

## NEP 2020 – Application based Integration of Nutrition with the core subjects in Hotel Management

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**ABSTRACT.** With the advent of the New Education Policy 2020, a complete overhauling of education is required at all tiers of the Indian education system. It has been observed that Indian Education System focuses more on the theoretical part of the subject, and little or no attention is paid to the practical application of the same in the real world. The same applies to the hotel management curriculum too. The students are found lacking in solving practical problems after joining the hotel industry for the same reason. This gap between theoretical knowledge and the application of the same in demanding situations must be bridged by remodeling the curriculum to encourage practical learning in hospitality education.

In India, Hotel and Hospitality management courses are offered across UG, PG, and Diploma courses with Food Production, Food and Beverage Service, Housekeeping Operations, and Front office management as core subjects and Communication and Soft Skills, Computer Applications, Nutrition, and a few others as allied subjects. The commitment of food science, nutrition, and technology towards advancing food science, ensuring a safe and abundant food supply, and contributing to healthier people everywhere defines the importance of food science in hotel management. The currently planned strategies from NEP 2020 need to be applied to hospitality education to revamp the current curriculum and make it more application based. An essential part of this revamping will depend upon integrating allied and core subjects to impart a complete education.

Keeping in mind the importance of nutrition in the hotel industry, this study was undertaken to redefine and revamp the role of food with more practical applications as per NEP. The study aims at integrating the application part of nutrition with the core subjects of hotel management as per the NEP 2020.

**Keywords:** Overhauling; Remodeling; Curriculum; New Education Policy; Integration; Nutrition

### 1 INTRODUCTION

The New Education Policy (NEP), released on 29th July 2020, is a historic and ambitious document that looks at our educational system in a new way. NEP 2020 lays out a compelling, ambitious agenda for education. NEP demands that the entire education

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system be reconfigured to support and foster learning (1). In the past, efforts to improve understanding using integrating practical aspects were often hampered by the requirements that teachers complete an over-ambitious curriculum which leaves most students behind. It is seen that the Indian education system focuses more on getting marks and clearing the exams instead of the application of the same. If the foundation is not appropriate, the building will be weak. That is why the gap between the current state of learning and what is required must be bridged to improve the state of higher education and professional courses being conducted at all educational institutes.

According to the Annual Status of Education Report (ASER), in 2018, nearly half of all rural students in grade 5 couldn't read a Grade 2 text, and two-thirds couldn't perform simple division. If any of them cannot read an introductory text, there is little point in having all students complete secondary school (as the NEP recommends). The same applies to higher studies in India, as the focus is more on the theoretical aspect, and little or no element is paid to the practical application of knowledge in real-world scenarios. (2)

Nutrition is the science that interprets the relationship of food to the functioning of living organisms. In contrast, food science is the ethical way to maintain a good standard for food served. Nutrition is a multidisciplinary subject, and its inter-relationship or interdependence in this field with various others, such as medicine, agriculture, food science and technology, sociology, psychology, economics, anthropology, demography, chemistry, biochemistry, biological sciences, hospitality, and so on.

Why is Nutrition & Food science taught in Hospitality Management courses? A question often asked by the students? Nutrition, though a new science, has a long history from the time of foraging for nutrients like animals to the developing agriculture to produce food with the advent of the Neolithic revolution to the advanced methods of food preparation with the chemical process of the 18th century. With further advances in technology and the economy of the 20th century, nutrition moved to mass production and food fortification. (3)

Food science is the science behind food. This multidisciplinary subject helps us understand the chemistry of food components, their processing and preservation methods, and all other related things. Food science is an ethical way to maintain a good standard for the food served.

The allied subjects like Nutrition, Food Science, Food Safety and Quality, Hygiene, and Sanitation are included in hospitality management as all these subjects help in serving the guests with quality experience of food. Hospitality, Nutrition & Food Science go hand in hand. The hospitality industry focuses on serving people, and food is an undivided part.

