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Perceptions of the Culinary Art Community on their Higher Education Programs in Egypt: The  
way forward

A Thesis Submitted by  
Kadria Ali Abdel Motaal

to the  
Department of Educational Studies  
Graduate Program

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In partial fulfilment of the requirements for the degree of

Educational Leadership: MA

### **Abstract**

Historically culinary art education was considered a vocational discipline without an academic base. Culinary art education used to have a narrow focus that forgoes its richness and ignores its infiltration into economic, political, and cultural aspects within society. Recently the world witnessed an evolution in this field of study as it reached tertiary education institutions. However, in Egypt, culinary art studies are integrated into hospitality education and are still confined to a shallow concept. This study aimed to explore the perception of the culinary art community in Egypt on their higher education programs from a sociocultural perspective. It also explored the possible new concepts, frameworks, and core competencies that could improve culinary arts higher education curricula in Egypt. The study used a qualitative research methodology based on a case study strategy for inquiry. Data were collected via focus group discussions based on semi-structured open-ended questions, and individual interviews. Data analysis relied on a combination of deductive, and inductive approaches to classify the results under five main themes. The findings confirmed the literature review on many points like the social connotation of food, and the divided perception of the culinary arts' higher education in Egypt between the traditional mindset that considers it a vocational field, and the emerging experts who see the potential of this field as an academic discipline based on scientific knowledge. Also, the gap in Egyptian higher education in culinary art was confirmed, where the field is addressed from a narrow perspective that does not equip the student with the necessary skills and competencies. The participants called for an education that promotes creativity, and innovation. As such the study proposed a multidisciplinary curriculum framework for culinary art higher education, to serve as a guiding reference for the future development of this discipline.

**Keywords**, Culinary art, Higher education, Curriculum framework, Egypt

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## **Chapter 1**

### **Perceptions of the Culinary Art Community on their Higher Education Programs in Egypt: The way forward**

#### **Background of The Study**

Culinary Art is defined as “the art of preparing, cooking, presenting and serving food”, it is a combination of science and art (Alfred Zuberbuehler, n.d.). It is associated with the most important human necessity, eating. Jones (2004) argues that culinary art is a complex field that needs technological and operational inputs, it is grounded on scientific principles from multiple disciplines like education, anthropology, history, chemistry, microbiology, thermodynamics, physiology, nutrition, food safety, and visual design (Agwa, Aziz, & Khalifa, 2017). As it is based on knowledge from different disciplines, it is multi-disciplinary, and it can be also considered transdisciplinary as it integrates the social, natural, and health sciences in a humanitarian context, crossing the boundaries between these disciplines (Choi & Pak, 2006).

Historically, culinary arts education was viewed as a technical skill without academic knowledge. It was associated with the hospitality industry. This neglected its infiltration in all aspects of our lives, cultural, economic, political, and societal (Mitchell, Woodhouse, Heptinstall, & Camp, 2013). Since the Middle Ages, culinary art education has been traditionally delivered through a master-apprentice model (Miles 2007). This means of knowledge transmission emanated from Socrates, in the Agora, while delivering his wisdom (Emms, 2005). However, the driving power behind the establishment of this model in the culinary sphere was the French chef and culinary writer Auguste Escoffier, who was claimed to be the "father of modern cuisine". He developed the model that was adopted in most of Western cuisines, the brigade, which is a military organizational model where the chef is placed on top of the hierarchy

and the apprentice at the bottom. This master-apprentice structure prevailed in most of the culinary education and training institutes (ibid).

Hospitality education, and culinary education within, have always been criticized. For instance, Ferguson and Berger (1985) in their study on a group of graduating hospitality students, found that these students did not show any development in their creative abilities through their learning journey. They mentioned in their conclusion that, when students operate within a non-creative system, they respond by adopting a less creative learning modus operandi to be able to perform within that system. Hegarty (2004), supports those findings and highlights the need for a critical approach to culinary art education, he criticized the master-apprenticeship model as he said:

It relies on behavioural or instructional objectives delivered in a didactic form to demonstrate unspecified competence(s), he added, it is concerned only with the performance outcomes, instead of encouraging critical reflection, it is based on the satisfaction of narrow performance criteria directed towards a fixed and predetermined outcome (p. 27).

Also, in 2013, Mark Ericson, Provost of the Culinary Institute of America, stated that historically the apprenticeship model prevailed in the kitchen as an autocratic practice where students are not allowed to disagree with the chef, now it is time for creativity and innovation, a balance between the two cultures must be reached (Moskin & Collins, 2013). Although revolutionary culinary experts, worldwide, are experimenting and exploring with consumers and food producers, culinary art education is still captivated by the traditional French cookery roots, the “masters” apprenticeship model, which can only provide limited culinary skills not fitting in our modern world (Miles, 2007).

Culinary art education is currently undergoing a major shift. This is described by Lugosi, Lynch, and Morrison, (2009) as a critical shift in the field toward a deeper understanding of culinary education. They also claimed that the hospitality industry and its culinary component must be viewed through a social lens and not only through the commercial perspective, but this can also be achieved through a major educational change from the old behaviourist pedagogy that focuses on production and resists the liberalization of the hospitality arena, to a more flexible and creative pedagogy (Lugosi, et al., 2009). They argued that institutions dealing with culinary art higher education must adopt new strategies that combine sophisticated technical skills, business and communication skills, creativity, innovation, and problem-solving strategies (ibid). Miles (2007) emphasized the importance of these new strategies to counterbalance the inherited tendency to overvalue vocational training skills over all other educational aspects. On the other hand, Parsa (2005) points out the importance of having a well-defined concept behind any hospitality business, it is as important as a strategy.

