

A Study on the Operational Efficiency of Online Food Delivery Executives

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Abstract

India's online food sector will have grown to a \$8 billion sector due to rapid digitization and an increase in both online buyer base and spending. Individuals can order and receive food products at their doorstep via online meal delivery services. It includes going to the website or app, choosing from a large range of cuisines, and paying using various methods. The user is informed about the expected time for food preparation and delivery via the website/application and food delivery platforms in India provide lucrative jobs to the unemployed youth, which does not require any special educational qualifications just armed with a smart phone and driving license. The objective of the study is to understand the socio demographic profile of delivery executives and the issues they encounter identify training needs based on the issues they experience and assess the effectiveness of the training programme and its influence on operational metrics

Key-words: Pick-up and Delivery Partners, Personal Digital Assistants, Customer Excellence Program.

1. Introduction

Food delivery or takeout from a local restaurant or food cooperative via a web page or app is known as online food ordering. Many of these services, like ordering consumer products online, encourage clients to create accounts with them in order to make regular ordering more convenient. A consumer will look for a preferred restaurant, which is usually categorized by cuisine, and order from

a menu of available dishes, with the option of delivery or pick-up. Payment can be made by credit card, PayPal, or cash, with a proportion of the proceeds going to the online food firm.

In 2020, the Indian internet food delivery market will be worth \$4.35 billion. By 2022, India's online food sector will have grown to a \$8 billion sector due to rapid digitization and an increase in both online buyer base and spending. Individuals can order and receive food products at their doorstep via online meal delivery services. It includes going to the website or app, choosing from a large range of cuisines, and paying using various methods. The user is informed about the expected time for food preparation and delivery via the website/application. One of the top reasons for frequent usage of online meal ordering applications was the variety of cuisines (35%), followed by exceptional savings and ease. These characteristics, combined with characteristics such as convenience, speed, and precision of delivery, are driving up demand for these services in India. "Food tech has now established itself in over 500 cities throughout India, and as consumer confidence grows, there are fresh chances for firms to 'win with the customer' in an ever-changing market." The online meal delivery market in India is now dominated by Zomato and Swiggy.

This research aims to better understand the challenges faced by delivery executives, also known as Pick-up and Delivery Partners (PDPs), which reduce their operational efficiency, and to determine the impact of a training program on PDPs by comparing their performance before and after the training program. The Customer Experience Coach (CEC) programme was created with the goal of improving delivery executives' customer satisfaction. This course is for full-time employees who work as pick-up and delivery partners (PDP). PDP's were chosen based on weekly earnings; log-in hours, order volume, efficiency, and customer satisfaction. The customer excellence program, customer interactions program, and step up earnings program are the three modules that make up the CEC program. The training module chosen for this study was step up earnings, which aimed to increase the profits of delivery executives.

2. Review of Literature

Online labour platforms are thought to have a lot of promise for transforming the way society organizes employment. Individuals or organizations using digital platforms to harness the aggregate talents, knowledge, and expertise of a big number of people to execute a task have become known as delivery executives (Zhao and Zhu 2014, Taihagh 2017). Individuals generally strive for growth and promotion in their careers, which increases their work-related duties.

When it comes to platform-mediated services, food delivery is a big growing segment. Indian consumers are accustomed to a convenient and transparent online buying experience through digital apps and e-commerce websites, and they want the same when it comes to online food ordering. To meet the different needs of clients; businesses have shifted their traditional business techniques to internet marketing. (Jyotishman Das, 2018).

Mitali Gupta (2019), investigated the issues faced by food service companies such as Swiggy, Zomato, and Uber, and classified extrinsic factors such as customer demand, restaurant food preparation time, network coverage, and traffic bottlenecks, as well as intrinsic factors such as demographics, work location, shift timings, and food item shelf life.

Training and development is a key component of employee development, as it results in a highly capable and adaptable staff that can adapt to changing business goals (Chang, 2011). Organizational business goals must be closely aligned with development solutions, which must be tightly aligned with mission-critical competences that drive business goals. The impact of training and development on operational efficiency propels delivery executives to the next level while also cultivating a positive work attitude and productive habits, both of which are required for the development of work relationships and the pursuit of higher levels of responsibility. Employees regularly increase their skills and talents through training in order to maintain and improve their career progression, which also improves employee operational efficiency.

