

Definition of cooking

Cookery can be defined as the chemical process, combination of ingredients, developing skills, methods and techniques of cooking, application of heat and in more advanced stages; it involves scope of creativity, new innovations and ideas. So in short it is a combination of art and science

Places where professional cookery takes place are

1. General – Hotels & Restaurants
2. Institutional – Schools & Colleges
3. Street – Chat & Vada Pav
4. Outdoor Catering – Mess & Canteens
5. Industrial Catering – Multinational companies
6. Bhojnalaya – Religious places
7. Airline & Sea Transport – Cruise Liners & Small Boats

Definition of Professional Cookery

Standardization of recipes, methods, techniques, skills developed for cooking is known as professional cookery

1.1 Origin of modern cookery

The art of cooking is ancient. The first cook was a primitive man, who had put a chunk of meat close to the fire which he had lit to warm himself. He discovered that the meat heated in this way was not only tasty but it was also much easier to masticate. From this moment in unrecorded past cooking has evolved to reach the present level of sophistication.

Culinary development initially was tied to development within an individual country or region, however each region came into contact with people from other areas and ideas were exchanged. The result was a traceable progression from the Egyptians, Assyrians, Chaldeans, Babylonians, Hebrews, Persians, Greeks, Roman to the Gauls and then to the Franks, the direct forerunner of the French kitchen. The French kitchen is the cornerstone for the most historians of the beginning of the modern during in the western world.

A pattern of refinement and development of culinary preparation began with the early Egyptian rulers and continued to the time of the Persians, and the further development by the Greeks. It is during the Roman era, that Apicius, a rich merchant published the first comprehensive book on cookery.

Francois Pierre de la Verenne in his book 'Le Cuisinier Francois' brought into focus the changes in the French kitchen from Taillevent to the middle of 1600s. A concern for balance and harmony in meal began to come to the forefront from the heavy banquets and unbalanced use of spices. There was little movement from the culinary art towards anything scientific until the great Chef and scholar Antonin Careme, founded the classical French cookery. He was the first to begin the recorded recipes in standard manner. He also began to streamline the menus.

A major change which occurred in the 1850s was the introduction of 'service a la Russe' by Urbain Dubois and Emile Bernard. Crème has been introduced to this type of service when he was in Russia but he preferred the traditional 'service a la Françoise' which had more showmanship. 'Service a la Françoise' was the presentation of large number of dishes at the same time, while 'service a la Russe' is the serving of dishes individually instead of all the once.

Frenchman Maitre Auguste Escoffier, in the 20th century created the first school of culinary arts – La Cuisine Classique. Chef Maitre Auguste Escoffier is known as the Godfather of modern cookery. Escoffier's

culinary career was supremely brilliant. He was regarded as the emperor of the world's kitchens. His changes in the kitchen were in the menu and food preparation, and the kitchen itself. It was Escoffier, who shaped the modern menu. The streamline menus were designed for the 'service a la Russe' and were presented by Dubois and Bernard. The change in style of service and streamlining of the menu made it possible for the restaurants to flourish.

Escoffier dedicated himself to reform the kitchens as much as possible. He thereby began the changes, which have resulted in the modern kitchen. A few of the many attributes introduced by Escoffier includes:

1. All cooks are required to wear checkered trousers and white jacket
2. Cooks to take bath regularly
3. Cooks should acquire schooling for their betterment
4. Kitchens to move out from their traditional location of unventilated basement
5. Smoking and consumption of alcohol to be banned for kitchen staff
6. Escoffier developed a kitchen brigade, which eliminated the confusion of the traditional kitchen setup
7. Standardizing the recipes and menus

The innovation of Escoffier began to make culinary preparations an art and a science, which emphasized more on quality. The 20th century brought tremendous changes in the field of equipment, fuel, preservation of food, refrigerated shipping and storage, vacuum packaging and inert gas packaging etc. all these had an impact not only on the preparation of food in the commercial kitchen, but also the organization and manpower requirement. The constant influx of immigrants from all over the world combined the quality and variety of food in the United States, creating a wide variety of dishes. Throughout the 20th century, the kitchen and the menu have been streamlined from the standpoint of nutritional value as well as taste. There is no question that the history of culinary preparation has just begun and kitchen organization, style of service, cuisine etc are yet to witness loads of modification and improvisation.

