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Hotel Linen: Problems and Solutions

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ABSTRACT

Housekeeping, as a critical department in a hotel, needs to maintain quality service. Constant complaints on the quality of linens were observed during a preliminary observation. The article discusses a result of a case study, identifying problems and solutions of linen supplies in a hotel.

Keywords: Complaints, Housekeeping, Linen-

1. INTRODUCTION

Service quality assurance has been a critical issue in the hospitality industry, especially hotels. Welldocumented studies have provided the important aspect of service quality as a prime differentiating factor in a highly competitive hospitality industry [1]. In hotel, housekeeping is a critical component of accommodation services, a key control point for service quality, and provides a link between accommodation management and guests [2]. Among various tasks of the housekeeping department, keeping linen supplies is one main duty [2], [3]. Ensuring the availability of clean bed sheets and towels remains the main daily activity of housekeeping in a hotel. The processes include collecting and replacing dirty linen, washing linen, delivering clean linen from laundry to rooms, etc. Thus, linen has been one main concern in the housekeeping department.

2. LITERATURE REVIEW

One way to check the quality of service is to see if there are any complaints or not. According to [4], perceived service quality is partly determined by customers' satisfaction. Complaints are indicators of dissatisfaction with the quality of a product or service [5]. On a preliminary observation, in a star hotel in Tuban district, various complaints were noticed. Most of the complaints went to the housekeeping department of the hotel, in relation to the quality of sheets and towels. A casual conversation to a housekeeping staff revealed that the complaints have been continuously received for a month. Prompted by the phenomenon, an in-depth study was designed to gain further information and learn from the case.

Very little empirical theoretical research has been conducted on the operational aspects of housekeeping. [1]. Relatively small number of studies have been conducted in relation to the problems of linen supplies in housekeeping department of a hotel. This article was a report of a study that was aimed at identifying the problems of linen supplies in a hotel, along with the solutions.

3. METHOD

The study is a case study, with no experimentation given during the data gathering. Considered as the first type of qualitative studies [6], a case study involves the comprehensive documentation, identification, and analysis of unique and interesting events, individual, organization, or group, focusing on atypical situations and distinctive outcomes [7], [8]. Specifically, according to [9], case study is a powerful method to solve and analyse business problems, as well as building theories. In this study, the case study was used as the method to identify the problems and solution in relation to hotel linen in a specific location and circumstances.

The study was conducted in Kingdom hotel (pseudonym), a star hotel in Tuban district, Bali. The hotel was chosen based on the finding of the problems in the preliminary observation. Since the study was a case study, Kingdom hotel was the only hotel chosen as the location of the study. The objects of the study were hotel linens, specifically bath towels and bed sheets.

The subjects of the study are housekeeper, housekeeping supervisors, and housekeeping staff. They were chosen for their experiences, knowledge, and responsibilities in dealing with linen in the housekeeping

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department. The subjects of the study act as the main source of the data through face-to-face interview and participant observations. Interviews are conducted to construct, verify, change, and broaden information from the subjects of the study [10]. There was no specific time and place for the interview; conducted on regular activities during the daily assignments as housekeeping staff, as part of the participant observation method. Participant observation is a qualitative data collection methodology, through direct and in-depth participation to gain fruitful information on human behaviours and experiences in a particular context [11], [12]. In this case, the researcher also acted as the subject and the instruments of the study; gaining information through direct experiences as a trainee in housekeeping. This participation was enabling the researchers to gain indepth and unfiltered information related to the problems of the study.

The gathered data was descriptively analysed, through thematic analysis, based on the purpose of the study. The study was focused on the reasons for the linen problems and the solutions. There was no interview form prepared, since the questions were changing from time to time, based on the context, situation, and the information gathered. Still, the questions were carefully organized to answer the research problems. The questions of the interviews open-ended and use snowball technique, in some casual interview sessions. The subjects were interviewed, back and forth, to verify, clarify, compare, and broaden information and argumentation, to gain the needed data. When the data was saturated, the interviews were stopped.

The collected data was reviewed, sorted, and then organized into categories based on the formulated problems. Interpretation was then conducted through comparison to literature reviews and relevant research results to form a theory and to answer the problems of the study. The researcher's point of view was also involved in the interpretation, considering that the researcher takes part actively as the research subject. Data validity can be achieved by giving more relevant references, observations and interview times, and triangulating the data carried out during data collection and when the data has been collected.

4. RESULTS AND DISCUSSION

In this subchapter, problems and solutions in relation to the linen's complaints will be discussed.