Some researchers analyzed the criteria that delivery executives use to fine/evaluate operational KPIs, such as the Service level agreement or the time it takes to deliver the meal, in order to determine the efficiency of the delivery executives (Adithya et al., 2018). Apart from customer rating, number of orders delivered versus login hours, and number of rejections, which affect the efficiency of delivery executives, we investigated additional critical variables such as customer rating, number of orders delivered versus login hours, and number of rejections. Due to differences in customer rating, amount of orders, service level agreement, login hours, profits, and number of rejections in different locations, it would be excellent to study and develop training program.

3. Objectives of the Study

- To understand the socio demographic profile of delivery executives and the issues they encounter.
- To identify training needs based on the issues they experience.
- To assess the effectiveness of the training program and its influence on operational metrics.

4. Research Methodology

There were three stages to the study, which included both descriptive and experimental research.

In the first phase, we used a questionnaire to collect data on the challenges faced by delivery executives (n=367), such as the most frequently faced challenge and how often they face the challenge on a weekly basis, and we used an interview method to collect data on the challenges faced by fleet managers at the hub.

The study's second step was a Pre-Training assessment, in which data was collected from delivery executives on their satisfaction with various work-related elements (n=207), as well as operational metrics data from the individual fleet manager to determine their efficiency.

The study's third step involved evaluating the executives' operational efficiency after they had completed the training program. Data was obtained from delivery executives (n=80) and operational metrics from fleet managers concerning the number of orders per week, number of log in hours each week, average efficiency, average service level agreement (SLA), and time required to deliver the order, average customer rating and number of rejections per week. Using coding and tabulation procedures, the responses were extracted. The SPSS programme was used to do the quantitative data analysis.

5. Analysis & Findings

Socio Demographic Profile of the Respondents

Sixty-five percent of delivery executives are under the age of thirty, while 35 percent are between the ages of thirty and thirty-one. The delivery executives who had not completed tenth grade made up 40% of the sample, followed by graduates who made up 30% of the sample. This study reveals that people of various educational backgrounds are willing to work as delivery executives, citing financial need and a lack of positions that match their qualifications as the primary reasons shown in table 1.