1.2 Factors influencing eating habits

1. Geographical Factors

Climate, type of soil, temperature and availability of food, People eat the food which is available in abundance and which more over in suitable keeping condition in mind. For e.g. in winters one tends to eat food which gives heat and have a satisfying value, vice a versa in summers. People in Kashmir or colder region tend to eat meat more, as fruits and vegetables do not grow there. Likewise in southern India people eat more of coconut as they are grown in large amount. So are easy to use served along and in the food? People in Bengal eat more of fish, Punjab eat more of mustard and wheat. Moreover the food items have been available in the region from years and our ancestors have been eating.

2. Religious Prohibitions

This is another very important factor to make our decision while eating for e.g. Hindu religion does not allow its followers to eat Beef, no non vegetarian food during festivals (Navratri, Shrawan & other Fasting Days) and special occasions. Muslims eat beef but no Pork.

3. Taste liking and allergies

Food which we consume also are majorly depends upon our taste and liking towards it. For e.g. some people prefer non vegetarian food but others don't, some like soft vegetables other like hard, some like fried, boiled, baked, cheese, milk etc. moreover allergies due to food items like rashes boils, itching, patches make us choose between various food products.

4. Market Availability

The availability of the food product in the market also influences the eating habits of the people of a religion. Sometimes market availability is affected due to seasonal changes and sometimes faulty transportation could also affect market availability

5. Region

Certain region has different staple foods. Each region also has a different method of preparation of food. This may be due to availability or unavailability of certain food products or it could also be due to tradition and other such reasons

1.3 Sectors of Hospitality / Catering Industry

1- Profit oriented

a. Commercial Catering

- Speciality Restaurants
E.g. Mainland China
- Hotels
- Coffee Shops e.g. Barista, CCD etc
- Restaurants e.g. Pizza Hut
- Commercial Bakery e.g. Monginis
- Fast Food Outlets
- Fine Dining e.g. Flags
- Street Food
- Take Away

b. Industrial Catering

- Industrial and office canteen
- Corporate Banquets

c. Transport Catering

- Airlines
- Railways
- Cruises

d. Institutional Catering

- Schools & College canteens

e. Outdoor Catering

- Events
- Weddings
- Banquets

2- Non-profit oriented

a. Welfare catering

- Hospital & Prison canteen

b. Defense sector

- Armed Forces Canteen

1.4 Attitude and behavior in the kitchen

What does it take to be a good food service worker? The emphasis of a food service education is on learning a set of skills. But in many ways **Attitude** is more important than skills, because a good attitude will help you not only learn skills but also to preserve and to overcome many difficulties you will face in your career. The successful food service worker follows an unwritten code of behavior and set of attitudes we call **Professionalism**. Let's look at some of the qualities that a professional must have

- 1. Positive attitude towards work:** You may like what you do and do it well. This, whatever the job is – from washing a pan or peeling potatoes to making sugar work or larder decorations. Pressure hours will seem difficult when you will master your technique, you will enjoy them too. Professionals are proud of their work and performance.
- 2. Staying power:** A day's work will seem very long and one has to get used to it. The same way an athlete gets trained, you will too and note that fact that you will know how to save steps by thinking and planning, improve your speed at work (cutting, boning etc). Beware of alcoholic drinks, they usually shorten staying power by '**cutting you legs**'.
- 3. Communicating:** With your supervisors – let them know your difficulties – with colleagues – share knowledge or learn more from them – maintain also good relations with F&B staff – learn to work with people – control your temper.
- 4. Experience:** If you want to be an experienced cook, you need more and more practice. Your degree will not make you a good cook.
- 5. Aiming of quality:** Whatever you do must have a distinctive sign of quality. Quality can be obtained elsewhere, not only in 5 star hotels, but also in institutional catering, industrial canteens, in staff food. There is a good or bad Tandoori Chicken as well as good or bad simple boiled rice.
- 6. Learning:** Your life will not be long enough to learn everything about cookery. Your instructor also has plenty to learn. In a way, you are lucky to be in this line – how many jobs offer this opportunity of constant learning.
- 7. Creativity:** Nowadays patrons still reach new eating experiences. Food production is a field where sky is the limit as far as creativity is concerned. Remember the French momentum of "Nouvelle Cuisine".
- 8. Return to basics:** In order to create, remember to always come back to basics. The objective of your first year is to impart to you the best possible knowledge of basics.