4.1. Problems

Based on the participant observations and interviews, two main problems related to the linen gathered; lack of stock and low quality of linen. The Kingdom hotel uses a system of 2-par. A par (periodic automatic replenishment) level is a specific amount of inventory

items at any given time that a hotel should have on hand [13]. With this system, the available linen is only 2 times the number of rooms, times the number of needed linens in each room. Therefore, if there are 2 bath towels in each room and 100 rooms in the hotel, the sum of linen stock using the 2-par scheme is only 400 parts (2-par x 2 pcs x 100 rooms=400). With this system, only 1 set (par) of linen is available in the room and 1 set (par) of linen is being washed. In other words, if things are out of the ordinary, there is no remaining inventory that can be used; such as a room with more than 3 visitors who want an additional bed, which needs extra linen. Not to mention, the problem of stains (spot) linen, which will not be used to ensure the standard of hotel service. This is one of the key causes of the Kingdom hotel's lack of availability of linen.

In addition to an inappropriate par stock system, poor linen circulation exacerbates the problem of limited linen at the operational level. The poor circulation of linen was due to two factors. The first factor was the failure of the main laundry machine. This machine was usually used to wash and dry linens, King and Queen sheets, as well as bath and swimming towels. Due to the failure of this machine, the washing process was hampered. As the consequences, washed and available linen decreased. Dirty linens have piled up in the laundry section. Other functioning machines were forced to work heavier in less time. This was the reason for the poor circulation of linen.

The second factor causing the poor circulation of linen at the Kingdom hotel was the deficiency of linen runners. The linen runner is in charge of distributing clean, washed linen to the linen storage (pantry) in each section and taking soil linen from the dirty linen bags brought by each room boy/maid to the laundry. This task is very important because the smooth running of the work in the room section depends on how fast the distribution is from the laundry to the room or vice versa. In this hotel, in each section, there were only two linen runners. According to the management, this number was still insufficient considering the number of rooms in each section exceeds 30 rooms. With such a large number of rooms, the average weight of linen carried per trip was 70 kg. A number heavy enough to be distributed by a single person. In other words, the 2 linen runners available were only able to do the job simultaneously. The time to distribute the linens was longer because the linen runner had to travel more than 4 times back and forth from room to laundry. Linen runners were often exhausted and under-pressed. In short, additional staff, linen runners, were needed to speed up the linen distribution process.

The issue of limited stock is closely linked to the decrease in the quality of linens at the Kingdom hotel. The low quality became the second problem of the hotel linens. Insufficient stock and faulty washing machines required available linen to be used as soon as possible after washing without going through the storage process.



According to a laundry supervisor, due to water abrasion, washing chemicals, heat, and washing machine rotation, linens have a shorter life span. The more frequently they were washed, the faster it declined in quality. Storing was needed to pause the use process of the linens, to maintain the quality and lifespan.

The shortened washing process was also the cause of the decline in linen quality at this hotel. Dirty linen, which was usually 'ripe' after going through the washing and drying process in the washing machine for 40 minutes, had been forced to be picked up in 30 minutes. With this kind of acceleration, the quality of cleanliness had deteriorated, although not at an alarming rate. Still, this was a problem because, on many occasions, some linens were still dirty and needed to be re-washed.

Water and washing chemicals were assumed to be the cause of the decline in linen quality at Kingdom hotel. The quality of water and chemicals used in washing greatly affect the quality of the washing results. The quality of water and chemicals can accelerate the colour fading of clothes [14], [15]. Based on this assumption, the hotel management was working with experts to evaluate the water and chemicals used in washing, recognizing the essence of water and chemicals that could be the cause of the decline in linen quality. The expert analysis found that the pH of water was higher than the normal threshold. This is due to the level of groundwater pollution in Denpasar, which according to the expert was quite high. High pollution makes the water unhygienic. The result of the groundwater pollution in Denpasar and surroundings was supported by the findings of several studies, including [16]–[17]. The hotel uses ground water for washing purposes, in contrast to drinking water which uses a different treatment system and takes water from the government water company (PDAM). The pollution made linen easily and quickly dull.

Furthermore, the washing chemical of bleach was also assumed to be one of the causes. This whitening product actually has a strong bleaching power that can remove stains from white fabrics. Results of studies [18], [19] support the negative effects of the bleaching agent to clothes. However, if white linens, such as bath towels and sheets, were bleached too often, the fabric would rot quickly and cause white stains as a result of the chemical reaction of the product. Referring back to the 2-par stock system implemented by the hotel and the failure of the laundry machine, the linens experience a more washing process than usual. Amplified with the water pollution and the side effect of the bleaching process, the quality and the life of the linen were quickly and easily decreasing. Having the results of the analysis, the hotel management were then preparing some solutions to overcome the problems.

4.2. Solutions

Some solutions were prepared by the management of the Kingdom hotel in overcoming these operational problems. Knowing that the amount of linen availability was insufficient due to the inappropriate par stock system, the management decided to change the 2-par stock system to the 3-par stock system. The management also planned to increase the budget for the purchase of linens, especially bath towels and sheets. With sufficient stock, it was expected that there will be no more complaints from guests related to the unavailability of towels in the room due to the poor stocking system.