It is worth mentioning that culinary art has always incubated an element of creativity and innovation. Escoffier updated his techniques in the successive editions of his seminal book “Le Guide Culinaire”. He requested the readers not only to value the work of the past great culinarians but to keep on finding new approaches not depending on copying the past.

Recently, the culinary world witnessed rapid changes, the consumer’s awareness of food increased considerably, and the food-related industries expanded noticeably. The Department of Education, Science, and Training, Australia (DEST, 2005), attributed those changes to globalization, the internationalization of the employment market, consumers’ and customers’ exigent demands, and increased business competitiveness. Accordingly, there was a pressing need for a culinary education that responds to the demands of students that are becoming food-

savvy and motivated and an industry that is looking for culinary graduates that can cater to the needs of an increasingly exigent market. In brief, culinary education must guide the student to a higher level of ability (Mitchell, et al., 2013). Meanwhile, the curriculum in culinary art remained unchanged, tending to repel transformation, and insisting on focusing on traditional vocational apprenticeship models (ibid).

At the beginning of the 21<sup>st</sup> century, culinary arts became recognized as an academic field of study. The world started to witness an expansion of independent culinary art programs, and degrees in higher education (Gresh, 2016; Zopiatis, 2014). Undergraduate and postgraduate degrees have appeared in Europe although they still must reinforce their position in the scope of innovation and creativity (Hegarty, 2009). In the USA, several universities like Boston and Harvard universities offered specialized degrees in culinary art (Vogel, et al., 2021). However, the field still holds some ambiguity; it needs a clear definition of its scope and purpose (Harrington 2005; in Dalton, 2020).

### **Culinary Education in Egypt**

Egypt has the largest educational system in the Middle East and Africa. The Higher Education system includes 29 state-funded public universities, 4 state-funded Ahlia universities, 23 private universities, and 51 non-university institutions. Ahlia universities are established by the state, as non-profit institutions, they offer education comparable to private universities at lower fees and they have a governing board of trustees (Ministry of Higher Education & Scientific Research Communities Universities, n.d.). It is an extremely centralized system under the governance of the Ministry of Higher Education. In 1990 legislation for the autonomy of universities was issued, however, the system is claimed to be inefficient as it suffers from shortages of funds, equipment, infrastructure, and human resources ("The Road Not Travelled:

Education Reform in the Middle East and North Africa," n.d.). Tertiary education in Egypt is governed by institutions that control the development of curricula and programs as well as human resources management. One of the main reasons behind the inefficiency of the system is the outdated curricula, which leads to the provision of graduates lacking the skills to compete in a modern employment market, the quality of education is highly compromised, and great efforts are imperative to improve these outdated curricula and rigid teaching practices (Global Competitiveness Report 2020-2021).

According to the World Bank (2009), the Ministry of Higher education launched a big project to improve the educational system, it is based on 5 components, Quality assurance, and Accreditation Project, (QAAP); Higher education Enhancement Project Fund (HEEPF), Faculty Leadership Development Project (FLDP), Information Communication Technology Project (ICTP), and Egyptian Technical College Project (ETCP) (Zaalouk, EL-Deghaidy, Eid & Ramadan, 2016).

In Egypt, culinary art is not considered an independent field of study, it is embedded in the hospitality field that is addressed in the tourism higher education institutes (Agwa, et al., 2017). Also, the colleges of Home Economics in Egypt offer very few courses in culinary art.

In 1962, tourism education started in Egypt with a two-year program that was offered in two small institutions until the faculty of tourism at Helwan University, (FTH), was established in 1975, it was the first of the kind in Egypt and the Middle East (Afifi & Wahab, 2010). In 1983 new public and private institutions appeared, they are classified according to their ownerships, and scope of activity; they comprise eight public colleges, two private universities that have colleges of tourism, five public colleges within the part-time and open public education system, sixteen private higher institutes, beside the ministry of tourism guided initiatives. All of them

offer a 4-year program that covers 43 courses, to obtain a bachelor's degree in either tourism, hotel management, or tourism guidance (Mahmoud, 2017; Ministry of Higher education, 2019).

These institutions attract almost 5% of the higher education students, however, the mismatch between the number of graduates and the market needs is still sizable (Agwa et al., 2017). Abdel Hamid (2010) stated that these educational institutions require a variety of special logistics and infrastructures such as laboratories, kitchens, restaurants, buildings, equipment, and facilities for accommodation which is not easy to provide.

As claimed by Baker et al. (1995) food and beverage courses represent a good indication of how culinary art is addressed in the hospitality management curricula. It was difficult to find academic research, that investigates the culinary art curriculum or evaluates the quality or number of food and beverages courses in Egyptian Higher Education. Nevertheless, research by Agwa, et al., (2017) in three faculties of tourism in Egypt, Mansoura, Fayoum, and Alexandria Universities, "Evaluating Food and Beverage Courses based on the perception of professional experts", produced the following findings:

- The course content is not well-structured toward clear intended learning outcomes
- The course content does not build the competencies required to meet the market demand.
- The content is out of scope concerning to the new development in the field.
- Students do not receive a deep theoretical foundation or knowledge in the field.
- There is a clear mismatch between what is delivered on the practical and theoretical parts.
- The scientific part is focused on food as a service and not as a production.
- The training is basic, does not enhance creativity or innovation
- The dynamism of the field and rapid evolution are not taken into consideration.