1.5 Personal Hygiene and Food Safety

1. Hand washing: Hands are in direct contact with the food, during its preparation and are frequently responsible for transferring bacteria to high risk foods. To avoid less contamination, food handlers should wash their hands frequently throughout the day particularly after:

- a. Entering in the Kitchen
- b. Using toilet
- c. Handling raw meat, poultry, vegetables and eggs
- d. Handling waste food or refuse
- e. Coughing into hands or using handkerchief
- f. Smoking, eating, combing hair
- g. Carrying out any cleaning task

2. Protective clothing (Uniforms): As ordinary clothing is always contaminated with dirt and dust, all food handlers should wear clean washable, light colored overalls and aprons (Chef's Uniform) to protect the food and preventing from contamination. Locker should be provided for storing the clothes. Hair should be kept covered with a net or a cap to prevent loose hair or dandruff falling into the food. Head covering should be worn with the uniform.

3. Jewellery: Food handler should not wear any jewellery other than plain wedding ring. The skin under the jewellery tends to harbor bacteria, particularly if it is not thoroughly dried after washing. There is also a danger that stones and small parts of ring, earrings, necklace may drop in the food.

4. Smoking: It is illegal to smoke in the commercial kitchen or while handling food. This because people touch their lips while smoking and may transfer harmful bacteria on their hands and so to the food. Food can also get contaminated with the ash.

5. Nose & Mouth: Food poisoning bacteria called Staphylococcus aureus are frequently carried in the nose and throat of a healthy individual. Care must be taken not to cough or sneeze over the food or working surface because the droplets of moisture expelled may carry large number of this bacteria. Food handler with cough and cold should not be allowed to handle the food. While working in the kitchen it is better to use disposable tissues which are destroyed after one use rather than ordinary handkerchief which will harbor bacteria and become a source of infection.

6. Cuts, Boils & Septic Spots: Cuts, Boils or open spots if left open will multiply bacteria very fast and may contaminate the food. Any cut or sore must be covered with a colored waterproof dressing immediately or it will quickly become infected. A blue or other dark colored plaster should be used in preference to a skin colored one as it can be seen more easily if fallen in food.

7. Reporting illness: If a food handler feels he / she should report it to his / her supervisor. Particularly if the symptoms include vomiting or diarrhea. This also implies to food handlers who have just returned from overseas and suffering from vomiting and diarrhea. Similarly food handlers with any kind of infection should get the medical clearance before joining the work.

1.6 Hygiene & safe practices in handling food

This is the most important aspect of food production.

1. Cleanliness should always be maintained in the area where the food is prepared
2. Chef should wash hands regularly, wears head covering and should be very particular about his personal hygiene
3. The equipments and utensils used must be clean
4. Cutlery, Trays, Uniforms etc must be clean
5. Safety training should be given to the staff before hand

1.6 Importance of kitchen uniform

Chefs, like many professionals, wear their uniforms practically every day. A standard Chef uniform consists of a Jacket / Coat, Cap, Trousers, Apron and most importantly Slip Resistance shoes. A chef uniform plays a very specific role in protecting the professional from everyday kitchen dangers. It is important for a chef working in the kitchen should wear suitable clothing and foot ware which must include:

