



## The Importance of Employees in Biotechnology Enhancement

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### **Abstract:**

A study was conducted to determine the opinions of workers in the biotechnology industry about the importance of employees in improving biotechnology. A questionnaire was distributed to 10 participants and the data was collected and analyzed. The purpose of this study is to determine the opinions of workers in the biotechnology industry about the importance of employees in improving biotechnology. A questionnaire was used to collect data from 10 participants in the biotechnology industry. The results indicate that employees play a crucial role in improving biotechnology by innovating new ideas and thinking creatively. The conclusions indicate that employees play a crucial role in improving biotechnology and that involving employees in decision-making helps to innovate new ideas and maintain employee happiness. The study recommends involving employees in decision-making, providing training opportunities and conferences for employees, and encouraging employees to innovate new ideas. A review of the literature was also conducted to examine the role of employees in improving biotechnology.

### **Introduction**

Biotechnology plays a crucial role in various fields, including healthcare, environmental, agricultural, and industrial sectors. Given the significance of this field, it is essential to understand all the resources, people, and factors that contribute to its development and enhancement, so that its benefits can be extended to all countries, particularly developing ones.

Employee is an important key element of any organization. The success or failure of the organization depends on the employee development and their skills performance towards specific jobs description. Therefore, organizations are always keen to nourish technical and scientific employee skills in Industries. Biotech Industries is one of the most popular scientific organizations in relation to public interest and it has great impact on the public health. In Biotech industry[1].

## **Importance of the Study**

Enhancing biotechnology is a crucial matter in various fields such as health, agriculture, and industry. Employees play a vital role in enhancing biotechnology and have a significant impact on the development of new products and services.

## **Research Objectives**

- ✓ To identify the role of employees in enhancing biotechnology.
- ✓ To determine how employees contribute to enhancing biotechnology in various fields.
- ✓ To analyze the challenges faced by employees in enhancing biotechnology, such as lack of skills and experience, intense competition, and rapid technological changes.
- ✓ To propose solutions to overcome the challenges faced by employees in enhancing biotechnology, such as developing training programs, providing educational opportunities, and improving working conditions.

## **Motivations for the Research**

- ✓ The need to enhance biotechnology in various fields.
- ✓ The importance of the role of employees in enhancing biotechnology.
- ✓ The need to identify the challenges faced by employees in enhancing biotechnology and propose solutions to overcome them.
- ✓ The desire to develop the skills and expertise of employees to enhance biotechnology.
- ✓ The need for scientific research in the field of biotechnology to enhance knowledge and understanding in this field.

## **Research Questions**

- ✓ Who are the employees working in the field of biotechnology?
- ✓ What are the challenges they face?
- ✓ What are the solutions to these challenges?
- ✓ What are the characteristics of a successful employee?
- ✓ How do employees enhance biotechnology?

## **Literature review**

### 1. Who are Employees?

Employees are individuals who work in an organization or company and play a crucial role in achieving the goals and objectives of the organization (koontz.2019, p123) [2]. Employees are individuals who work in an organization or company and perform specific tasks to achieve the organization's objectives, and they play a crucial role in the organization's success (Journal of man,2020) [3]. Employees are individuals who work in an organization or company and perform specific tasks to achieve the organization's objectives, and they play a crucial role in developing skills and expertise. (Robbins. 2019.p145) [4]

### Types of Employees:

#### ➤ Technical Employees:

They work on developing new products and services.

#### ➤ Administrative Employees:

They work on developing products and organizing materials.

➤ Field Employees:

They work on applying new products and services in the field.(Koontz,2019,p125)[2]

2-Who are the employees working in biotechnology?

The following table1 shows the different fields of biotechnology and the role of employees in that field:

The field	Role of employees
1. Field of Research and Development	Biology plays a crucial role in the development of biotechnology by developing new resources and improving chemical processes. (6)
2. Biomedical Engineers	Biomedical engineers design and develop biological systems, and use genetic engineering techniques to design and develop living organisms with specific characteristics. (6)
3. Computer Scientists	Computer scientists work on developing software and computer systems to handle biological data, helping to design databases that convert biological data (such as nucleotides) into usable data for designing molecules that are produced in genetic engineering in bacteria to produce, for example, insulin, and in the production of vaccines. (7)
4. Field of Production and Manufacturing	In the field of production and manufacturing, production engineers play a crucial role in designing and developing production processes. Manufacturing engineers work on developing and improving manufacturing processes. (8)
5. Production Technicians	Production technicians work on operating and maintaining equipment. (9)
6. Field of Marketing and Sales	Marketing and sales staff play a crucial role in developing marketing strategies and work on selling products and services. (10)
7. Public Relations Officers	Public relations officers work on enhancing the company's image, and communication officers work on communicating with customers and suppliers. (11)
8. Field of Administration and Finance	Management administrators manage the

<b>9. Accountants and Human Resources Officers</b>	<p>company, and financial managers work on financial management. (12)</p> <p>Accountants work on managing financial reports, and human resources officers work on managing human resources. (13)</p>
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## **Strategic Human Resource Management in Biotech Organizations**

- ✓ Improving organizational culture and increasing innovation and employee retention
- ✓ Improving company performance
- ✓ Improving organizational culture
- ✓ Increasing innovation
- ✓ Increasing employee retention

## **Challenges Faced by Employees in Biotechnology**

- ✓ Lack of managerial skills among scientists appointed to managerial positions
- ✓ Failure to involve employees in the decision-making process
- ✓ Lack of sense of ownership and autonomy among employees
- ✓ Tension between planning department and production laboratories
- ✓ Lack of freedom of information
- ✓ Lack of sense of ownership among employees.

