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The Five Aspects Meal Model: a tool for developing meal services in restaurants

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Abstract

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Preparing, planning and serving meals require several important steps before you can enjoy a meal. The meal takes place in a room (*room*), where the consumer meets waiters and other consumers (*meeting*), and where dishes and drinks (*products*) are served. Backstage there are several rules, laws and economic and management resources (*management control system*) that are needed to make the meal possible and make the experience an entirety as a meal (*entirety – expressing an atmosphere*). These five factors are the major ones for developing meal service in restaurants, and together form the Five Aspects Meal Model (FAMM). Several studies have shown that the context of a meal is important for the acceptance and consumption of a meal. Accordingly, the context has to include the food product itself, the consumer and the environment. These three factors need to be considered in an integrated manner, because they affect each other. A qualitative study of restaurant consumers found that there are at least eight main categories of importance for the experience of the meal: restaurant atmosphere, core items of consumption, restaurant scene, personal service encounter, staff quality, visitors, restaurant decision process and individual circumstances. These categories can easily be related to the 'Five Aspects Meal Model'. The essence of each factor is dependent upon different forms of knowledge, such as science, practical-productive, aesthetical and ethical.

Introduction

The concept of the restaurant in its modern form is closely related to the French Revolution, a revolution that reduced the power of aristocratic households. Many skilled cooks had been employed in such households, but were left without employment after the revolution. These cooks, some of whom were skilled artisans, established other places to work and served meals for the new class, the bourgeoisie, who could pay for them. At these places one could restore or rest one's body from hunger or fatigue, which is why such establishments came to be known as restaurants (Finkelstein 1989a).

However, too much emphasis has been put on the connection between the French Revolution and the modern restaurant concept. Already in the early 1780s, there were taverns in England which served meals for travelling upper classes; for instance, in 1786, the London Tavern opened. This was a public house used mainly by members of parliament who lived in London during parliamentary sessions, away from their country homes (Mennell 1985). Politicians, writers and traders needed places for meals, meetings and discussion.

From these early days, as well as today, restaurants have been a meeting place in people's social life. The fast growth of the restaurant industry was certainly an effect of economic growth and the emerging new social classes, but also of the growing numbers of skilled cooks working for a broader public. These cooks also became good entrepreneurs, who started new restaurants. One such cook was Antonin Carême (1784–1833), who created the concept of *grande cuisine* – specially designed dishes in which food was turned into architectural feats for the entertainment of the guests. Food sculptures and the décor of the dining room were some of the ingredients of *grande cuisine* (Fisher 1954). From the very outset, restaurants were the scene of complex social interactions and cultural influences. Food was always there, but also ideas and tastes. The restaurant became a forum for expression of individual desires and moods. Finkelstein (1989b) said that the early diners were not interested in fine foods, but in imitating a style and form of life associated with the declining aristocracy. They wanted to present themselves as the new social élite. Dining at restaurants had become a status symbol, a way to flaunt oneself and display a new and fashionable lifestyle. Such situations probably bear a strong resemblance to modern restaurants. People are looking for experiences that go beyond the food itself, and they use the restaurant as an arena where they can relax, enjoy and socialize. This requires a new, more broad-based approach in the development of meals in restaurants. Restaurateurs need to be aware that a restaurant visit is a social and cultural act in a context that reflect their dream and lifestyle and where people look for the fulfilment of certain desires and mood expectations.

Furthermore, in our modern society, food and meals, as well as the manner in which they are consumed, have become symbols of social differentiation, a way to express oneself and one's individual preference, rather than merely a way of providing for the needs of the body. This has been strongly expressed by Finkelstein (1989b) as well as by Warde & Martens (2000), who draw a distinction between eating for pleasure and eating from necessity.

How the entirety of a meal is perceived is also dependent on earlier experiences. We consume a meal with all our senses – sight, hearing, smell, taste and touch. Our sight gives us information about colour and appearance, and is of great importance for our perception of the taste, smell and texture of the meal, but the surroundings of the meal also affect our perception: the table and other furniture and equipment in the room where we have our meal. The cognitive picture of the meal in our brain creates certain expectations, according to our earlier memories, knowledge, experiences and contexts. Our earlier experiences will influence the way we experience the meal. This sensory process has been called a filter between the external (objective) and internal (subjective) world (Martens 1999) and has to be kept in mind when producing meals of any kind.