- The different types of cuisines are not addressed

The curriculum of the faculty of tourism at Helwan university is also an example of the limited space that culinary art is occupying in the Egyptian education sphere. The time dedicated to culinary arts courses is on average, three hours theoretical plus two practice hours weekly per annum for the first three years only. Summary in the table below

**Table 1**

*Culinary Arts Topics in The Syllabus of the Faculty of Tourism / Helwan University*

<b>Academic year</b>	<b>Course</b>	<b>Hours</b>
<b>1<sup>st</sup> year</b>	Food & Beverages Management	3 hours/ week Theoretical
<b>2<sup>nd</sup> year</b>	Food Production	2 hours/ week/ theoretical + 3 hours / Practical
	Food Cycle	3 hours/ week/ theoretical first semester only
<b>3<sup>rd</sup> year</b>	Nutrition and food Menu	3 hours/ week/ theoretical
<b>4<sup>th</sup> year</b>	-----	-----

In conclusion, the place and scope of culinary arts education in the curriculum of the tourism faculties are very limited and narrow. It does not give credit to this discipline as an independent academic field grounded on knowledge and science. This reflects the perception of culinary arts within the Egyptian educational sphere as a marginal field.

There is a pressing need to have a deeper conceptualization of culinary art within the Egyptian higher education system to be able to supply the market with graduates who can

compete on an international scale. Mastering this domain can open new opportunities in the tourism industry, in Egypt, where tourism is one of the country's main sources of income.

### **Research Problem**

There are numerous research-based studies on culinary arts higher education worldwide to explore its different aspects. Several universities worldwide are offering specialized degrees in this area. However, in Egypt, culinary arts higher education is not addressed as an independent academic field. Rather, it is embedded in the hotel management degrees in the institutes of tourism. Therefore, there is a demand for filling this gap by exploring the Egyptian culinary art higher education case.

This study explores the perception of students, graduates, and professors of tourism institutions about culinary art higher education as a concentration area in the degrees offered by these institutions.

### **Research Questions**

This study aims to answer the following questions:

- 1- How do the students, graduates, and professors of the Faculty of Tourism at Helwan University perceive culinary art in Higher Education in Egypt, from a socio-cultural perspective?
- 2- What new concepts, frameworks, and core competencies could be recommended to revolutionize the culinary arts higher education curricula in Egypt?

### **Research Purpose**

The purpose of the study is to draw attention to the importance of the recognition of the field of culinary art as an independent interdisciplinary field of study in Egyptian Higher Education.

### **Significance of the Study**

The study demonstrates the perception of the culinary community about higher education in culinary art, it will also, define the core competencies to be addressed through a new curriculum framework in culinary art. It will present some global models in the field. All of this will be eye-opening to policymakers and will be an added value while designing new educational programs in the field. Future research in the field could refer to this study.

### **Outline of the Study**

This study is divided into five chapters:

1. Chapter one includes the introduction (background, aim, research problem and questions, and significance).
2. Chapter two includes the literature review and the conceptual, and theoretical frameworks).
3. Chapter three includes the research design and methodology.
4. Chapter four includes the findings, and data analysis
5. Chapter five includes the discussion and proposed curriculum framework

## **Chapter 2**

### **Literature Review**

This study explores the perception of the students, graduates, and professors of the faculty of tourism at Helwan University about culinary arts higher education in Egypt. Based on this, a new curriculum framework in culinary studies that approaches food from a multidisciplinary perspective will be proposed. This literature review spans the food sphere from the social, historical, and scientific perspectives, and relates it to the concept of multidisciplinary. The different curriculum design models are discussed, and the core competencies required to design the new framework are identified. A conceptual framework for the study is presented. The interpretivist /constructivist and critical research paradigms are highlighted as the theoretical framework for the study.

#### **Theoretical Framework**

A paradigm is a method of thinking or the rational beliefs that build consciousness about a certain reality "Chapter five: Research design and methodology," n.d., p. 300). It can be used as a theoretical framework to guide specific research. To be able to contextualize this study within a specific research paradigm two research approaches are considered.

#### ***Interpretivist / Constructivist Theory***

The Interpretivist / Constructivist Theory is also referred to as the phenomenological approach. According to Babie (2008), it is used to have a better understanding of a social phenomenon. Interpretivism claims that everything is subjective and depends on the perception of the community involved in the research. As opposed to the positivist approach that attempts to confirm reality, the interpretive approach claims that there could be more than one reality

Babbie, (2010). It highlights the role of experience in the interpretation of reality and the different points of view that contribute to the construction of social perception. This approach is usually based on a qualitative method of inquiry in collecting and analysing data. The interpretivism approach is suitable for exploring the perception of culinarians participating in this study. Its ontology and epistemology that rely on inner reality and individual experience make it a good theoretical framework for the study.

However, the main objective of this study is to identify the gap in the current culinary education curricula and recommend an improved curriculum framework. Therefore, the critical theory is considered as an additional research framework for the study.

### ***Critical Theory***

While the interpretive approach aims at understanding the societal facts, the critical approach is focused on transformation. As argued by Henning et al. (2004), positivists are concerned with prediction, interpretivism tries to understand, and critical researchers attend to societal challenges through research (ibid). Critical theory is usually associated with a sense of power and freedom. It is about development and positive change. Research must be transformational; it does not have to stop at understanding, rather it should aim at inducing a change in people's life (Tierney, 1994; as cited in "Chapter five: Research design and methodology," n.d.).