Table 1 - Socio Demographic Profile of the Respondents

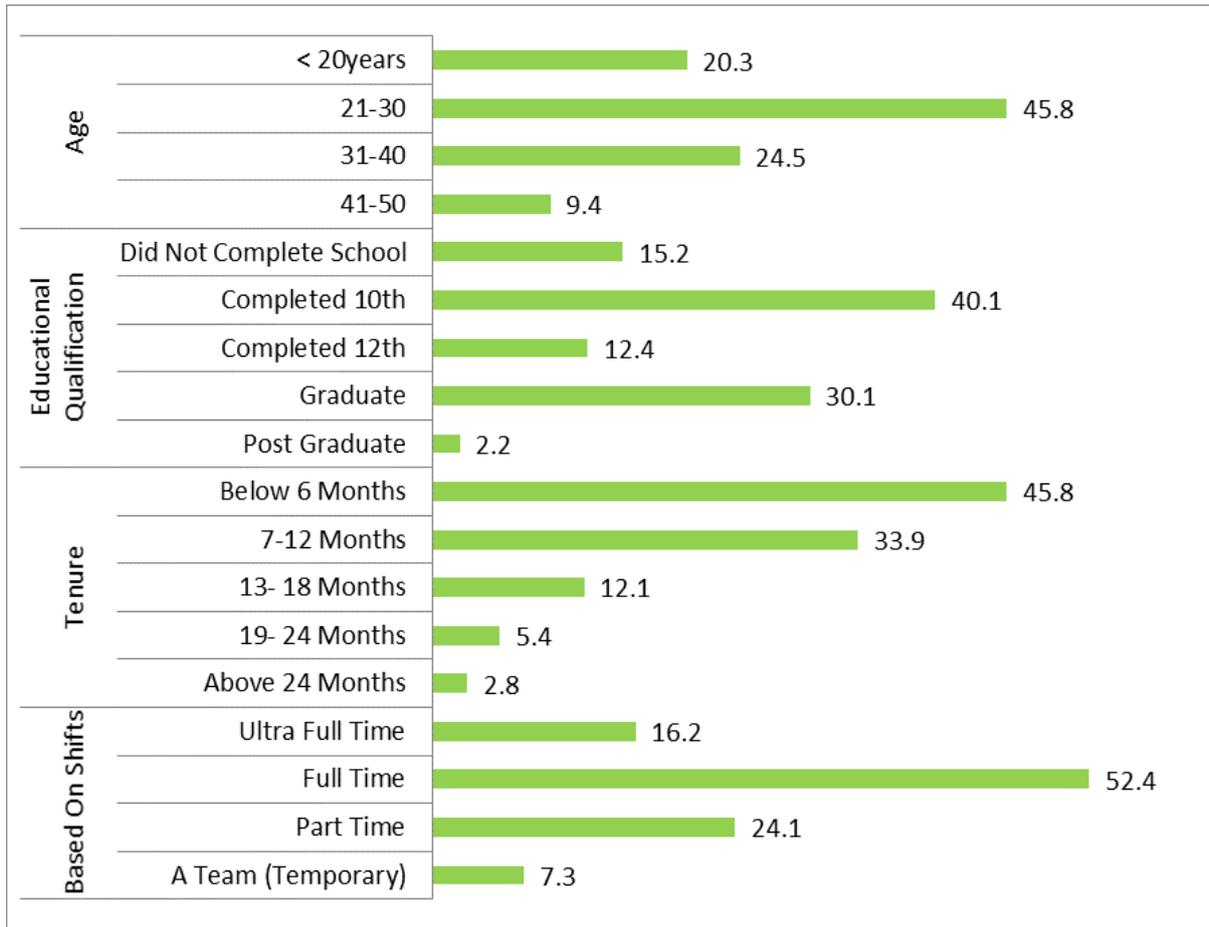
Particulars		Percentage
Age	< 20 years	20.3
	21-30	45.8
	31-40	24.5
	41-50	9.4
Educational Qualification	Did Not Complete School	15.2
	Completed 10th	40.1
	Completed 12th	12.4
	Graduate	30.1
	Post Graduate	2.2
Tenure	Below 6 Months	45.8
	7-12 Months	33.9
	13- 18 Months	12.1
	19- 24 Months	5.4
	Above 24 Months	2.8
Based On Shifts	Ultra Full Time	16.2
	Full Time	52.4
	Part Time	24.1
	A Team (Temporary)	7.3

The majority of the delivery executives had less than a year's experience, accounting for roughly 80% of the overall force. The attrition rate in this type of job is extremely high, as evidenced by this data. Delivery executives typically take this profession on a temporary basis to supplement their income while they look for a more permanent position. Also, this study reveals that delivery executives who have worked for more than one year are few in number, and past investigation revealed that they were executives who had not completed their education and relied on this job as their sole source of income, thus they stayed on the same position.

In comparison to the other shifts, full-timers are the most numerous, followed by part-timers. The full-timers work during the lunch and dinner periods.

The ultra-full-timers who cover the breakfast peak between 7 am and 11 am, in addition to the lunch and dinner peak, are fewer in number, despite the higher earning potential. This is due to the fact that many restaurants do not open for orders until after 10 a.m., and customer demand for breakfast is lower.