Keeping in mind the importance of nutrition in the hotel industry and to improve upon the practical learning aspects as per the NEP, this study was undertaken to redefine and revamp the role of food with more practical application and aims at integrating the application part of nutrition with the core subjects of hotel management as per the NEP 2020.

## 2 RESEARCH METHODOLOGY

The study paper is descriptive and theoretically analytic. The study is mainly based on secondary data from the New Education Policy published by the ministry of Human Resource Development in August 2020. The primary data was collected using multiple-choice questions from hospitality educators, hospitality students, nutritionists, nutrition educators, nutrition students, and industry professionals.

The following questions were asked from the above-mentioned diverse pool of people:-

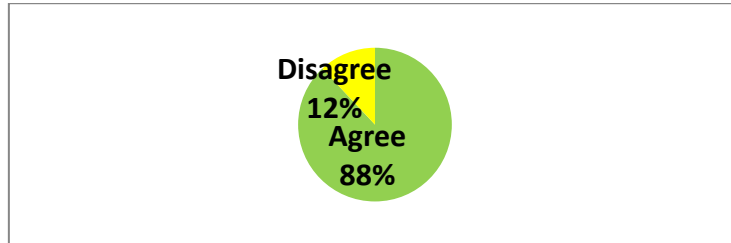
- Is it essential to impart knowledge about the practical application of theoretical aspects of subjects taught in hospitality courses
- Do you think the current hospitality course curriculum adequately covers nutrition's practical application
- Will the integration of Nutrition and Food Science with the core subjects of Food Production and Food & Beverage Operations make the curriculum more application based
- Will the integration of Nutrition and Food Science with the core subjects of Food Production and Food & Beverage Operations make applying nutritional and food science aspects much simpler in practical scenarios
- Is there any facility for a food lab in the hotel management institutes
- It will help food labs in hotel management institutes in better assimilation and understanding of the nutritional aspects involved in the core subjects
- Will the involvement of healthy faculty during the practice of core subjects enhance the assimilation and clarification of dietary aspects
- There should be an undergraduate certification for the students in nutrition who study all four food subjects during their hotel management degree course.
- Students having a degree in hotel management should be made eligible for various government jobs like food inspectors apart from teaching
- The nutrition curriculum is relatable to the core subjects and has practical application for the hospitality sector

The answers from the respondents, along with the data collected from hotel management institutes about the curriculum being followed for various course, was analyzed to derive logical results which have been deliberated upon in this study.

## 3 ANALYSIS

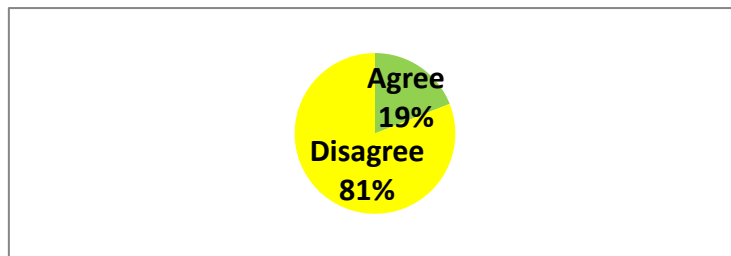
The responses to the questionnaire prepared for the diverse pool of respondents belonging to the hospitality industry and hospitality education sector are as given below:-

- An overwhelming 88 % of the respondents agreed that it is essential to impart knowledge about the practical application of subjects taught in hospitality courses.



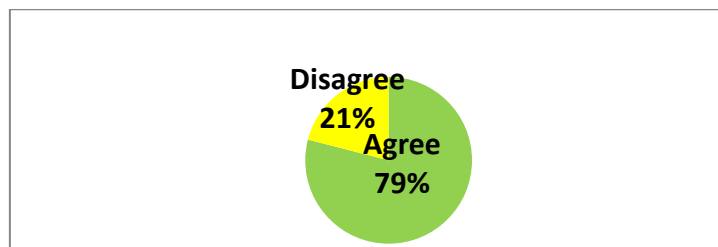
**Fig. 1.** Importance of imparting the knowledge about practical application in hospitality courses

- A total of 81% of the respondents believe that the current hospitality course curriculum does not adequately cover the practical application of nutrition.