The application of the critical theory in the context of this study can be explained by the carrot cutting experience described by Woodhouse (2015). He argued that chopping a carrot into a "brunoise" (2 mm cubes), is common practice in a traditional French-based culinary curriculum. The master ship of a knife is an indication of a good chef, he must be able to cut the vegetables speedily, according to standards, and without wasting the ingredient; this simple

chore of cutting the carrot could be a case study that we can explore from an educational and pedagogical perspective (ibid, 2015). According to Friere (1970), the way students are instructed to produce this brunoise following the French standards symbolizes the principle of knowledge banking, where the French technique is imposed on the students. He added, this is a cultural invasion. As Schön (1983) argued, this is espoused knowledge, a kind of knowledge banking that only serve the purpose of assessment. Sometimes, the students have work experience through which they learned how to make the cutting differently using other tools, as Bourdieu (1984) claims, they are obliged to move between two worlds' standards. The students are not allowed to question or challenge the ultimate authority of the master, they are taught to say yes master, but never why (Deutsch, 2014). There is no opportunity for innovation, imagination, or inventiveness as if they are in the military (Shewry, 2012). This leads to the indoctrination of the cultural ideologies of the masters into the students (Friere,1970).

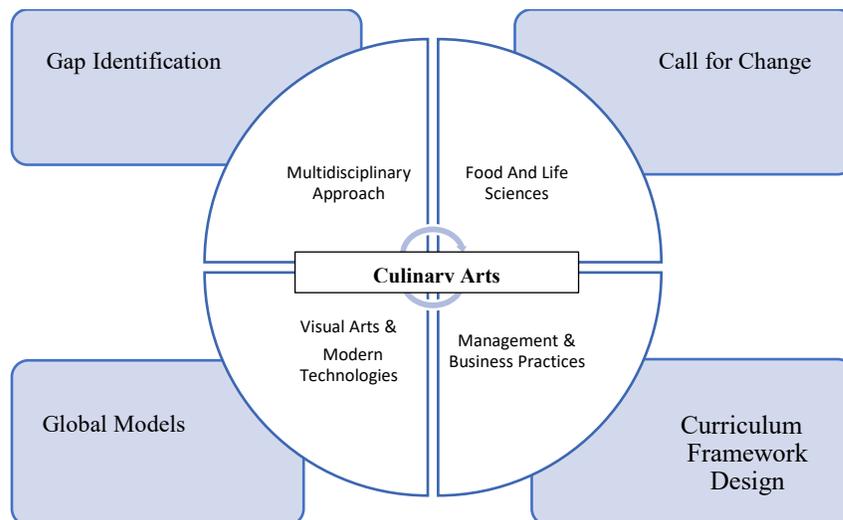
As argued by Apple (1982), the hidden curriculum, referring to the school and social environment where education takes place, plays a role in defining the place and identity of people in society. The environment and the place of a chef in the kitchen impacts his identity and how he perceives himself, simple labourer, entrepreneur, business executive, or artist (Fine,2008). Woodhouse (2015) argues that to make the artist's identity prevail in the classroom the educator must release the knowledge power and give it to the learner; the lecturer could say "take this carrot and create with it what you want" (p.68). This leads to a democratic engagement in classroom dialogue.

In conclusion, this humble task of cutting the carrot could be the job of a professional, a worker, or an artist; this identity is determined based on the lecturers' behaviour and their educational practice in a classroom (ibid).

Culinary art education is suffering from the perception that considers it not deserving of intellectual status. The concerns of perception and poor intellectual classification can be handled through critical theory. The reconstruction of reality within the culinary world, and the induction of change and empowerment are conducive to the application of the critical theory as a theoretical framework for this study. This study will be guided by both interpretivism and critical paradigms.

**Conceptual Framework For The Study.**

The figure below presents the conceptual framework, its explanation will follow



**Figure 1:** *Conceptual Framework of the Study (Own Construct)*

The conceptual framework is the lens through which the researcher views this study (Henning, et al., 2004). At this stage, a provisional framework is designed, it may be subject to modifications, or expansion during the study. This conceptual framework aims at designing a curriculum in culinary studies higher education, which is a new concentration area in the Egyptian higher education system. The gap identification is explained in the background and the

problem statement paragraphs, in Chapter one. The global models in culinary art higher education and the curriculum design models are surveyed in the literature review in chapter two. The investigations will take place through the research procedures as explained in chapter three. Data analysis and synthesis in chapter four will lead to the development of the proposed curriculum framework. Chapter five with the conclusion presents the proposed framework, based on a multidisciplinary approach, to include culinary arts, food, and life sciences, modern technologies, including information communication technology, visual art, and management and business practices.

### **The Concept of Multi, Inter, and Transdisciplinarity**

Knowledge has always been organized into separate distinctive disciplines. However, in the new world where science must be innovative and oriented towards implementation, the application of scientific knowledge usually requires the integration and the complementarity of knowledge from different scientific fields (Besselaar, 2001). Choi and Pak (2006), argue that the term multidisciplinary refers to the combination of knowledge from multiple disciplines while preserving the boundaries between those disciplines; interdisciplinary refers to the synthesis and blending of these disciplines to produce a comprehensible whole; transdisciplinary integrates the social, natural, and health sciences in a human context, crossing the boundaries between these disciplines. So, these concepts aim at providing different perspectives in resolving the world's problems, they point out the contribution of multiple disciplines to the same field to different extents. They are not alternatives to each other as multidisciplinary is additive, interdisciplinary is interactive, and transdisciplinary is holistic.