Chart 1 - Socio Demographic Profile of the Respondents



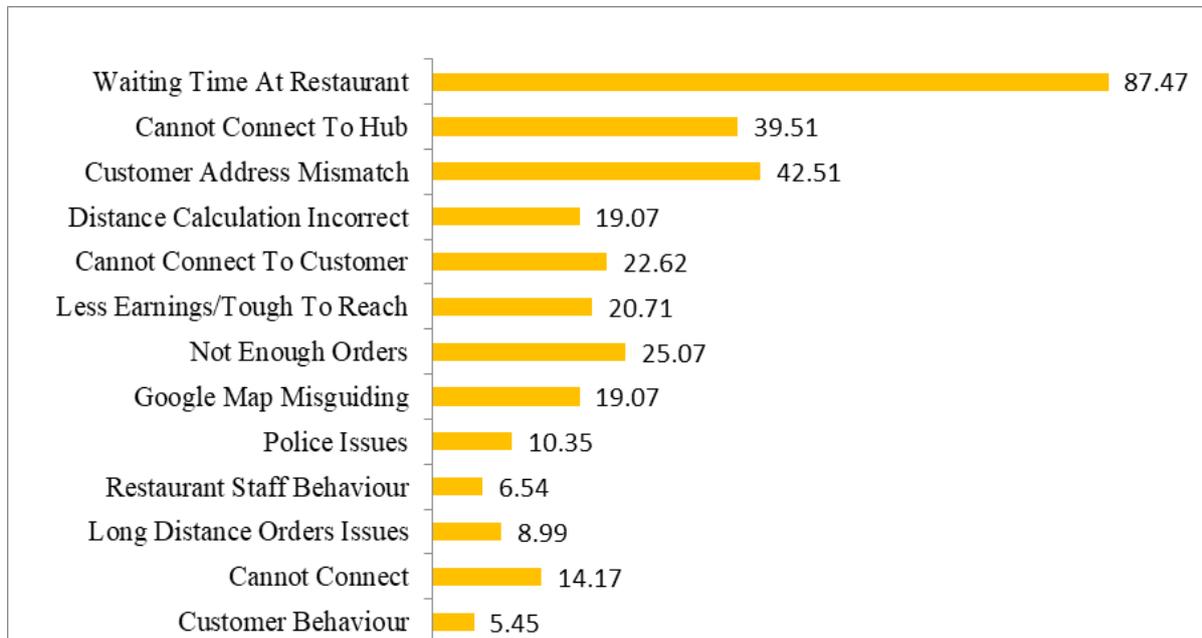
Challenges Faced by the Delivery Executives

Table 2 depicts the difficulties that delivery executives confront. The most common difficulty faced by most delivery executives is an 87.4 percent wait time at the restaurant, followed by an inability to connect to the hub. Customer-related issues such as address mismatch and customer behaviour are also among the most common challenges faced by delivery executives. Less number of orders and less earnings are almost scored equally, as they are related factors; the fewer the orders, the lower the delivery executives' earning potential. Customer related issues like address mismatch and customer behavior is also counted as one of the frequently faced challenges by the delivery executives, both less number of orders and less earnings are almost scored equally, as they are related factors, the lesser the number of orders lesser is the earning potential of the delivery executives. Apart from Google map difficulties, the most common APP faults were long order difficulties and inaccurate distance calculations.

Table 2 - Challenges Faced by the Delivery Executives

Challenges	Percentage
Waiting Time At Restaurant	87.47%
Cannot Connect To Hub	39.51%
Customer Address Mismatch	42.51%
Distance Calculation Incorrect	19.07%
Cannot Connect To Customer	22.62%
Less Earnings/Tough To Reach	20.71%
Not Enough Orders	25.07%
Google Map Misguiding	19.07%
Police Issues	10.35%
Restaurant Staff Behaviour	6.54%
Long Distance Orders Issues	8.99%
Cannot Connect	14.17%
Customer Behaviour	5.45%

Chart 2 - Challenges Faced by the Delivery Executives



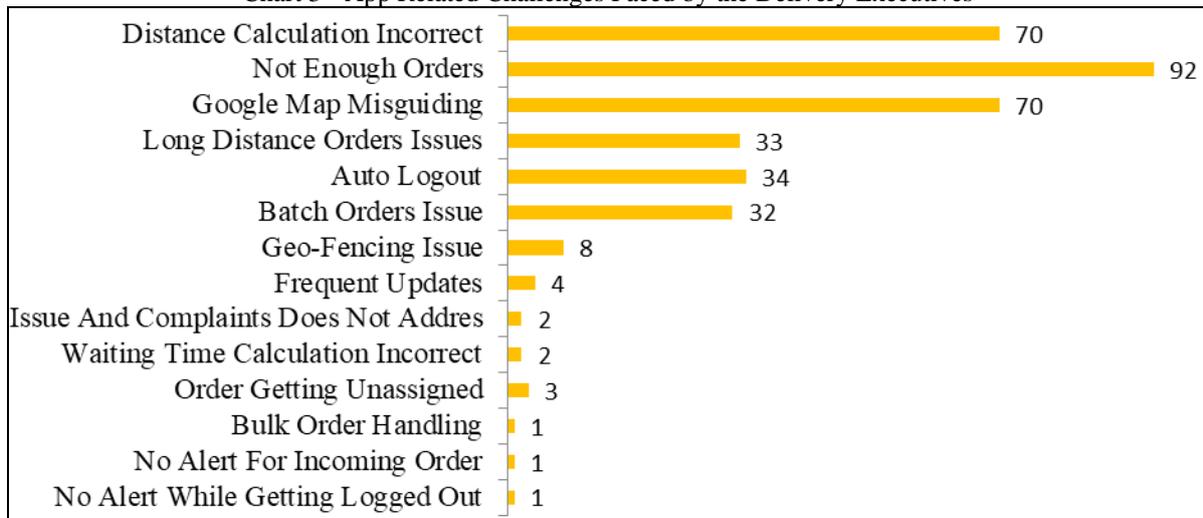
App Related Challenges Faced by the Delivery Executives