Since stock replenishment was still in the planning stage, for the time being, a strategy was being implemented to minimize linen changes in each room, through a linen reuse program. In each occupied room, only dirty sheets were changed. In each room there was usually 1 bed. For each bed, the hotel applied a 3-sheet system, which means that each bed was covered by 3 sheets. The first sheet served as a mattress cover as well as a sleeping pad. The second and third sheets served to cover the blanket. The second and third sheets prevented the blanket, which requires more complicated care, from getting dirty. As a default, all sheets were replaced daily. However, due to the limited number of linens, only the dirty ones were replaced. Mostly, the sleeping pad sheet and the top sheet were the dirty ones. Using a rolling system, the sheets were replaced. If the first sheet was dirty, then the second sheet would be reused as the first sheet; while, the third sheet would be reused as the second sheet and the new sheet would be used as the third sheet. This system changeover was quite effective. The available linens were maintained. There were also not too many sheets to wash, so the washing process was faster. In addition, the quality of service provided was not reduced, considering that the sheets used were still clean. The effectiveness of the linen reuse program in solving linen stock has been previously studied, e.g. [20]-[21]. On request linen changing has also been one of the main suggestions of environmental management; reducing water and energy use [2].

Washing machine maintenance was also planned. For the time being, to speed up and improve the washing process, the hotel sends King and Queen sheets to an outsourcing laundry company. King and Queen sheets were larger than regular sheets, requiring a larger washer which has a stronger torque. The broken washing machines usually handle this type of sheet. Daily, twice a day, the laundry company picked up dirty linens and delivered the clean ones. According to the management, this is not the best solution since the pickup and delivery process required more time and more expensive compared to the self-handled process. Immediate washing machine maintenance was the main need.



Table 1 Summary of the Findings: Problems, Causes, and Solution

Problems	Causes	Solutions
Lack of stock	Poor par stock	Chang the par-stock
	system	system from 2-par to
		3-par
		Linen reuse program
	Poor linen	Washing machine
	circulation	maintenance
		Additional staff
		planning (linen
		runner)
Low quality of linen	Broken	Washing machine
	washing	maintenance
	machine	
	Poor washing	Outsourcing laundry
	process	
	Poor quality of	Water treatment
	water and	management
	chemical	Changing bleaching
	(bleaching	product
	product)	

Source: data analysis

In order to overcome the decreasing linen quality, water quality checks were conducted. Improvement on water treatment was made to reduce the high pH water to normal. The water storage pool and tower were cleaned of moss and bacteria with green chemical products. In addition, on a daily basis, chlorine-like substance which functions as a disinfectant was poured to the water to maintain its ph. Routine checks, twice a week, were also carried out with the professional supervision. The water treatments were successful. Gradually, the water quality returned to good. The water quality remained at a good level when the study ended.

While improving water quality, an assessment was also carried out with several suppliers of washing chemicals. Several suppliers came and presented their products. The researcher also had the opportunity to attend a presentation from one of the suppliers. Due to the confidentiality and ethical reasons, the name of the suppliers and the products are not stated in this study. After doing various considerations, finally a product brand was chosen, suiting the needs of the hotel. One of its products, a linen bleach agent, was considered clean enough to remove stains, yet gentle enough not to cause the linen to peel.

In conclusion, the problems of linen at Kingdom hotel fell into two categories; poor stock and quality of linens (see Table 1). The stock problem was caused by the par stock system and poor circulation of linen due to lack of linen runner and broken washing machine. While, the poor quality of linen was due to the shorten washing process, the failure of the washing machine, inappropriate washing chemicals, and low quality of water. Changing the par stock system, water treatment, washing machine maintenance, and changing washing chemical were conducted. Most of the solutions to the linen problems gained fruitful results. Some solutions had gained positive results, while some others were still under process and improved.

5. CONCLUSIONS

The stock and the quality of linen were problematic in the Kingdom hotel. Based on interviews and participant observations, poor stock system and circulation, lack of staff, broken machine, poor quality of water and chemical, and shortened washing process were revealed as the sources of the problems. As the solutions, changing stock system and chemical, adding staff, as well as maintaining the washing machine and quality of water treatment were taken. While the addition of staff and washing machines were under process, the changing of bleaching and water treatments had already gained positive outcomes.

The use of participant observation was enabling the study to gain in-depth information related to the problems of hotel operation, in this case the linen problems. The casual face-to-face interviews during the operational participations had made the subjects of the study to freely express information, enabling comprehensive data gathering. It has to be noted, though, confidentiality has been taken into consideration. The use of participant observation to gain fruitful information is then suggested for revealing the problems and solution to hotel operations.