Culinary art education is a multidisciplinary field. Jones (2004) argues that culinary art is a complex field that needs technological and operational inputs, it is grounded on scientific

principles from multiple disciplines like education, anthropology, history, chemistry, microbiology, thermodynamics, physiology, health, nutrition, food safety, and visual design (Agwa, et al., 2013). As it is based on knowledge from different disciplines, it is multi-disciplinary, and it can be also considered transdisciplinary as it mixes different sciences within a human context. (Choi, & Pak, 2006).

### **Science in the Kitchen**

Two decades ago, science and cooking were two separate worlds. There was the world of natural sciences like chemistry, biology, and physics tackling life subject matter. And food science deals with the applied industrial process of food manufacturing. Also, the vocationally oriented field of restaurant and traditional cooking small businesses existed but in the isolation of relevant scientific background.

McGee (2004), in his famous book “The science and lore of the kitchen”, raised exciting questions such as why eggs become solid when we cook them. Why does yeast make the dough bounce? Why do the fruits become dark after cutting them? He claims that the answers to those questions made him think of the link between the molecular component of a cell and the way it is crafted. Science can turn cooking into a thought-provoking experience, as it relates it to the basics of nature.

Science started to invade the kitchen, and the science of cooking appeared in journals, newspaper articles, and books. In 1997, the book of Shirley Corriher “Cook Wise” presented a breakthrough in the integration of recipes with their scientific explanation. Kitchen science found its way to the television worldwide and several food molecules, micro-organisms, nutritional facts and figures, and health-related issues became familiar.

Lately, there is a shift towards a more scientific approach, the kitchen opened its door to

science, and become like laboratories and factories. Famous culinary professionals like the Spanish Ferran Adria and the British Heston Blumenthal paved the way for “molecular gastronomy”; they got involved in experimentation to create new ingredients for cooking, like using seaweeds to produce gelatinous agents, new aromatic extracts, and new forms of pressurized gases like liquid nitrogen to add new culinary delights (McGee, 2004).

Nicholas Kurtis, a physicist at Oxford University claimed that the fact that we can measure the temperature in the atmosphere, while we are not able to know what goes inside our food, is a bad reflection on our civilization (The Christian Science Monitor, 1985). He added, to be aware of what happens during cooking, we must understand the invisible world of molecules and how they interact. He was the first to organize an international workshop on molecular and physical gastronomy.

Following up on the evolution of the field drives us to recognize the potential it offers. Experts, trainers, and scientists in this field are raising the bar for a more academic and scientific foundation for the profession. Science moved to the culinary world, and cooking is integrated into the academic and industrial arena (Ruark,1999).

### **Culinary Art: Cultural, Anthropological, and Social Perspectives**

The cultural environment of society is shaped by literature, artistic productions, religion, and traditions. These are the aspects that symbolize the art of living, culinary art and gastronomy are part of this art (Mitchell, 2003). Eating is an activity where the human essence is intertwined with spiritual and sociocultural norms (Gustafsson, 2004).

Several issues related to culture, gender, and class can be explained if simple questions like, who is cooking, what, and for whom, are answered. House cooking is a female duty in most of the cultures, however, in privileged social classes, women can skip this obligation (Aviakan,

2014). Food could be a tool to evaluate female experiences through the lens of intersectional feminism, which refers to how the various sorts of inequality can reinforce each other. For long years the topics of cooking and eating were avoided by female writers as they linked them with oppression (Avakian, 2014). However, lately, many female writers published their work on food analysis, and food memoirs appeared; these are narrative writings that rely on memory, and they lead to discussions on more important issues. Some of the famous females' food memoirs are *The Language of Baklava: A Memoir* by Diana Abu-Jaber, and *A Memoir of Food, Love, and War* by Annia Ciezadlo. However, men dominate the culinary industry, they occupy most of the senior positions. Therefore, females try to avoid pursuing a qualifying higher degree in culinary education as there is no guaranteed career pathway.

The anthropology and sociology of food are based on many theoretical concepts in approaching, diet, eating behaviour, and cooking practices (Ayora-Diaz, 2015; as cited in Aktaş-Polat & Polat, 2020). These concepts and the impact of culture on the preparation and consumption of food can be summarized as follows:

### ***Modernization***

The effect of modernization on the evolution of the concept of food. Primitive societies used to depend on raw food, with modernization cooked food with new sophisticated cooking techniques emerged and became a skill and occupation. Food turned out to be a social activity, and a profession (Wrangham, 2010; as cited in Aktaş-Polat and Polat, 2020).

### ***Communication***

Food became a way, for people to interact and socialize with each other. (Aktaş-Polat & Polat, 2020).

### ***Religion***

The spiritual symbolism of food became as important as its nutritional value. Religious identity is related to food, for instance, Muslim people do not eat pork meat or drink alcoholic spirits, and Hindus are vegetarians (ibid).

### ***Social Analysis***

Food can be an identifier, Levi-Strauss (1964) points out the role of food in defining the social standing, economic status, and ethnic origins in society. During Diaspora, and among immigrants, where food nostalgia was noticeable, food symbolized a sense of belonging. On the other hand, in their book, the Social Appetite, Germov and Williams (1999), pointed out the three dominant concepts in food sociology:

### ***Homogenization***

Referring to the world isomorphism which is exhibited through the popular international chains of restaurants and hotels. This was called the McDonaldization phenomenon, which was opposed by counteractive initiatives, such as the slow food movement that emerged in 1986 in Pollenzo/ Italy to counteract the fast-food concept.

