meals.

“The ends of bread, partially bruised vegetables and other produce are used for staff lunches” (CD2)

“Leftover prep is made into dinner for staff members at the end of the shift” (LH2)

“The leftover cut outs of pastry are cooked in the oven to use as a crumble for desserts” (LH1)

Result indications

The findings from the interviews indicate that management has the biggest impact on food waste, expressing that the quality of an establishment does not have any relation to the amount of waste created. Furthermore, the up bringing of a chef had a bigger impact on the awareness of food wastage, than the influence of an establishment.

CONCLUSION

The purpose of this research was to identify chef perceptions of the reasons behind food wastage within the kitchen, and to conclude if these perceptions varied when comparing different types of hospitality establishments. Based on the analysis conveyed, it can be concluded that perceptions of chefs vary throughout establishment types. Whilst the researcher started out comparing luxury and casual establishments, it was noticed that there was a significant outlier within hotels, which was evidently the management. The interviews brought clarification to the fact that it is not the quality of a business that impacts the amount of food wastage, but that experience and stricter processes established by managers mitigated the issue, which was previously mentioned by (Chan, 2011). It is important to point out that across the establishments, the reduction of wastage was not to become more sustainable, as they were only concerned from a financial standpoint, proving the lack of awareness still surrounding the impacts of food wastage from an environmental and ethical standpoint (Cantele & Cassia, 2020). Future exploration into the observation of chef practices in establishment types could be useful in improving validity amongst their perceptions and would assist in elucidating the type of management that is needed to mitigate such high volumes of food wastage to further fill the gap in the knowledge.

LIMITATIONS

The validity of the data could be seen as a limitation in the context of this research as the data achieved has been based on what the participants have said, which may not correspond to what they actually do (Mann, 2016). This could be improved on in future research by performing observations in the variety of establishments to gain visual evidence to allow for a valid interpretation of behaviours (David Ferguson et al, 2012) to further fill the research gap.

Semi-structured interviews allowed for development of the questions throughout the course of the project, so that the researcher could follow up new lines of enquiry as a result of information previously given by interviewees (Denscombe, 2017). This method of research positively influenced the outcome, as valuable in-depth insights were gained from all participants, which assisted in answering the research question and filling the gap within the aforementioned research. Although these results are partially reliable, it is not possible to generalise from a sample of this size, alluding that a larger quantity of interviewees would be needed to draw on inferences (Polit & Beck, 2010) in the future to gain a well-grounded generalisation.

REFERENCE LIST

Alonso-Almedia, M.-M., Fernández Robin, C., Celemín Pedroche, M. S., & Astorga, P. S. (2017). Revisiting green practices in the hotel industry: A comparison between mature and emerging destinations. *Journal of Cleaner Production*, 140, 1415-1428.

Baker, SE. (2012). How many qualitative interviews is enough? *National Centre for Research Methods Review Paper*. 4-7.

Beatty, P. C., & Willis, G. B. (2007). Research synthesis: The practice of cognitive interviewing. *Public opinion quarterly*, 71(2), 287-311.

Bharucha, J. (2018), "Tackling the challenges of reducing and managing food waste in Mumbai restaurants", *British Food Journal*, Vol. 120 No. 3, pp. 639-649.

Birdir, K. and Pearson, T.E. (2000), "Research chefs' competencies: a Delphi approach", *International Journal of Contemporary Hospitality Management*, Vol. 12 No. 3, pp. 205-209

Boruhan, G., & Ozbitekin- Pala, M. (2021). "Food waste management: an example from university refectory". *British Food Journal*, Vol. 124 No.1, pp. 293-313, doi: 10.1108/BFJ-09-2020-0802.

Braun, V., & Clarke, V. (2012). Thematic analysis. *APA Handbook of Research Methods in Psychology*. Vol. 2, research designs. Washington (DC): American Psychological Association.

Brinkmann, S., Kvale, S. (2014). *InterViews-Learning the Craft of Qualitative Research Interviewing*, 3rd ed; *Sage Publications inc*.

Cantele, S., Cassia, F. (2020). Sustainability implementation in restaurants: A comprehensive model of drivers, barriers, and competitiveness-mediated effects on firm performance. *International Journal of Hospitality Management*, 87, 102510.

Chan, E.S.W. (2011). Implementing environmental management systems in small-and medium-sized hotels: obstacles. *Journal of Hospitality & Tourism Research*, 35(1), 3-23.

Charlebois, S., Creedy, A. and Von Massow, M. (2015), "Back of house – focused study on food waste in fine dining: the case of Delish restaurants", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 9 No. 3, pp. 278-291.