The restaurant industry is growing at a fast pace, as people choose to eat out more frequently. In Sweden, for example, restaurant sales increased by 65%, from SEK28 billion to 46 billion, over the period of 1994–2004. During the same time, the number of employees increased by 62% and restaurant customers spent 5% more of their total food expenditure on eating out at restaurants (Sweden Statistics 2004). The same trend can be seen in other Western countries. There are several reasons behind the growing interest in eating out at restaurants. First of all, people have more money to spend, but another reason is that family situations have changed. It is now more common for both parents to work outside home, which leaves less time for cooking. The ability to cook also has declined (Caraher *et al*. 1999).

Offering commercial meals requires professionalism in preparing, planning and producing these meals. Knowledge of the diners/customers and their expectations, desires and reasons for eating out are other crucial factors. Since 1993, the Department of Restaurant and Culinary Arts at Örebro University have been working with the Five Aspects Meal Model (FAMM, see Fig. 1) to plan, prepare and produce meals in our Bachelor's degree programme for cooks, chefs and waiters, and the model has been described by Gustafsson (2004). The methods used to produce different meals are based on different types of knowledge: scientific, practical-productive, aesthetic and ethical, i.e. these correspond to the forms of knowledge that the philosopher Aristotle considered to be of equal
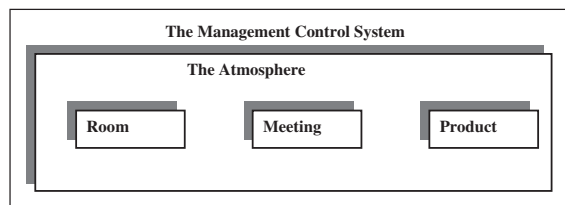
Figure 1 The Five Aspects Meal Model (FAMM) from a producer's perspective.

importance in real life (Aristoteles 1988). We need scientific knowledge to understand why we should do things in a particular way. We need practical knowledge to be able to do it; ethical knowledge to determine which foods are suitable, and choose methods of preparation that are consistent with a sustainable society and with individual needs, e.g. religion, culture, economic resources and individual diets. Finally, aesthetic knowledge will help us in the creative process when producing meals.

The aim of this paper is to describe the model and how it can be used in planning service delivery to enhance customers' satisfaction.

A description of the model

The idea for the model came from the Michelin Guide's evaluation of hotels and restaurants, and was implemented from the start in the education programmes, by lecturers at the Department of Restaurant and Culinary Arts.

The starting point to describe the model is a restaurant visit. It starts with entering the restaurant, and this is the first aspect to be described. The second aspect is the meeting, which refers to not only the meeting between waiters and customers, but also interactions between customers as well as interactions between service personnel. The third aspect is the product, which here refers to food and beverages and their preparation. The fourth aspect is the management control system, which refers to the economic aspects, laws and logistics when providing the whole meal. These four aspects will result in an atmosphere with the meal encompassing the fifth aspect. During the description of each aspect, a definition is included, followed by a scientific discussion of the aspect. At the end, suggested questions are given for managers and chefs to consider in relation to each aspect of the model.

The room

Meals are always consumed in a room. Besides restaurants, as this paper focuses on, meals can be consumed in a hospital or school, at a hotel, at home or in the open air. The geographical boundaries expand as the interest in finding new meeting places increases (Sherry 1998). The person serving the meal in a commercial situation should know about the eating situation and try to fulfil guests' needs in the best way. Working professionally with the *Room* context requires knowledge about style history, architectural style, textiles, design and art, as this should be the basis on which the room is decorated. This 'built environment' is called 'servicescapes' by Bitner (1992). It refers to the environment in which services are provided and where customers interact. Even in the early 19th century, Carême pointed out the importance of décor and a total designed environment that suited the restaurant's concept (Finkelstein 1989c). The lighting, sounds, colours and design of textiles can have a great impact on a meal situation, and this may have been one of the key factors behind the differing experiences of the same meal consumed in hospitals, at schools, in the Army and in restaurants (Meiselman *et al.* 1987; Edwards *et al.* 2003). Changing the context also can influence our preference for wine (Hersleth *et al.* 2003), while changing the theme of a restaurant can affect the acceptability of food (Bell *et al.* 1994). In a study by King *et al.* (2004), the meal situation, social interaction and physical environment on food acceptability was shown to have positive effects on changes of contextual factors on the acceptability of some dishes but not all. They concluded, however, that more research is needed in this field. Bowen & Morris (1995) found that the meal needed to be in accordance with the overall style of the restaurant. Finkelstein (1989c) pointed out that furniture should be in accordance with the rest of the style of the restaurant, and several studies have pointed to the importance of restaurant interiors for the experience of the meal (Nissen Johansen & Blom 2003; Andersson & Mossberg 2004). Even consumers of ready-made meals are affected by the room or situation in which the meal is consumed. In a study of ready-meal consumers, Ahlgren *et al.* (2004a) have shown that eating situations also