### ***Social Distinction***

It is related to people who tried to use food and cooking to assert their identity and mark their differentiation. It is more prevalent among youth who developed new food trends and eating habits like vegetarianism.

### ***Self-Justification***

Within this mixed confused world, some people are trying to reflect on their social standing and living style in food (Alonso & Krajsic, 2016). While food symbolizes different

meanings according to cultural backgrounds, it still has common connotations in all societies.

These can be summarised as follows:

**Consumption**, the meaning of food goes beyond responding to the basic physiological need “hunger”. We can prepare food to serve a functional purpose, satisfy our physiological needs, or mark our differentiation, using more sophisticated and artistic food preparation techniques. Food discretely responds to other needs like social standing, pride, self-esteem, and fulfilment.

**Transfer**, the importance of food goes beyond its nutritional function, it contributes to shaping the community. It has a marked cultural role, it is a means to develop social relations and emotional attachment between people, and even to assert their identity (Alonso & Krajsic, 2016). As an example, the opportunities that mealtimes offer by creating emotional bonding between family members, and a unifying influence in the work environment. Also, cooking is a vehicle to transfer culture through travel and migration, etc. Food bridges cultural barriers.

**Identity**, food links past and present as a witness to the history of nations. Specific food varieties are strongly linked to certain cultures, they become an illustration of this culture (Alonso & Krajsic, 2016). For instance, the origin of falafel was debated between several middle eastern countries such as Egypt, Sudan, Yemen, and Israel; Falafel is a type of vegetarian patty, and it is a middle eastern recipe, even writers like Jeff Rice wrote the Falafel Memories. This authenticity issue about falafel reflected the deep political battle and identity debate (Rice, 2019). Food is an indicator of socio-economic background, cultural status, and quality of life, it is an identifier (ibis). As argued by the famous anthropologist Lévi-Strauss “Food is good to eat and good to think with”.

### **Evolution of Culinary Art in Higher Education**

According to Rebecca (2015), Culinary art started millions of years ago to address primitive human needs. The field was subject to profound and detailed studies to encompass a wealth of knowledge. United States came first in establishing the first cooking school in Boston in 1879, to put the base for culinary arts education. Asia took a similar path to develop its culinary arts studies, which fused later with its European counterpart, nowadays in the global marketplace, the boundaries between Eastern and European food are fading, and culinary arts students are exposed to different cultures and cuisines (ibid).

Most of the study of culinary arts began in Europe guided by Brilliant- Savarin who propagated the world-renowned statement “Tell me what you eat, and I tell you who you are”, it covered the diverse food sciences and gastronomy. The current situation in the culinary art field is the result of the work done over the years by leading people who dedicated themselves to the evolution of this domain. After the French revolution in 1789, many of the expert cooks who worked for the French aristocracy left France for other European countries, to avoid persecution. They worked with the aristocrats in these countries, and some of them established their businesses and this marked the start of the hospitality industry (Brame, 2010). Renowned culinarians played significant roles in demarcating landmarks in the evolution pathway of the culinary field (Bednarz, 2015; McGee, 2004; Ryan, 2002). This can be summarized as follows:

- Boulanger, a French entrepreneur who opened the first place to serve food, to be called later a restaurant
- The introduction of the refined dining concept, using forks and knives on the occasion of the historical marriage of Princess Caterina de Medici and Henry the second in 1533.

- The first cookbook to appear by Pierre Francois de la Varennes in 1651, described the French aristocracy's cooking styles.
- In 1833, Marie-Antoine Carême, a French chef developed a system for culinary techniques He wrote several books on cooking principles. He introduced the concept of the menu "Carte" as opposed to the prevailing single dish.
- The publication of the Seminal book of Jean-Anthelme Brillat-Savarin "Le Physiologie du Gout" in 1869. It is considered core knowledge up to today.
- In 1903, George Auguste Escoffier presented his famous book "Le Guide Culinaire", which is still in use, it is a coding of cooking techniques. He also introduced the concept of the "kitchen brigade system" it is an organizational chart for the workforce in the kitchen and proved to be extremely useful, especially in large hotels and restaurants.
- Ferdinand Point created the concept of the "Nouvelle Cuisine" in the 1970s, with innovative recipes, and small portions artistically displayed.

The expansion of the market in a multicultural and diverse environment paved the way for new career opportunities in the field. The efforts of all these experts created contemporary cuisine as we see it now.

This historical pathway showed that this field is a dynamic field that needs constant innovation and creativity to keep pace with the societal evolution at all fronts, scientific, technical, communication, and cultural exchange. Hence the development of educational programs based on mutlidisciplinarity and creativity was very much needed.

### **Global Models of Academic Culinary Arts Education**

Interesting academic progress, in gastronomy and culinary education, started at the end of the last century. Undergraduate and master's degrees evolved, and research and Ph.D. thesis

commenced. Questions started to emerge about the place of food in our lives, the different perspectives that scientists and philosophers can research in this regard, and the relation between the social, esthetic, and scientific dimensions of food (Hegarty, 2009).

There are numerous programs in culinary education worldwide that cover the different aspects of gastronomy, and culinary arts. These studies span this industry from anthropological, ethnic, social, cultural, and technical perspectives. Several universities worldwide are offering specialized degrees in this area. Two models will be presented. The model of the Gastronomic Sciences University of Pollenzo, Italy, and Ecole Ducasse, Paris, will be presented.