REFERENCES

- [1] R. T. George and M. Hancer, "Housekeeping managers and the administration of housekeeping service," *Int. J. Hosp. Tour. Adm.*, vol. 9, no. 4, pp. 365–383, 2008, doi: 10.1080/15256480802427313.
- [2] D. Styles, H. Schönberger, and J. L. G. Martos, "Efficient Housekeeping," 2013.
- [3] R. Sihite, *Housekeeping*, 5th ed. Surabaya: Penerbit SIC, 2003.
- [4] B. Friman and B. Edvardsson, "Service quality: Complaints and compliments," *Meas. Bus. Excell.*, vol. 13, no. 1, pp. 20–26, 2003, doi: 10.1108/mbe.2003.26707bab.005.
- [5] S. J. Forbes, "The effect of service quality and expectations on customer complaints," *J. Ind. Econ.*, vol. 56, no. 1, pp. 190–213, 2008, doi: 10.1111/j.1467-6451.2008.00338.x.
- [6] A. B. Starman, "The case study as a type of



- qualitative research," *J. Contemp. Educ. Stud.*, vol. 1, no. 2013, pp. 28–43, 2013.
- [7] T. Sammut-Bonnici and J. McGee, "Case Study," *Wiley Encycl. Manag.*, vol. 9, no. January, pp. 1–2, 2015, doi: 10.1002/9781118785317.weom120012.
- [8] J. Gerring, Case Study Research: Principles and Practices. Cambridge: Cambridge University Press, 2007.
- [9] J. Dul and T. Hak, Case Study Methodology in Business Research, 1st ed. Oxford: Elsevier, 2008.
- [10] L. J. Moleong, Metodologi Penelitian Kualitatif (edisi revisi), 38th ed. Bandung: PT. Remaja Rosdakarya, 2018.
- [11] B. B. Frey, *The SAGE Encyclopedia of Educational Research*, *Measurement*, *and Evaluation*. Thousand Oaks, CA: SAGE Publications, Inc., 2018.
- [12] B. B. Kawulich, "Participant observation as a data collection method," *Forum Qual. Soc. Res.*, vol. 6, no. 2, 2005, doi: 10.17169/fqs-6.2.466.
- [13] S. Ariska and A. M. Rifiyan, "Management of Linen Housekeeping in the Premiere Hotel Pekanbaru," *JOM FISIP*, vol. 3, no. 2, pp. 1–12, 2016.
- [14] S. Munfiah and O. Setiani, "Kualitas Fisik dan Kimia Air Sumur Gali dan Sumur Bor di Wilayah Kerja Puskesmas Guntur II Kabupaten Demak," *J. Kesehat. Lingkung. Indones.*, vol. 12, no. 2, pp. 154–159, 2013, doi: 10.14710/jkli.12.2.154.
- [15] Hasrianti and Nurasia, "Analisis Warna, Suhu, pH, dan Salinitas Air Sumur Bor di Kota Palopo," in *Prosiding Seminar Nasional*, 2016, vol. 02, pp. 747–753.
- [16] M. F. Abadi, M. S. Mahendra, and I. W. B. Suyasa, "Pemetaan Kualitas Air Tanah Di Desa Dauh Puri Kaja Kota Denpasar," *Ecotrophic J. Environ. Sci.*, vol. 6, no. 2, pp. 77–80, 2015.
- [17] N. J. Cahyani, I. N. Dibia, and N. M. Trigunasih, "Analisis Daya Dukung Air Tanah untuk Kebutuhan Dometik dan Pariwisata di Kota Denpasar," *E-Jurnal Agroekoteknologi Trop.*, vol. 7, no. 1, pp. 34–44, 2018.
- [18] E. Khalil and J. Sarkar, "Effect of Industrial Bleach Wash and Softening on the Physical, Mechanical and Color Properties of Denim Garments," *IOSR J. Polym. Text. Eng.*, vol. 1, no. 3, pp. 46–49, 2014, doi: 10.9790/019x-0134649.
- [19] K. Seiphetlheng, He. J. Steyn, and R. Schall, "Anolyte as an alternative bleach for stained cotton fabrics," *J. Costumer Sci.*, vol. 2, no. Special Edition, pp. 12–23, 2017.
- [20] J. E. Blose, R. W. Mack, and R. E. Pitts, "The Influence of Message Framing on Hotel Guests'

- Linen-Reuse Intentions," *Cornell Hosp. Q.*, vol. 56, no. 2, pp. 145–154, 2015, doi: 10.1177/1938965514556480.
- [21] P. Senthilkumaran and P. S. Pratim, "Trends and Opportunities: Room Linen in Hotels," *Coularage*, vol. 64, no. 3, pp. 48–49, 2020.