improve the attraction of the products, as some disparaging beliefs are situation-dependent. Our senses and any earlier experiences that we may have had while consuming food in similar environments can affect our appreciation of the same meal in different contexts.

We will mention here a few questions that a chef/manager needs to consider before planning a meal. What type of concept does the restaurant have? What type of meal are we going to serve? What type of guests/diners do we have and what do they want? What season is it? What does the dining room look like and can anything be done about it to fit the season or the concept of the restaurant? How should the tables be laid? What type of textiles could be used? What utensils should be used? What about the lights and the sounds? All these questions have to be answered before the meal is planned and prepared to achieve a feel of the concept, the season and that which seems to satisfy the guests (Johansson 2004). Otherwise, the result could be the situation described by Bitner (1992): 'Managers continually plan, build and change an organization's physical surroundings in an attempt to control its influence on patrons, without really knowing the impact of a specific design or atmosphere change on its users'.

The meeting

The meeting aspect encompasses not only the meeting between customers and service staff, but also the meeting between one customer and another, and one member of staff and another. Here, service or service quality is seen as a 'meeting' in the sense of the way guests are treated.

To understand the importance of the meeting aspects and how to manage them, we need some knowledge of social psychology, the theory of emotions, forms of social interactions and rules of etiquette, which makes higher education very important for this group of staff. Service staff are often the main contact between the restaurant and the customer, so their performance will have an impact on the guest's enjoyment. The situation between the waiter and the diners can be difficult, as it is unequal. The waiters have more authority and power, as they have more knowledge of the menus and beverages served than the guest, and if they have an arrogant and insouciant style, the dining event can be totally ruined. The waiters also need to be aware that when customers eat out for pleasure, they can act as anyone they would like to be. In a restaurant, customers may thus pretend to be rich, successful, fashionable, sophisticated and urbane (Kivela 1994a). Waiters must be prepared for and able to handle such situations. The waiter may also encounter customers who are more unsure and not so experienced restaurant visitors with less money. If the waiter realizes this and is more observant and helpful, rather than insouciant or arrogant, this will help the restaurant achieve a good reputation (Finkelstein 1989d).

Several authors have pointed to the importance of meeting aspects, but use the concept of service with a focus on restaurants (Lewis & Chambers 1989; Warde & Martens 2000; Zeithaml & Bitner 2000; Andersson & Mossberg 2004). In a study by Mattila (2001), personal service was found to be as important as the delivery of service.

Andersson & Mossberg (2004) identified five factors influencing the experience of a meal: cuisine, restaurant interior, service, company and other guests. The authors regard these five factors as 'satisfiers' during a meal experience in restaurants. The basis of their method was customers' willingness to pay for different aspects of the dining experience. They found that customers were willing to pay more for an ideal service than the one that they actually received. Hansen *et al.* (2005) also have shown that service is an essential part of the experience of eating at a restaurant for experienced *à la carte* customers. Hansen *et al.* (2004a) also found that an example of bad service was a long wait to pay the bill, which can be so serious that customers choose never to come back. According to Pratten (2003), the training of waiters is generally minimal, and little research has been carried out, even though the performance of the waiters is crucial to the profitability of a restaurant.