Table 3 depicts the delivery executives' App-related issues. The most common issue is a lack of orders; orders are distributed to delivery executives based on an algorithm that considers the delivery executive's availability, proximity to the restaurant for speedy arrival, the executive's average SLA time, the number of rejections, and customer rating. An order is assigned to a delivery executive based on all of these characteristics.

Table 3 - App Related Challenges Faced by the Delivery Executives

CHALLENGES	Percentage
Distance Calculation Incorrect	70
Not Enough Orders	92
Google Map Misguiding	70
Long Distance Orders Issues	33
Auto Logout	34
Batch Orders Issue	32
Geo-Fencing Issue	8
Frequent Updates	4
Issue And Complaints Does Not Address	2
Waiting Time Calculation Incorrect	2
Order Getting Unassigned	3
Bulk Order Handling	1
No Alert for Incoming Order	1
No Alert While Getting Logged Out	1

Chart 3 - App Related Challenges Faced by the Delivery Executives



Paired T Test to Compare the Pre-Training and Post Training Operational Metrics

Table 4.1 - Paired T Test to Pre-Training and Post Training Operational Metrics

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of Difference				
					Lower	Upper			
Pair 1	Pre Number of orders per week - Post Number of orders per week	.425	1.629	.182	.063	.787	2.334	79	.022
Pair 2	Pre Earnings per week – Post Earnings per week	1.350	1.202	.134	1.082	1.618	10.04	79	.000
Pair 3	Pre Customer rating – Post Customer rating	-.188	1.192	.133	-.453	.078	-1.407	79	.163
Pair 4	Pre Log-in hours per week- Post Log-in hours per week	.487	1.396	.156	.177	.798	3.123	79	.003
Pair 5	Pre Average SLA- Post Average SLA	-.300	.973	.109	-.517	-.083	-2.758	79	.007
Pair 6	Pre Number of rejections per week- Post Number of rejections per week	-.16250	.66454	.07430	-.31039	-.01461	-2.187	79	.032

$H_0: \mu_1 = \mu_2$; “The means of the operational metrics of the delivery executives are equal before and after training”

Number of orders p value is $0.02 < 0.05$ $\mu_1 \neq \mu_2$: Reject null hypothesis

Earnings p value is $0.00 < 0.05$ $\mu_1 \neq \mu_2$: Reject null hypothesis

Customer rating p value is $0.163 > 0.05$ $\mu_1 \neq \mu_2$: Accept null hypothesis

Number of login hours p value is $0.003 < 0.05$ $\mu_1 \neq \mu_2$: Reject null hypothesis

SLA p value is $0.007 < 0.05$ $\mu_1 \neq \mu_2$: Reject null hypothesis

No of Rejections p value is $0.032 < 0.05$ $\mu_1 \neq \mu_2$: Reject null hypothesis

Table 4.1 illustrates that after the training, there is a significant difference in the number of orders, earnings, log in hours, rejections, and SLA. A simple analysis was performed to further investigate the impact of training in table 4.2.