### ***The Gastronomic Sciences University of Pollenzo, Italy***

It was established in 2004 by the slow food association. It offers food studies programs that introduce students to global food cultures and promote innovative trends in the food sector. The university has an international orientation, it attracts students from several countries. It offers an undergraduate bachelor's degree in "Gastronomic Sciences and Culture" that emphasizes the importance of food and its role in shaping society. It is a 3-year program, including a mix of theoretical background, training projects, and educational trips across the world. It is interdisciplinary covering knowledge and skills in culture, politics, economy, sciences, ecology of food, and stages of production and consumption. The courses included in the syllabus include anthropology; sociology; physiology; philosophy of food; food and health; food law; biodiversity; molecular sciences; and sustainability. The teaching methods combine knowledge about the complex food universe and experiential applications in and out of the classroom. The program exposes the students to the global perspective of the food industry, past and present, and allows them to recognize cultural diversity (University of Gastronomic Sciences, 2020).

Also, the university offers master's degrees in many food-related areas:

- Master's degree in sustainable food innovation & management
- Master's degree in food thinking
- Master of applied gastronomy: culinary arts
- Master in contemporary food thinking
- Specialized master in food design

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- Specialized master's in food design

*Ecole Ducasse, Paris*

Ducasse offers a leading bachelor’s degree in culinary arts that combines practice with management, and entrepreneurial skills. The program duration is 3 years, divided into six semesters, with two internships, 5 months each. This program is based on extensive training in culinary arts and business and management. The number of students in classes is limited to ensure individual attention to the learners. The table below highlights the main features of the bachelor’s degree program in culinary art at Ecole Ducasse.

**Table 2**

*Structure of the Program (Appendix 3, Brochure of the Institute, for Details)*

<b>Semester</b>	<b>Course/ hours</b>	<b>Topics included</b>
<b>First</b>	Essential Practices in Culinary Arts. 20 weeks, 480 hours	Sustainable business practices, Regulations, food safety, soft skills, and communication
<b>Second</b>	24 weeks	Internship
<b>Third</b>	20 weeks/ 450 hours Advanced Practices in Culinary Arts	Sustainable business practices; the global landscape of food and beverages; emerging trends and models; applied mathematics and software; Food and beverage management
<b>Fourth</b>	24 weeks	Internship 2
<b>Fifth</b>	Management 15 weeks / 116 hours	talent management; HR guidelines; photography; IT; financial principles; marketing basics; entrepreneurship; and concept design
<b>Six</b>	Cuisine Masterclasses II in the innovation lab	Digital marketing, sales, and social networks - Sustainable business practices - Commercial law and legal risk - Media training and communication - Business game - restaurant management model - Applied business project.

The model of the University of gastronomic sciences in Pollenzo is the adoption of a multidisciplinary approach to give the students skills and knowledge in various fields. It stresses

the complementarity between humanities and sciences and provides hands-on and sensory training. While Ducasse school is more focused on applied culinary basic and advanced training besides other business and management issues. Both models will be synthesized while developing the new curriculum framework to combine both perspectives.

### **Curriculum Development**

To contextualize this research within the paradigm of curriculum development, several definitions of the curriculum will be explored. The different curriculum design models will be discussed and synthesized to reach a model suitable for a culinary arts curriculum framework.

#### ***Definition of Curriculum***

The word curriculum is understood as the educational path that learners must undertake, guided by their instructors, to reach a higher level of expertise and ability (Olivia,1998). According to Pratt (1994), the word curriculum has its roots in the Latin language,currere (that run), it points to running on a racing track, which implies that there is a beginning and an end, a path, performance, a program, winners, and awards. Even the word was used metaphorically in the expression vitae curriculum, referring to someone's life path. Olivier (1977) argues that curriculum has to be interpreted through a wide lens because besides its conceptual role it has a hidden mission, it leads to unseen learning experiences through the values promoted by the school, the different approaches of teachers within a given subject area, and the socio-cultural school environment. The curriculum must represent an elucidation of the educational promise of content. In a classroom, there is much more than content, pedagogical and social features are exhibited.

According to Marks (1974), the curriculum is not a syllabus to study or precise goals and objectives to achieve, it is rather the sum of the learning experiences offered to the student in his

school. On the other hand, Tanner (1975), sees the curriculum as planned and reconstructed knowledge and experiences used to offer to the student a guided learning experience in the school to increase his personal and social abilities. The tension between Marks's holistic definition, and Tanner's precise one leads us to conclude that there is no single definition of the word. The curriculum is not limited to the literal and institutional meanings. It encompasses some historical, racial, political, gendered, phenomenological, theological, local, and international nuances, which is why it has to be contextualized.

### *Curriculum in Culinary Studies*

Traditionally, curriculum design in culinary education was based on vocational education and technical competencies rather than a theoretical foundation (Mandabach, 2002). Nowadays the boundaries between vocational and liberal education must dissolve, to produce well-rounded graduates (Hegarty, 2004). Zuberbuehler (n.d.), the executive chef at the Swiss school of hospitality and tourism, published an article titled “What does the perfect culinary arts curriculum look like”, where he argued that food innovation is not a luxury anymore, it is needed now more than ever to feed the constantly increasing world population without putting further stress on the environment. He added that the biggest drive for innovation is curiosity, enthusiasm, and persistence; science has always been important for culinary art, it had its impact on new equipment and scientific understanding of cooking, and it helped the professionals in the field to be more creative (Zuberbuehler, n.d.). He defined the aspects of the ideal culinary art curriculum as follows: It must promote all the necessary skills for a qualified culinarian; it must expose the student to the different functions and operations in the kitchen so that the student becomes fully aware of the work cycle; it must orient the student on how to combine food and present it on the plate; how to identify tastes and flavors, in other words, palate training is a

necessity that a curriculum should provide; it must provide practical training to gain real-life experience; the curriculum must develop the secret skills of the students, like how to fix a bland plate and how to get the maximum flavor of the ingredient; how to select the most efficient and up-to-date equipment in the kitchen and learn when and how to use and take care of them ( ibis).