Cooper, J. (2012), *The Occupational Identity and Culture of Chefs in United Kingdom (UK) Haute Cuisine Restaurants*, Unpublished Ph.D. thesis, University of Strathclyde.

Corrado, S., & Sala, S. (2018). Food waste accounting along global and European food supply chains: state of the art and outlook. *Waste management*. 79, 120-131.

David Ferguson, T., Briesch, A.M., Volpe, R.J., & Daniels, B. (2012). The influence of observation length on the dependability of data. *School psychology quarterly: the official*

journal of the Division of School Psychology, American Psychological Association, 27 (4), 187-197.

DeJonckheere, M., & Vaughn, L.M. (2019). Semi structured interviewing in primary care research: a balance of relationship and rigour. *Fam Med Com Health*. doi:10.1136/fmch-2018-000057

Denscombe, M. (2017). *EBOOK: The good research guide: For small-scale social research projects*. McGraw-Hill Education (UK).

Farrell, S. (2016). Open-Ended vs. Closed-Ended Questions in User Research. NNg. <https://www.nngroup.com/articles/open-ended-questions/> [Accessed: 29/10/2022]

Filimonau, V., & Todorova, E. (2020). Chapter 21- Management of hospitality food waste and the role of consumer behaviour. *Food Industry Wastes (second edition)*. 451-466

Filimonau, V., Todorova, E., Mzembe, A., Sauer, L. and Yankholmes, A. (2020a), “A comparative study of food waste management in full-service restaurants of the United Kingdom and The Netherlands”, *Journal of Cleaner Production*, Vol. 258 June, p. 120775.

Food Wastage Footprint (Project). (2013). *Food wastage footprint: impacts on natural resources: summary report*. Food & Agriculture Org.

Garnder, B. (2021). “More than half of food is still being wasted at hospitality venues”. [How much food waste does the hospitality sector create? \(morningadvertiser.co.uk\)](https://www.morningadvertiser.co.uk) [Accessed 04/10/2022]

Goh, E., & Jie, F. (2019). To waste or not to waste: Exploring motivational factors of Generation Z hospitality employees towards food wastage in the hospitality industry. *International Journal of Hospitality Management, 80*, 126-135.

Goh, E., Okumus, B., Jie, F., Djajadikerta, H. G., & Lemy, D. M. (2022). Managing food wastage in hotels: discrepancies between injunctive and descriptive norms amongst hotel food and beverage managers. *British Food Journal*.

Hennink, Hutter, I., & Bailey, A. (2020). *Qualitative research methods* (2E. ed.). SAGE.

Genç, Uğur, H., Yildiz, M., Yilmazer, H., Coşkun, A. (2019). Stop Wasting, Start Tasting! Design Speculations for Reducing Food Waste in The Hospitality Sector. *Companion Publication of the 2019 on Designing Interactive Systems Conference 2019 companion*, 171-176

Harrington, R. J., Mandabach, K.H., VanLeeuwen, D., & Thibodeaux, W. A. (2005). A multi-lens framework explaining structural differences across foodservice and culinary education. *International Journal of Hospitality Management, 24*, pp. 198-218

Hutton, G. (2022). Hospitality industry and Covid-19. *House of Commons Library*, 14-15.

Kiger, M. E., & Varpio, L. (2020). Thematic Analysis of Qualitative data: AMEE Guide no.131. *Medical Teacher, 42(8)*, 1-9.