Table 4.2 - Pre - Training and Post Training Metrics

Metrics	Login hours	Efficiency	SLA	Orders	Customer rating	Rejections	Earnings
Pre training	68.52.53	1.945	32.74	98.16	4.63	3.36	5323
Post training	78.58.06	1.943	34.28	106.53	4.64	4	6350
Difference	10:05	0.02	1.54	8.37	0.01	0.64	1027

We can conclude from Table 4.2 that the SLA changed by 1.54 minutes after training, which is an important metric because the faster the delivery, the higher the customer happiness. The average salaries of delivery executives have risen by Rs.1027, which is a substantial benefit.

Weekly Analysis of Operational Metrics

To accommodate the dynamic nature of the delivery metrics, the average metric score was taken every week. For week 1 (before training), the average number of orders was 107. If the delivery executive performed better than this, he improved, so a score of 1 was given. If the delivery executive did not improve, a score of 0 was given. Similarly, for week 1 and week 6, all metrics were mapped for all 80 CEOs (post training). The total of all ratings would indicate whether or not the training was effective. The averages of operational metrics gathered for 6 weeks, beginning with week 1 before training, are shown in table 5.1.

Table 5.1 - Weekly Analysis of Operational Metrics

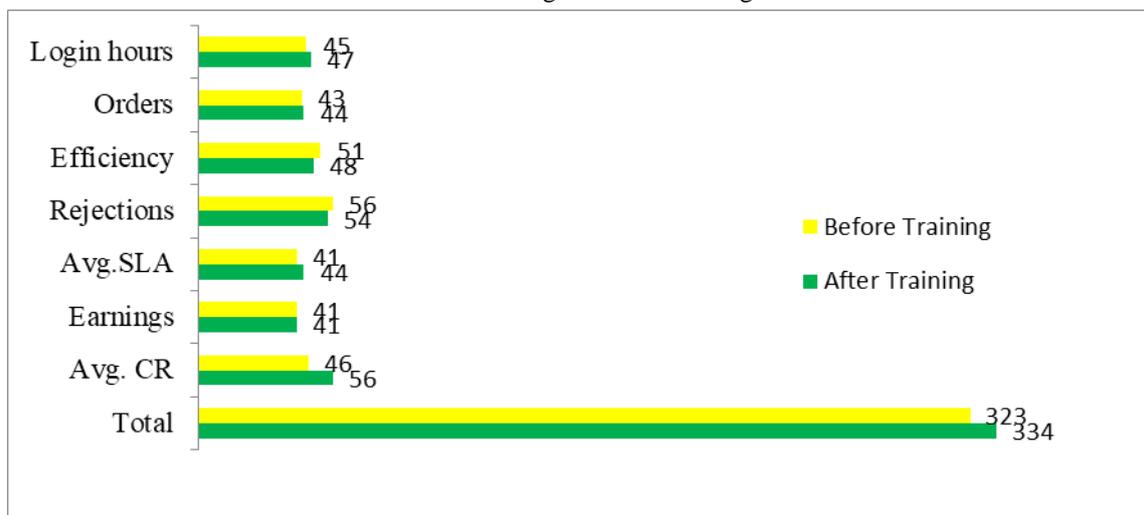
weeks	Login Hours	Orders	Efficiency	Rejections	Avg. SLA	Earnings	Avg. CR
Week 1	78:58:06	107	1.94	4.03	34.29	6350	4.64
Week 2	76:05:46	103	1.93	3.44	33.41	5562	4.68
Week 3	57:51:26	86	1.68	3.26	31.29	4980	4.56
Week 4	72:07:27	101	1.84	3.79	33.63	5352	4.65
Week 5	72:08:21	100	2.48	2.88	31.96	5367	4.65
Week 6	66:11:26	95	1.79	3.55	33.44	5358	4.64

Table 5.2 - Pre Training and Post Training Metrics

	Login Hours	Orders	Efficiency	Rejections	Avg. SLA	Earnings	Avg. CR	Total
Before Training	45	43	51	56	41	41	46	323
After Training	47	44	48	54	44	41	56	334

We can conclude from table 5.2 that the login hour's orders SLA and customer rating have improved slightly. The combined total score of all operational measures has also improved by 11 points.