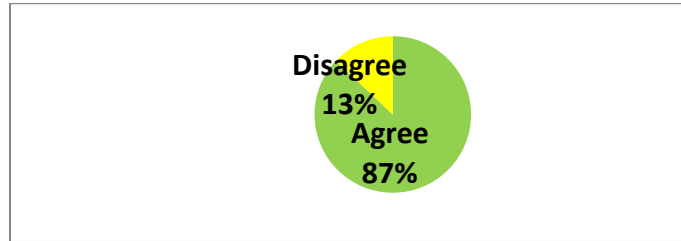
**Fig. 2.** The present curriculum of hospitality courses cover the practical application of nutrition adequately

- 79% of the respondents agreed that integrating Nutrition and Food Science with the core subjects of Food Production and Food & Beverage Operations will make the nutrition curriculum more application based.



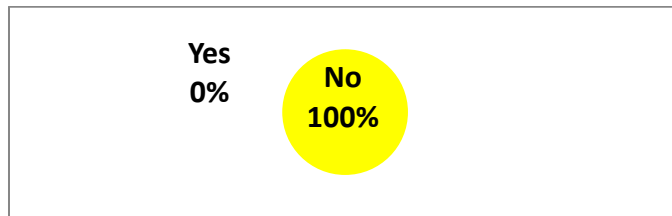
**Fig. 3.** The integration of nutrition and food science with the core subjects of food production and food & beverage operations make the curriculum more application based

- 79% of the respondents agreed that integrating Nutrition and Food Science with the core subjects of Food Production and Food & Beverage Operations will simplify applying nutritional and food science aspects in practical scenarios.



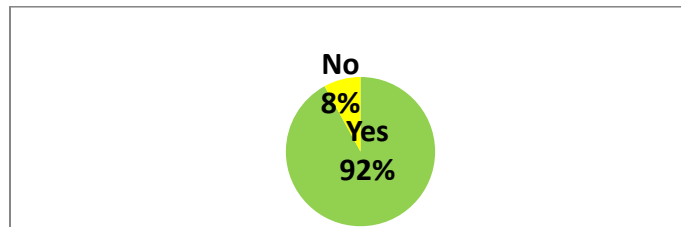
**Fig. 4.** Integration of nutrition and food science with the core subjects of food production and food & beverage operations will make the application of nutritional and food science aspects a lot simpler in practical scenarios

- 100% of the respondents confirmed that there is no facility of a food lab in the hotel management institutes.



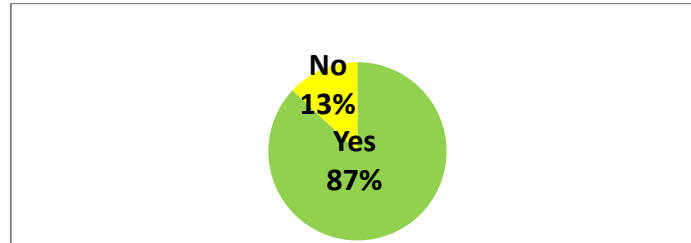
**Fig. 5.** Availability of food lab facility in hotel management institutes

- 93% of the respondents agreed that providing food labs in hotel management institutes would help in better assimilation and understanding of the nutritional aspects involved in the core subjects.



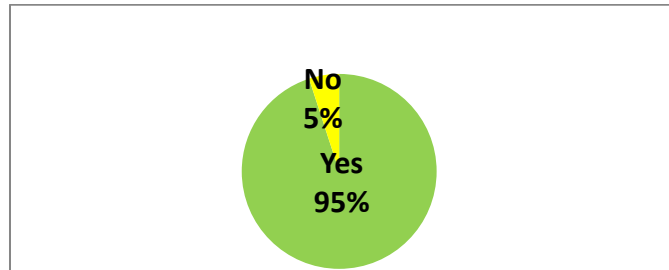
**Fig. 6.** The provision of food labs in hotel management institutes will help in better assimilation and understanding of the nutritional aspects involved in the core subjects

- 87% of the respondents agreed that the involvement of nutritional faculty during the practice of core subjects would enhance the assimilation and clarification of dietary aspects.