What questions, then, should a restaurant manager ask her/himself to fulfil the guests' needs? What staff do I have? What competences do they have? Do they need more training? Who is doing what and when? Especially important is a written schedule when serving a formal meal. According

to Kivela (1994b) and Johansson (2004), all these questions need to be addressed and solved to achieve a successful meal experience in respect of the meeting (service) aspect, which requires both practical-productive and ethical and aesthetic knowledge.

The product

The product aspect consists of the food and beverages served and their combination. By dint of their craftsmanship, chefs transform the foodstuffs into appetizing dishes. Their theoretical knowledge of the art of cooking, as well as food chemistry, then helps to make their effort more target-oriented, as shown by McGee (2004) in his book *On Food and Cooking*, where he attempts to combine science with craft. Theoretical knowledge acquired from science supports this process, for instance, in the making of a soufflé. If the chefs know something about the physics and chemistry of its various stages, and are able to reflect on this, their chances of producing a better end product are greatly improved. The waiters use their theoretical and practical knowledge of food and drink to offer advice and suggestions on which wine to choose for a particular dish. This requires a great deal of knowledge about wine and other beverages: growing and production methods, origin, grape varieties and sensory characteristics. The obvious purpose of this is to satisfy the guest's expectations of a good combination of food and beverages. This process is guided by what the 'craftsman/waiter' has interpreted as the 'guest's identity' regarding that person's own tastes. However, good combinations are sparsely scientifically studied. The study by Nygren (2004) is an exception. He studied the interactions between the food and wine and their effects on perceived sensory attributes (Nygren 2004). His results are valuable for the understanding of why food and wine in combinations sometimes fit together and sometimes do not, and that you mostly find a decrease in the intensity of a wine's attribute when you combine it with food.

Research has pointed to the importance of the product itself. The visual effect of the core product was a factor that many respondents, in studies by Hansen *et al.* (2004b, 2005), saw as important for their meal experience, a conclusion in accordance with findings in another study, by Warde & Martens (2000). In some situations, the appearance of the dish was 'the moment of truth', which decided whether or not the restaurant had succeeded.

However, visual effect was not sufficient in itself. If the taste of the food did not meet the customer's expectations, as created by the standard and style of the restaurant, appearance would not be sufficient in itself, as confirmed by Fine (1992). Even consumers of ready-made meals have been shown to have expectations of good tastes and other sensory characteristics of their meal (Ahlgren *et al.* 2004b).

In one study, the composition of the menu and the recommendations made by waiters played a role in how the meal as a whole was experienced by the customer (Meiselman 2000). If the recommendation did not meet or exceed the guest's expectations, there was a risk of dissatisfaction. The staff needed to have certain knowledge of how different courses interact while also respecting the guest's choice, if they had been advised a different course combination. In all these recommendations, it must be remembered that the opinion of the guest was not necessarily equal to the waiter's. Another little studied dimension is the effect of using semiotic menu description. In a study by Wansink *et al.* (2005), the sensory perceptions of different dishes were shown to be positively affected by a suggestive description of the dishes in a menu.

According to Kivela (1994a,c) and Johansson (2004), the following questions have to be answered by the chef before planning: What menu is suitable for this meal considering the theme or idea of the restaurant? What type of guests do I expect: age, female or male, work, background, religion, with an allergy and so on? What season is it? What type of menu [breakfast, lunch or dinner (special occasion)? Does the meal represent value for money, considering the costs for the restaurant and price for the guest? What type of kitchen equipment and staff do I have and what knowledge do they have? Furthermore, the menu has to be planned and taken into account: variations and balance in foodstuffs, taste, flavours, nutrition, cooking methods, temperature, consistency, colour, form and suitable beverages (Dornenburg & Page 1996).

If one link in the production and serving chain is broken, this can have a negative impact on the level of enjoyment. In other words, the whole *Product* process requires both craftsmanship, science and aesthetical/ethical knowledge in order to produce good meals and result in the optimum experience for the guest/diner, which is also the conclusion drawn by Warde & Martens (2000).