Chart 4 - Pre Training and Post Training Metrics



6. Managerial Implications

We identified eight major difficulties or grievances as a result of the investigation, including restaurant wait time. Unable to connect to the hub, customer address mismatch, inaccurate distance calculation due to the app, unable to connect customer once they arrive at their destination Earnings are down, incentives are difficult to come by, and the amount of orders are down. These are the key

challenges that delivery executives experience in all food service hubs; if these problems are addressed successfully by management, performance will increase. Training, according to theory, improves mankind's talents and abilities in order to preserve and increase employment position. According to theory, delivery executives were given training and their performance was measured using operational metrics. We discovered an increase in the ordering rate, service level agreement, login hours, average earning, and customer rating, with more positive customer ratings encouraging employees to have a higher chance of success.

Overall, delivery executives' incomes have increased, which has resulted in higher job satisfaction. Employees are a firm's asset; therefore happy employees will tend to produce happier customers, which will raise demand for the company, resulting in higher income.

Food service industries can provide clients with wow elements such as food supplement services, payback offers, and free delivery.

Human issues require more effort than technical issues, such as the hub-based problem, which has two effects: one on the restaurant side and the other on the delivery side; both must be addressed simultaneously in order to gain a potential market and provide effective service to customers, as all hubs face similar issues. As we spoke with fleet managers, the issues faced by delivery executives were divided into two categories. Fake orders, self-ordering, restaurant escalations on delivery executives, and log in defaulters are some of the issues faced by delivery executives (delivery executives do not log-in during peak hours that leads to scarcity of manpower), customer escalations on delivery executives, minimum guarantee, payout defaulters (delivery executives who log in but do not take orders because they are not in the specified locations), lack of grooming standards for delivery executives, attitude and behavioural issues with the reporting manager and fellow executives at the Hub.

Non-Delivery executive challenges include policy issues, payment delays, a small number of restaurants, a payout sheet that does not contain all details, chain restaurants (food preparation time exceeds 45 minutes), rejoining issues, Delivery executive location status not updated in the dashboard, and document quality blurred.

According to the findings, the operational team needs to improve support factors such as better hub assistance and fleet manager support, as well as improve the software application, call centre coordination, particularly in local language, and quick response to queries, to help solve technical issues to a certain extent. Customers are more interested in technology because of its convenience and ability to save time. The user-friendly and quick response time, as well as the algorithm's consideration of the needless travel path, has resulted in increased consumer support.

The goal of operation metrics is to increase delivery executives' earnings by encouraging them to take more orders, which will increase the company's revenue. The delivery executive's compensation or payment is based on effort — the amount per order is determined by the distance travelled, the time spent waiting at the restaurant, and whether or not the item was successfully delivered. The delivery prices range from Rs.35/- to Rs.120/-. The weekly payout is determined by the number of orders delivered and the incentives given for meeting the weekly objective, which is divided into zones.

Human and technical concerns can be resolved because both are intrinsically controllable elements, but the key uncontrollable extrinsic aspect is increasing the number of clients and orders. To solve these challenges, the food service industry should focus more on promotional activities including pop-up advertisements, banner advertisements, templates, combo deals, and discounts.

How to reach an increasingly distant audience is a major commercial concern. To retain commercial relationships with major client restaurants, trade marketing methods can be used. The smooth marketing is also a result of the agreement between the food service sector and restaurants. With the growing use of handheld devices like Personal Digital Assistants (PDAs) in restaurants, pervasive applications will become a significant tool for restaurants to improve management by reducing human error and offering better customer service.

7. Conclusion

This research provides useful information on how to improve the operational efficiency of delivery executives in the food service industry in Chennai. To begin, this research examines the technical and non-technical issues that Delivery Executives encounter. The study's conclusions can only be applied to theory to a limited extent, not to the broader population. Second, this study concentrated on the necessity for a training program and its characteristics.

Future study in India might adopt a broader perspective to address the numerous features of training programs connected to socioeconomic, behavioural, and cultural issues. Third, as per our findings, training can help delivery executives increase their operational efficiency. Only when the training is offered constantly and over a longer period of time can the full potential of the training program be measured. In this aspect, our research demonstrates delivery executives' ability to act and shape their own future, enhancing our knowledge of their adoption as full-time employees rather than shift workers. Future studies could focus on client restaurant issues and their impact on the food service industry. Finally, we believe that our research will inform the food service industry about the

important factors that influence delivery executives' operational efficiency, highlighting the necessity of training in this regard.

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