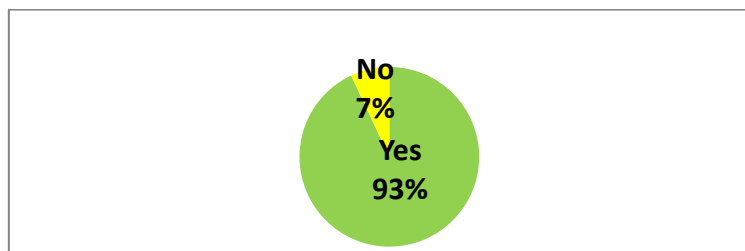
**Fig. 7.** The involvement of nutritional faculty during the practical of core subjects will enhance the assimilation and clarification of nutritional aspects

- 95% of the respondents agreed that there should be an undergraduate certification for nutrition students who study all four subjects of nutrition during their hotel management degree course.



**Fig. 8.** There should be an undergraduate certification for the students in nutrition who study all the four subjects of nutrition during their hotel management degree course

- 93% of the respondents agreed that students having a degree in hotel management should be made eligible for various government jobs like food inspectors apart from teaching.



**Fig. 9.** Students having degree in hotel management should be made eligible for various government jobs like food inspectors apart from teaching

The study results reveal that the current nutrition and food science curriculum in almost all hotel management institutes is theory-based without any practical aspect taken into consideration as it is an allied subject. The recent fact has validated that the

hotels are hiring nutritionists to calculate the calories of various dishes. The Food Safety and Standards Authority of India (FSSAI) has notified new regulations that made mandatory the display of the calorie count of food products on menu cards for restaurant chains, hotels, and online food aggregates from 1st January 2022 (4).

Students study nutrition, food science, and related subjects for almost 3-4 semesters. Still, since nutrition is an allied subject and not the core subject, they take it very lightly and aspire to get passing marks without learning the application part, with few exceptions.

It was observed that Food science and basic principles of food production are taught as two subjects, but these subjects are two sides of the same coin. Food science should be clubbed with food production for a better understanding of both subjects in a better way as both have a mutual dependency on each other. Food science is the science and logic behind food preparation while production is preparing food keeping in mind the changes taken in it like Gelatinization, gelation, etc., to name a few. Most of the syllabus of the Basic principles of food production has their root in food science, and even food production operations have a significant part of menu planning.

During the food production practices, students are just asked to cook and present their dishes, and calculating the nutritional information of the dishes prepared is not touched upon. Though the students of hotel management study menu planning in nutrition, the application of theoretical knowledge during practical is completely missing. Here again, we lack as educators, which is why the New education policy has been framed to cease this culture of imparting theoretical knowledge only.

Even food science topics can be clubbed with Food Production and Food & Beverage operations, where the beneficial role of micro-organisms and their harmful effects can be taught to the students.

It is observed that the role of Nutrition faculty is restricted to theory classes, and they have no access to kitchens or are not involved in the practice of core subjects. Suppose the topics of food science and nutrition must be taught practically. In that case, integrating nutrition faculty in these practical will help the students understand processes like gluten formation, Gelatinization, gelation, etc.

No food lab is established in any hotel management institutes across India, even though nutrition and food science are practical subjects that can be better understood when done practically. The application part is missing for many topics like the evaluation of food quality, which require experiments with chemicals to understand how quality is checked and standards set for food products. It will also help students understand how certification is given to new products introduced for human consumption. No field visits are part of the curriculum for this subject, whereas the NEP focuses more on real-world scenarios. Students are just given theoretical knowledge about the various agencies like FSSAI, Agmark, etc. Still, the field visits to these institutes will enrich their knowledge about these agencies and help them understand how such agencies work on the ground level.