The management control system

The management control system comprises several different systems of an administrative nature, such as economic and legal aspects, and leadership. There are rules for the treatment of food, handling of wine and spirits, staff behaviour and administration, as well as economic rules for the management of a company (Bergman 2003; Yukl 2005). Logistics in a kitchen, dining room or hotel are other considerations (Kivela 1994a). Of course, there are great differences in the management control system for different eating and preparation locations: canteens, restaurant kitchens and dining rooms and hotels. In a canteen, people walk up to the counter to get their food, which they choose from the daily menu, and a large number of meals have to be served in a short time period, sometimes several times a day. Hence, logistics must be planned for peak periods during the day. An à la Carte meal needs a more sophisticated logistical system. Here, information about what guests want should be delivered by the waiter to the chef. That puts the chef(s) under pressure to, say, deliver several different dishes to the same table at the same time, so that everyone around the table can enjoy them at the same. In formal meals, dishes and the whole meal are prepared on a minute-by-minute schedule to produce the best meal experience (Kivela 1994a).

Handling this in a commercial context requires knowledge in areas such as business administration, marketing, labour law, work organization, work environments, statistics, management and leadership, besides the practical-productive knowledge required for the work in the kitchen and dining room. It would be useful if the managers of different areas in companies had an academic education so that scientific knowledge can be combined with practical and productive knowledge.

Such leaders are able to see the entirety of the meals that they offer their guests and also see the guests' expectations.

How important is this aspect for the guest? The management control system operates backstage, and thus may not be observed by guests. However, the delay in receiving the bill can be a cause of irritation, which the customers were very aware of and disappointed about. This is a sign that the management control part did not work. The service in the dining room failed. The management control system is a superior system that governs all the other aspects, such as room–product and meeting. Guests may not see the failure as a result of something missing in the management control aspects, but rather as a failure in the product or in the meeting aspect. However, Iglesias & Guillén (2004) have shown that quality and price have a considerable impact on customers' satisfaction, which is a sign that all aspects interact with each other.

The manager's questions in this aspect are: What price can we offer for the different meals or services from a business perspective? Are the figures realistic? Will it be possible to obtain the products in time from the various delivery companies (Bergman 2003)? How should the different laws relating to hygiene, alcohol, labour and environment be followed up? What staff will be required? Do they require more instructions or training? Does the right person run the right area? How will the logistics work in the kitchen and in the dining room?

Atmosphere

In marketing, Kotler used the term 'atmospherics' as long ago as 1973 to describe 'the effort to design buying environments to produce specific emotional effects that enhance the chance of purchase' (Sweeney & Wyber 2002). In other words, atmospheric restaurants can be described as places where guests feel comfortable and at ease. Especially important is the verbal communication at the table between the diners and between diners and staff in the meeting aspect. Warde & Martens (2000) have emphasized the importance of communication among the participants around the table. But overall, the atmosphere is probably created by all the other aspects, room–product–

meeting and the management control system. In other words, the entirety of a meal experience or a hotel experience could be called 'atmosphere'. In a study by Hansen *et al.* (2005), the atmosphere was created by two main categories: senses and the environment, where senses could be described as the inner frame and subjective personal experience, which represent the experience of the product. The environment is the outer frame of the meal, representing the room. All five senses were used for the ultimate meal experience:

Sight: the appearance of the different components and their colours, their shine or gloss, translucency, size and shape and surface texture.

Hearing: the sounds made when you chew as well as the sounds produced by the mode of preparation, e.g. flambéing.

Smell: the aroma of the dish.

Taste: the taste of the various flavour combinations of the dish.

Touch: the texture, for instance, of fish and the contrasts between different textures in the dish.

All the senses must be in harmony to create agreement that it was a good meal experience, and they were the inner frames of the experience of the product. Furthermore, culture and social context are crucial factors in determining what we consider good or bad.

The environment was the outer frame and consisted of interactions with other customers in the restaurant, and the sounds emanating from the kitchen and other incidents, which together create an overall impression of the restaurant. As a part of the outer frame, our culture and the social context in which we live are crucial in determining what we consider a good or bad meal experience. Music was one of the elements that could create a special atmosphere, but if the music did not fit the style of the restaurant, it could degrade the meal experience. Music was an important part of the restaurant atmosphere and influenced customers, as also shown in other studies (Areni 2003; Wilson 2003). Furthermore, the atmosphere was found to be important for attracting customers to the restaurant (Mattila 2001). According to Riely (1994) and Finkelstein (1989b), interactions with the place, interior décor, the meal occasion and service encounter could form a frame that expresses certain emotions and results in an atmosphere. The importance of creating an appealing atmosphere, influencing the customer's overall perception, will depend on other aspects: the room, the product and the meeting, which are the key elements in the model, which is also shown by Johns & Kivela (2001) on the perceptions of first-time restaurant customers. They said that designers should pay more attention to creating a friendly and welcoming restaurant interior, and that service staff need to provide service at a level that is appropriate for the situation at hand and the core products, food and drinks. Artists and designers can therefore make a significant contribution to creating an appealing atmosphere for the meal.

