The Study on The Perception of The Students About The Course Provided In Inker Robotics

Mr. Rithin Mohanan[1], Ms./Dr. Sreejamol. K. S[2]
[1]Dept of Management Studies
[2]Associate professor, Dept of Management Studies
[1, 2] Jawaharlal Business School, Jawaharlal College of Engineering & Technology, Ottapalam.

Abstract- *This study aims to explore the perception of students regarding the courses provided by INKER Robotics. The research objectives focused on assessing student's satisfaction levels, their perception of the course content, the effectiveness of the classes and their overall experience with INKER Robotics courses. The sample population consisted of students who had completed courses at INKER Robotics, encompassing various age groups and educational backgrounds using a questionnaire. The collected data was analyzed using both quantitative and qualitative techniques to identify patterns, themes, and key insights. The findings provide valuable information about student's perceptions, highlighting strengths and areas for improvement.*

Keywords- Perception, effectiveness of teaching, Customer service, Customer experience, Educational methodologies.

I. INTRODUCTION

Inker is one of the leading firm, spearheading Robotics, Artificial Intelligence and Emerging Technology education, Research and Development and Product development in India. Headquartered in Thrissur, Inker has branches in Kerala & UAE. Inker has been awarded as "The Best Robo-Lab Setup in India" at the Stem summit 2019 held at IIT Delhi. Inker is a Certified ISO 9001:2005 quality management system Company. Council for Robotics and Automation (AICRA) chosen Inker to be state coordinator in Kerala since March 2019 for conducting seminars, workshops, and summits across the state. Inker owns an environment with Future Ready lab facility in Thrissur for Robotics, AI and Emerging Technologies, The humanoid robot, etc. Robotics is becoming important and is used more often in industrial manufacturing facilities. Trends in the industrial robotics market include increased digitalization of services and automation in multiple stages of manufacturing.

II. LITERATURE REVIEW

- **Systematic Review of Research Trends in Robotics Education for Young Children**, **Sung Eun Jung and Eun-sok Won(2018**), This study tells about the systematic and thematic review on robotics education using robotics kits for young children.
- **Learning while doing: practical robotics education**, **K. Nagai, Department of Robotics, Ritsumeikan University, Kusatsu, Shiga, Japan(2001),** In the article, first the basic concepts of practical engineering education are presented. Second, the outline of classes for practical and effective education at the Department of Robotics in Ritsumeikan University.
- **Children, robotics, and education**, **J. Johnson, *Artificial Life and Robotics* , volume 7, pages16–21 (2003),** The study tells that robotics has increased astonishingly in the last few years and its benefits in education at all levels.
- **Robotics in Education & Education in Robotics: Shifting Focus from Technology to Pedagogy**, **Dimitris Alimisis School of Pedagogical and Technological Education, Greece(2012),** It highlights the role of constructivist pedagogy and consequent educational methodologies either while using robotics in school education or training teachers to use robotics for teaching purposes.
- **The contribution of robotics education in primary schools: Teaching and learning, A. Lathifah, C. W. Budiyanto, R. A. Yuana (2019),** This tells that the adoption of robotics in education has gained attention. Robotics activities can be applied in any level of education since the early childhood up to, starting in primary schools until graduate schools.

III. OBJECTIVES OF THE STUDY

- To understand the perception of the students who had undergone courses in Inker Robotics.
- To measure the effectiveness of the courses provided.
- To understand the factors that lead to better satisfaction level.
- To measure the satisfaction level of students.

IV. RESEARCH METHODOLOGY

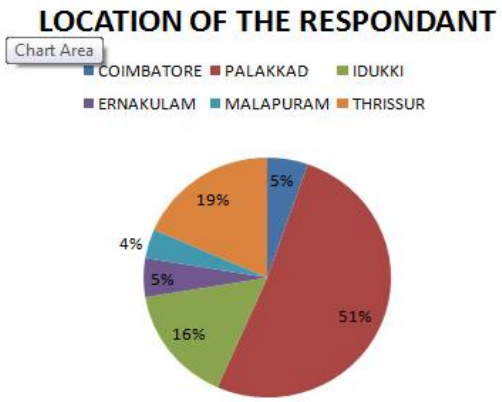
Research methodology is a way to explains the way how a research has to be carried out. It is a logical, systematic plan to find solution for a research problem. A research design is concerned with turning a research question into a testing project. The best depends on the research question. The research design for present study is a descriptive research design that seeks to discover ideas an insight to ring out new relationships. Research design is flexible enough to provide opportunity for considering different aspects of research problem.

The population of the study consists of 96 students. Sample size is 76. For this study, systematic sampling technique was used. Systematic sampling is a probability sampling method where we select members of the population at a regular interval. Data collection methods can be categorized into primary methods of data collection and secondary methods of data collection. Here primary data are collected with the help of questionnaire.