## **Solutions to Overcome Challenges in Biotechnology**

- ✓ Involving employees in the decision-making process
- ✓ Increasing employees' sense of ownership and autonomy in their work
- ✓ Providing training and development for employees
- ✓ Providing freedom of information
- ✓ Providing a sense of ownership among employees.

## **Characteristics of Empowered Employees in Biotechnology**

- ✓ An employee who feels a sense of ownership and autonomy in their work
- ✓ An employee who is involved in the decision-making process
- ✓ An employee who receives training and development
- ✓ An employee who has a sense of responsibility and commitment to their work
- ✓ An employee who has a sense of freedom in their work. (5).

## **Methodology:**

"The research approach is descriptive, using a questionnaire to collect and analyze data. A Google Survey will be created and sent to ten individuals working in the biotechnology field. The survey will consist of ten questions related to the challenges faced by employees in the biotechnology field, how employees work to increase innovation, how to retain employees, the characteristics of a successful biotechnology employee, what they should do, and how employees can develop themselves. The role of administrative employees in this field will also be explored. The questions

will cover all aspects that make an employee competent in the biotechnology field, how to improve this field, and the challenges that may arise in this field and how to overcome them. The survey will also show that administrative work has an important role in improving this field.

### **Research Methodology:**

- ✓ Type of research: Descriptive
- ✓ Sample: 10 individuals working in the biotechnology field
- ✓ Tools: Online questionnaire using Google Survey
- ✓ Method of data collection: Online survey
- ✓ Method of data analysis: Statistical analysis

### **Limitations and Constraints:**

- ✓ Financial constraints: None
- ✓ Time constraints: The research must be completed within 28 days
- ✓ Other constraints: None

The survey responses will be collected, analyzed, and the results will be extracted and presented.

### **The results**

A study was conducted to determine the opinions of workers in the field of biotechnology regarding the importance of employees in improving biotechnology. A questionnaire was distributed to 10 participants, and the data was collected and analyzed.

### **The results:**

This table 2 shows the data collected from the participants, and the data indicates the following:

question/answer	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Companies in the biotech industry face challenges in coming up with new ideas. When employees are involved in decision-making and have control over their work, it helps to create new ideas and keeps employees happy.	2	8	—	—	—
2. Biotech employees should be willing to take risks and follow ethical guidelines	6	4	—	—	—
3. Employees learn and grow through training and attending conferences	1	8	—	—	—
4. Good employees are able to come up with new ideas, think creatively, and solve	4	6	—	—	—

problems.					
5. They should be self-motivated and patient.	3	7	—	—	—
6. Employees in administrative roles play a crucial part in improving biotech products.	2	7	1	—	—
7. Employees are essential in developing and using biotechnology in different fields.	3	7	—	—	—
8. They create new products and technologies to help society.	1	8	—	—	—
9. Biotech companies need employees to come up with new ideas and grow.	2	8	—	—	—
10. Managing employees well is important for success in the biotech industry."	2	8	—	—	—

**From this table, we find that:**

1. Companies in the biotech industry face challenges in coming up with new ideas. When employees are involved in decision-making and have control over their work, it helps to create new ideas and keeps employees happy.
  - ✓ Strongly Agree: 20%
  - ✓ Agree: 80%
2. Biotech employees should be willing to take risks and follow ethical guidelines.
  - ✓ Strongly Agree: 60%
  - ✓ Agree: 40%
3. Employees learn and grow through training and attending conferences.
  - ✓ Strongly Agree: 20%
  - ✓ Agree: 80%
4. Good employees are able to come up with new ideas, think creatively, and solve problems.
  - ✓ Strongly Agree: 40%
  - ✓ Agree: 60%
5. They should be self-motivated and patient.
  - ✓ Strongly Agree: 30%
  - ✓ Agree: 70%

6. Employees in administrative roles play a crucial part in improving biotech products.

- ✓ Strongly Agree: 20%
- ✓ Agree: 70%
- ✓ Neutral: 10%

7. Employees are essential in developing and using biotechnology in different fields.

- ✓ Strongly Agree: 30%
- ✓ Agree: 70%

8. They create new products and technologies to help society.

- ✓ Strongly Agree: 10%
- ✓ Agree: 70%
- ✓ Neutral: 20%

9. Biotech companies need employees to come up with new ideas and grow.

- ✓ Strongly Agree: 20%
- ✓ Agree: 80%

10. Managing employees well is important for success in the biotech industry.

- ✓ Strongly Agree: 20%
- ✓ Agree: 80%

### **The analysis and discussion**

The results were analyzed and trends and patterns in the data were identified. The results indicate that employees improve biotechnology by generating new ideas, thinking creatively, creating new products and technologies to help society, and administrative employees work to improve biotechnology products. Employees in the biotechnology industry should be willing to take risks, follow principles and ethics, solve problems, and be patient. Employees learn and develop through training courses and attending conferences. Involving employees in decision-making helps to generate new ideas and maintains employee satisfaction. Effective employee management is crucial for success in the biotechnology industry.

### **The conclusions and recommendations**

were derived from the results, and recommendations were made that can lead to the improvement or development of the research.

#### **1. Conclusions:**

1. Employees play a crucial role in improving biotechnology by innovating new ideas and thinking creatively.
2. Administrative employees work to improve biotechnology products.
3. Employees learn and develop through training courses and attending conferences.
4. Involving employees in decision-making helps to innovate new ideas and maintain employee happiness.

## **2. Recommendations:**

1. Biotechnology companies should involve employees in decision-making to stimulate innovation and creative thinking.
2. Companies should provide training opportunities and conferences for employees to enhance their skills and development.
3. Companies should encourage employees to innovate new ideas and reward them for their achievements.
4. Companies should focus on managing employees effectively to achieve success in the biotechnology industry.

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