To study the importance of atmosphere, semiotics might be used. An example is a study by Lashley *et al.* (2004), where 63 students wrote a 500-word narrative reflecting on their most memorable meal experience; they were guided to structure the content within an analytical framework composed of six dimensions (the multidimensionality of meals): occasion, company, atmosphere, food, service and setting. According to the results, atmosphere was identified as a feeling of 'being at home', along with service encounters that contribute to a relaxed and comfortable environment. The atmosphere or the perception of the entirety of the meal seem to be the product of both material and immaterial factors or the balance between the two.

Discussion

The aim of this paper is to describe the FAMM and how it can be used in planning service delivery to enhance customer satisfaction. The advantages and disadvantages with the model will be discussed here.

The FAMM, as a tool for understanding and handling the different aspects involved in producing commercial meals and offering the guests the best possible meal experience, has been used since 1993. The model has several advantages, and it has been used successfully in the education of waiters and cooks to a Bachelor degree in Culinary Arts and Meal Science at Örebro University. The department offers students a broad view of education and why subjects such as style history, textiles, design, colour, social psychology, menu planning, sensory analysis, food and beverages,

food chemistry, business economics, labour and alcohol laws, besides that of cooking and serving techniques, have to be studied. As lecturers we found that the FAMM is a valuable tool to get students focused on what is going on during planning, preparation and service of meals in restaurants. The students find the context in which their knowledge will be required when they work professionally and can catch the entirety of a meal. Our ex-students, working in hotels and restaurants as managers, often tell us that the most valuable part of the education was the main thread: FAMM, which makes them aware of the importance of different parts of a restaurant visit. The advantages in planning and preparing different kinds of meals from canteen meals to ceremonial or formal meals, such as weddings, Nobel dinners and so on, are obvious. All staff educated in use of the FAMM should be aware not only of their own responsibilities but also of the others and, to our knowledge, the method is also used by FAMM-educated staff in the industry. Another advantage is that restaurant managers have a tool to easily get an overview and thereby take control of the different parts of the meal. If anything fails in the meal, it can be easily identified and hopefully improved.

There are also disadvantages with the model in different situations. Sometimes it is impossible to create meals in line with the intention of the model. The room might be impossible to change according to the restaurant theme, at least in a short run. Staff may need more education to adhere to the service quality wanted, and it seems difficult to change that in a short run. The price of the dishes or the menu that guests are willing to pay may not meet the quality standards in accordance with the FAMM. However, with the intentions of the FAMM in mind, there are always opportunities, in the long run, to improve the restaurant meals offered. There are now a relatively large number of studies from different disciplines that focus on the production and consumption of meals in various restaurant settings, some of which have been referenced in this paper, that support the use of the FAMM. However, more research is needed in this field. Sensory analysis could be a valuable scientific tool for learning more about how the various aspects in the FAMM influence the complexity of the experience of a meal. Sensory analysis is a multidisciplinary field of science where professionals such as physiologists, psychologists, philosophers, anthropologists, marketing scientists as well as chemists, technologists and data analysts have contributed empirical and theoretical information (Martens 1999). Although sensory analysis is a scientific method where the human senses are used as measurement instruments, the methods could be the bridge between chemical/physical methods and marketing research that allows us to attain a better understanding of the links between products and humans (Martens 1999).

Another method to study different parts of the FAMM and thereby develop the model could involve semiotics, which can be used to verbalize the guest's feelings and emotions related to all the five aspects of the FAMM (Barsalou *et al.* 2005).

Conclusions

The requirements needed to achieve a positive atmosphere for guests seem to be based on the room, the meeting and the product, for which the management control system serves as the controlling and logistical tool. Thus, the FAMM can be a valuable tool for creating an overall meal experience, which can help satisfy customers/diners.

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