The study of micro-organisms is part of the curriculum to understand the micro-organisms responsible for food spoilage to increase the shelf life, the beneficial role of micro-organisms in nutrition, and foodborne diseases. Still, it doesn't attract the attention of students. It is found too difficult to be assimilated by the students as many are

from arts and commerce streams. If these micro-organisms and their roles are explained with the help of practical in labs, then the student's assimilation and retention rate of these topics will be much higher. There are no field visits planned to food processing industries despite their importance to the students who will enter the hospitality sector. The learning curve will be much higher if the students experience various processes like cheese making, pasteurization, irradiation impact, etc., in the food processing industries. The focus must be on learning by doing rather than only learning.

The research aspect is missing in nutrition, particularly in the hotel management course. Many interesting topics, such as edible packaging to decrease soil pollution and conserve the environment with minimal use of plastics, are left untouched because of less focus on these aspects in the curriculum. Nutrition research seems alien in hotel management courses but can be clubbed with food production topics to have better acceptability amongst the students and faculties.

It has emerged during this study that though Nutrition and Food Science are part of hotel management courses, employability options in the fields requiring a nutrition background are not open for students from a hospitality education background. No undergraduate certification is given to students to enable them for positions in the nutrition fields like slimming centers, food inspectors, weight loss clinics, and various other private and government organizations.

#### **4 RECOMMENDATIONS**

Nutrition and food science should be clubbed with the core subject of food production. Food science should be clubbed with food production for a better understanding of both subjects in a better way as both have a mutual dependency on each other. Nutrition teaches the students about the various macro and micronutrients (their RDAs deficiency disease related to each nutrient) and how to procure the food items and conserve them during preparation/storage. Production deals with bulk cooking and mass production, but at the same time, it is essential to ensure that nutrients are conserved during this process.

Practical should be incorporated along with the theory in the curriculum itself so that the students acquire in-depth knowledge.

Food labs should be established in all hotel management institutes across India as the NEP 2020 focuses on practicality to develop critical thinking and each student's creative potential. As per NEP, students should learn, but more importantly, learn how to learn. Many topics like food quality evaluation, the study of micro-organisms present in food, food adulteration, and various processes involved in food production need labs for better understanding.

The students do not like nutrition if taught in a theoretical manner. So, to make it more uncomplicated and fun, field visits should be conducted in the nutrition curriculum to cover otherwise tricky topics. Students are just given theoretical knowledge about the various agencies like FSSAI, Agmark, etc. Still, field visits should be planned to such agencies to understand how such agencies work on the ground level. All these must be incorporated into every semester, depending upon the curriculum.



Undergraduate certification should be given to the students in nutrition too to broaden their job prospects and increase the employability of hotel management students in other areas of employment like slimming centers, weight loss clinics, government organizations like FSSAI, food evaluation panelists and food inspectors to name a few. Provision should be made as per NEP that if they are pursuing the course and leaving it in between for any reason, they are also left with some employment options depending upon the level of certification achieved in each semester.

It is concluded that instead of teaching this subject as a separate subject, it should be integrated with the core subjects. The same will assist in covering the major aspects of Nutrition and Food Science in a more application-oriented manner.

## 5 IMPLICATIONS

The study will help bring more practical application to the nutrition subject in the hotel management curriculum as guided and suggested in NEP 2020. It will help widen the vocational opportunities in various government and private organizations for hotel management students in areas fixed earlier only for nutritionists.

It will help attract the policymakers' attention and compel them to frame such policy proposals, which will help revamp the role of nutrition in hotel management courses across India.

It will also help develop a research-based approach towards this subject in amalgamation with the core subjects of hotel management, like food production and food and service operations.

It will transform the nutrition faculty's role as otherwise restricted to visiting members only.

## 6 LIMITATIONS

This study is based on the recommendations of the National Education Policy 2020 for higher educational institutes and the data obtained by the online survey through questionnaires and the author's personal opinion. For the extensive implementation of the same, more in-depth study and approvals from the respective decision-making and regulatory authorities are required.

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