- Ko, W.H., Hsiao, C.Y. (2008). To Evaluate the Professional Competency of Chef-Applying in Analysis Hierarchy Process. *J. Hosp. Home Econ.*, 5, 69–91
- Kuo, C., & Shih, Y. (2016). “Gender Differences in the Effects of Education and Coercion on Reducing Buffet Plate Waste”. *Journal of Foodservice Business Research*. 19 (3): 223-35.
- Lorenz, B., Hartmann, M., Hirsch, S., Kanz, O. & Langen, N. (2017). Determinants of plate leftovers in one German catering company. *Sustainability*. 9 (5), 807.
- Malerfors, C., Callewaert, P., Hansson, P.-A., Hartikainen, H., Pietiläinen, O., Strid, I., Strotmann, C., & Eriksson, M. (2019). Towards a Baseline for Food-Waste Quantification in the Hospitality Sector- Quantities and Data Processing Criteria. *Sustainability*, 11 (13), 3541.
- Mann, . (2016). The Research Interview: Reflective Practice and Reflexivity in Research Processes. *Basingstoke: Palgrave Macmillan*. pp. 144-152.
- Massow, M. V. & McAdams, B. (2015). Table scraps: an evaluation of plate waste in restaurants. *Journal of Foodservice Business Research*. 18, 437-453.
- McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical teacher*, 41(9), 1002-1006.
- Nikadimovs, O. and Ivanchenko, T. (2020), “Soft skills gap and improving business competitiveness by managing talent in the hospitality industry”, *Economics and Education*, Vol. 5 No. 1, pp. 36-48
- Okumus, B., Taheri, B., Giritlioglu, I., Gannon, M.J. (2020). Tackling food waste in all-inclusive resort hotels. *International Journal of Hospitality Management*. 88, 10254
- Papargyropoulou, E., Steinberger, J. K., Wright, N., Lozano, R., Padfield, R., & Ujang, Z. (2019). Patterns and causes of food waste in the hospitality and food service sector: Food waste prevention insights from Malaysia. *Sustainability*, 11(21), 6016.
- Pirani, S. I., Arafat, H. A. (2016). Reduction of food waste generation in the hospitality industry. *Journal. Clean. Prod*, 132, pp. 129-145
- Polit, F.D., Beck, T.C. (2010). Generalization in quantitative and qualitative research: myths and strategies. *International journal of nursing studies*, 47 (11), 1451-1458.
<https://doi.org/10.1016/j.ijnurstu.2010.06.004>
- Pratten, J.D. and O’Leary, B. (2007), “Addressing the causes of chef shortages in the UK”, *Journal of European Industrial Training*, Vol. 31 No. 1, pp. 68-78.
- Ramsay, R. (2021). How To Reduce Customer Plate Waste. *Toogoodtogo*.
<https://toogoodtogo.co.uk/en-gb/blog/plate-waste> [Accessed: 14/12/2022]

- Roosipõld, A. (2011). Occupational Change and Changes in the Professionalism using the Example of Chef Profession. *The International Journal of Learning Annual Review*, 17 (11), pp. 281-288
- Sakaguchi, L., Pak, N., Potts, M. (2018). Tackling the issue of food waste in restaurants: options for measurement method, reduction and behavioural change. *Journal of Cleaner Production*. 80, 430-436
- Strotmann, C., Friedrich, S., Kreyenschmidt, J., Teitscheid, P. & Ritter, G. (2017). Comparing food provided and wasted before and after implementing measures against food waste in three healthcare food service facilities. *Sustainability*. 9 (8), 1409.
- Suhairom, N., Musta'amal, A.H., Amin, M., Kamin, Y., & Abdul Wahid, N.H. (2019). Quality culinary workforce competencies for sustainable career development among culinary professionals. *International Journal of Hospitality Management*, 81, pp. 205-220
- The House of Commons (2017), "Food waste in England", House of Commons. <https://publications.parliament.uk/pa/cm201617/cmselect/cmenvfru/429/429.pdf> [Accessed: 14/12/2022]
- Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis.
- Waste and Resources Action Programme (WRAP), 2011, The composition of waste disposed of by the UK hospitality industry, Waste and Resources Action Programme (WRAP) WRAP. RES093-001, Oxon (2011)
- Williamson, S., Block, L. G., & Keller, P. A. (2016). Of waste and waists: the effect of plate material on food consumption and waste. *Journal of the Association for Consumer Research*. 1 (1), 147-160
- Wilson, G. (2019). How Participative Leadership Brings The Workplace Together. https://www.thesuccessfactory.co.uk/blog/participative-leadership-in-the-workplace?hs_amp=true [Accessed: 10/12/2022]
- WRAP (Waste and Resources Action Programme). (2013). Overview of waste in the UK hospitality and food service sector. <https://wrap.org.uk/sites/files/wrap/Overview%20of%20Waste%20in%20the%20UK%20Hospitality%20and%20Food%20Service%20Sector%20FINAL.pdf> [Accessed: 15/12/2022]
- Wu, S. H., Ku, E. C., & Wu, T. P. (2022). Increasing restaurants' sales performance: linking suppliers and chefs' culinary knowledge. *British Food Journal*.
- Yamane, T., & Kaneko, S. (2021). Is the younger generation a driving force toward achieving the sustainable development goals? Survey experiments. *Journal of cleaner production*, 292, 125932.
- Yeh, R. (2012). Hotel General Managers' Perceptions of Business Ethics Education Implications for Hospitality Educators, Professionals, and Students. *Journal of Human Resources in Hospitality & Tourism*, 11 (1), 72-86.

Yu, M., Palumbo, L., & Secondi, L. (2022). Saving Food from Waste or Advance Selling? An Empirical Analysis of Too Good To Go Offering in Rome.