1. **Chef's Coat:** Clothes worn in the kitchen must protect the body from excessive heat. For this reason coats are double breasted and have long sleeves, they are to protect the chest and arms from heat of the stove and to prevent hot food and liquids burning or scalding the body
2. **Aprons:** They are designed to protect the body from being scalded or burned and particularly to protect the legs from any liquids which may be spilled, for this reason apron should be of sufficient length to protect the legs
3. **Chef's Cap:** This is designed to enable air circulate on top of the head and thus keep the head cooler. The main purpose of the cap is to prevent hairs from dropping in the food and to absorb perspiration of the forehead.
4. **Trouser:** Black or checkered (white & Black) is normally preferred as a part of uniform.
5. **Footwear:** Comfortable shoes to support the feet as the kitchen staff is on their feet for many hours. Shoes with steel toecaps are encouraged nowadays.
6. **Scarf:** Prevents perspiration of sweat to run down on the chef's coat, designed depending upon the grade /level of staff the color will change depending upon the job position.
7. **Duster:** Cotton dusters should always be there with the staff for wiping their hands and the table.

1.7 Aims & objectives of cooking food

Aims of cooking food

Cooking partly sterilizes food. Above 40°C the growth of bacteria falls off rapidly and in general it ceases above 45°C. Non sporing bacteria are killed at temperatures above 60°C for varying periods of time, e.g. to make milk safe, it is pasteurized at 63°C for 30 minutes or at 72°C for 15 seconds. Boiling kills living cells with the exception of spores, in a few seconds. Spore bearing bacteria take about 4 to 5 hours of boiling to be destroyed. To destroy them in a shorter period of time higher temperature must be used.

1. Cooking helps to make food more digestible. Complex foods are often split into simpler substances during cooking. This helps the body to absorb and utilize the food more readily than if consumed in its raw form.
2. Cooking increases palatability.
3. Cooking makes food more attractive in appearance and therefore more appetizing.
4. Cooking introduces variety. Many different types of dishes can be prepared using the same ingredient.
5. Cooking helps to provide a balance meal. Different ingredients combined together in one dish make it easier to provide a balanced meal.

The objective of cooking is to achieve certain results such as:

1. To facilitate the digestion so as we cook: food can be absorbed by the digestive system as quick as possible. During the cooking process the complex food breaks down into simple form. The cooking process softens the connective tissues it brings out alternations in the texture by physical as well as chemical changes.

a. Protein: The protein of meat (Myosin), egg (Albumen), Wheat (Gluten), Pulses (Legumin) get coagulated by heat. The connective tissues are converted to gelatin which is soluble in water. Mutton has a lots of connective tissues that if cooked on a higher flame gets rubbery

b. Carbohydrates: Starch in the food generally gets greatly affected by heat, by moist heat it is first converted into a soluble form, by extreme heat into new substance which is sweetish in flavor. Moist heat causes starch to swell, it gelatinizes at temperature below boiling point i.e. below 100 °C. Cellulose gets softened by moist heat, sugar when heated in water first gets dissolved with the further heating the color and texture changes becomes brown and becomes caramel

c. Fats: If heated to a very high temperature for a longer time, fats undergo a partial decomposition into fatty acids and glycerol.

2. Cooking pleases the eye: and to the palette and helps to stimulate the digestive juices thereby increasing the appetite. Flavors are developed, the cooler of vegetables are brightened

3. Cooking sterilizes the food: If it is cooked above the boiling point cooking increases the shelf life and food can be stored for a longer time. It also prevents food poisoning and development of bacteria up to a certain extent. The bacteria get killed because of higher temperature during cooking specially in meat products.

4. Cooking enhances the appearance of the product: So far possible it retains the nutritive and flavoring ingredients. If the cooking is done in the cooking liquor the loss of vitamins and nutrients can be brought down the minimum level

5. Cooking gives variety: in the menu as one ingredient can be cooked in various ways to achieve different textures, flavors eventually a new product. E.g. mutton roasted, pieces of mutton in soup, mutton stew, kheema or boti kebab. Here the different methods are used to cook same types of meat which gives different varieties.

6. Cooking helps in preservation: if it is done at a higher temperature to provide a wide range of certain ingredients have natural preservative character. E.g. salt, sugar etc

7. Cooking makes balance: in the meal by creating interesting varieties