V. DATA ANALYSIS

1. LOCATION OF THE STUDENTS:

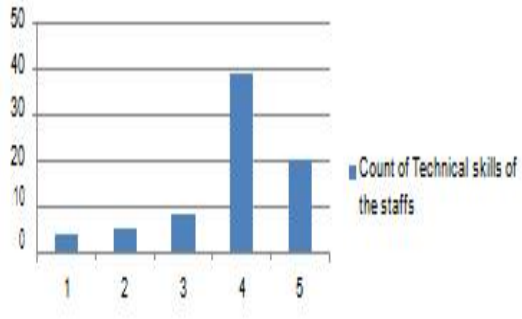
From the below chart, it shows that majority of the respondents are from Palakkad followed by Thrissur. It is seen that students from Ernakulam and Coimbatore exhibit same percentage of the responds. Students from Malapuram exhibit same percentage of the response.



2. RATING OF THE TECHNICAL SKILLS OF STAFFS:

From the below chart, the ratings indicate the distribution of technical skills among the staff members, with rating 4 having the highest count and rating 1 having the lowest count**.**

Count of Technical skills of the staffs



3. ABILITY OF THE TECHNICAL PERSON:

By performing weighted average analysis method, It is found that technical skills of the staff has got the highest value and the staff needs to improve his communication skills as it has got the least weighted average.

Value	Communication skills of staffs	Attitude Of staffs	Ability of staffs to listen and understand you	Ability of staffs to clarify you doubts	Technical skills of the staffs	Ability of the faculty to engage the session	Narration of main points of the presentation
1	8	8	8	4	4	4	5
2	13	9	9	9	5	10	4
3	12	8	8	8	8	13	12
4	31	39	36	39	39	36	43
5	12	12	15	16	20	13	12
Total	254	266	269	282	294	272	281
Weighted average	3.34	3.5	3.53	3.71	3.86	3.57	3.69
Rank	7	6	5	2	1	4	3

4. THE QUALITY OF THE MATERIALS PROVIDED:

By performing weighted average analysis method, It is found that attractiveness and information in the presentation template has got the highest value and the team needs to improve the quality of notes provided as it has got the least weighted average.

Value	Attractiveness and information in the presentation template	Visuals to support the message	Confidence level of the presenter	Notes provided
1	4	4	4	8
2	5	5	5	17
3	0	20	8	12
4	47	31	47	35
5	20	16	12	4
Total	302	278	286	238
Weighted average	3.97	3.65	3.76	3.13
Rank	1	3	2	4

5. ANALYSIS OF VARIANCE BETWEEN NUMBER OF DAYS OF PROGRAM AND SATISFACTORY LEVEL:

It appears that the hypothesis being tested is related to the relationship between "Number of Days of Program" and "Satisfactory Level".

- **Null Hypothesis (H0):** There is no significant difference in the mean "Satisfactory Level" among groups with different "Number of Days of Program."
- **Alternative Hypothesis (Ha):** There is a significant difference in the mean "Satisfactory Level" among groups with different "Number of Days of Program."

This ANOVA table provides information on the statistical analysis of variance between groups and within groups. It appears that the factor being analyzed is the "Number of Days of Program," and the dependent variable is the "Satisfactory level."

ANOVA results indicate that there is a significant difference between the groups. The p-value (5.58227E-47) is much smaller than the conventional significance level of 0.05, suggesting strong evidence against the null hypothesis. The F-value (449.511) is also large, further supporting the conclusion that the means of the groups are significantly different.

ANOVA: Single Factor						
SUMMARY						
Groups	**Count**	**Sum**	**Average**	**Variance**		
Number of Days of Program	76	1995	26.25	84.75		
Satisfactory level	76	284	3.73	0.943		
ANOVA						
Source of Variation	**SS**	**Df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	19260.01	1	19260.00	449.511	5.58	3.90
Within Groups	6426.987	150	42.84			
Total	**25686.99**	**151**				

VI. CONCLUSION

After conducting a comprehensive analysis, it can be concluded that the overall student satisfaction is high. The course content offered by Inker Robotics is highly regarded by students. The courses are designed to cover a wide range of topics, ensuring that students receive a comprehensive education in robotics. Furthermore, Inker Robotics employs experienced and knowledgeable instructors who are experts in their respective fields. These instructors have a strong understanding of robotics concepts and technologies and are able to effectively communicate and engage with students. The instructors' expertise contributes significantly to the positive learning experience and high levels of student satisfaction. In addition, Inker Robotics prioritizes providing a conductive learning environment for its students. The firm invests in modern facilities, well-equipped laboratories, and cutting-edge robotics tools and technologies. This ensures that students have access to the necessary resources to enhance their learning and practical skills.

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