Therefore, designing a framework can be a benchmark to assess the existing curricula and develop a framework for a new curriculum in culinary education. In the field of education, it is important to note the difference between institutional curriculum, course curriculum, and subject curriculum. Concerning culinary art each of these can be interpreted as follows:

- Institutional curriculum points to the programs offered by different institutions like a Diploma in food and beverage management, or culinary arts.
- Program curriculum shows the subjects included in a specific program. For instance, a program in culinary arts can include a subject like food science, or food and culture.
- The subject curriculum will include the details of each of the subjects, it will highlight the goals, objectives, learning outcomes, activities, modality of teaching, and assessment (Carl, 2004).

Experiential learning theory is appropriate as a base for the development of a curriculum in culinary arts. In this theory, learning is premised on praxis and experimentation, and knowledge is created through transformation and assimilation of experience (Dernova, 2015). Experiential learning theory is based on David Kolb's Learning Cycle. Kolb argued that learning occurs in four phases: concrete application, reflection, assimilation/conceptualization, and planning/action (Kolb,1984). In this learning design, the learners are engaged in real-life experience, and instructors are facilitators, they do not guide the progress. Experiential learning motivates students, exposes them to unpredicted situations, and stimulates creativity and

innovation. Students direct themselves and learn to reflect and adapt their knowledge to new contexts and environments.

### ***Curriculum Design***

It refers to the development phase of a curriculum whether it is a new curriculum or a revisited one (Carl, 2002). According to Wiles & Bondi (1984), there are different concepts behind curriculum design, the six major ones are:

- Conservative-Liberal Arts concept focuses on human intellect as the most important differentiation point, hence the curriculum should pursue knowledge.
- The Educational Technology concept neglects the goals and concentrates on techniques and processes.
- The humanistic concept mainly draws on the human element and focuses on students as the center of the learning experience, and the teachers as the initiators of the educational process, it has a decentralized approach.
- The vocational concept focuses on the skill's development in specific applied domains having an economic impact.
- The social reconstruction concept considers social development the main objective of a curriculum.
- The de-schooling concept advocates for informal free education.
- The vocational concept is the one mostly used in culinary and hospitality education. In this concept, job analysis is the base for the definition of the objectives and learning outcomes.

To recommend a design for a new curriculum framework based on, a theoretical foundation and defined goals and objectives, different designs presented by curriculum theorists like Carl, Oliva, Saylor, Taba, and Tyler will be considered.

### ***Models of Curriculum Design***

To select a flexible curriculum design that allows continuous improvement, the different design models will be discussed. Four models will be briefly presented according to Isyaka Hamisu (n.d., p. 58-66).

**Taba Model**, this model was created by Hilda Taba in 1962, she is one of the main curriculum theorists. She adopted a “grassroots” approach because she believed that teachers, as the users of the curriculum, should design it, she was against a down streaming approach through a central authority. Her approach is inductive, it starts with the specific, and moves towards constructing the general design. She believes that teachers should start with establishing trial learning units before engaging in a general design. She defined five stages for the process:

1. Establishment of a pilot unit for curriculum development according to the following sequence: (1) needs assessment; (2) the definition of objectives; (3) selection of content; (4) organization of content; (5) and design of the activities (Isyaka Hamisu, 2021, p. 58).
2. Experimenting with the unit, this phase will address the evaluation and assessment of the design.
3. Revision and adaptation, this phase will address the required changes and modifications according to the findings of the previous stages. It will ensure the flexibility of the curriculum in responding to the needs of the students, within the limitations of the available resources.

4. Framework development, in this stage the rationale for the new curriculum will be established.
5. Installation and dissemination of the new design.

The weak point in this model is its focus on short-term objectives neglecting the broader overview.

**Tyler's Model**, is called the objectives or "means-ends" model. It was developed in the 1940s by Ralph Tyler. It is the standard prototype of curriculum development and is still viewed as one of the strongest models. One of the main advantages of the model is its simplicity. According to Colin Marsh (2009, p. 29) it comprises four stages:

1. Defining the purpose or selecting the objectives according to the institution's philosophy (what needs to be done by the students to succeed?). This selection should rely on sources from society, the subject matter, and the students.
2. Define the educational experience linked to the objectives, this stage should aim at developing skills and values.
3. The organization of experience, According to Tyler (1949), Marsh and Stafford, (1988 as cited in Isyaka Hamisu (n.d), this stage includes a horizontal integration of the curriculum, linking the subjects to each other, and vertical integration, connecting past and present learning experiences to construct knowledge.
4. Assessment of the learning objectives, in this stage the realization of the learning outcomes is assessed.

In this model, the link between the objectives, the activity, and the assessment is very applicable in culinary arts.

**Oliva's Model**, is a deductive model that proceeds from the general context toward a more specific objective. It assesses the student needs in the context of their communities, claiming that needs within a specific community are different from the general needs of society.

According to Oliva, a curriculum must be inclusive, systematic, and applicable. Twelve components are included in this model: (1) a philosophy aligned with the mission and vision of the institution; (2) an assessment of needs within the institution's community; (3) identification of the general and specific objectives of the curriculum; (4) formulation of the strategy for learning (5) organization and implementation; (6) evaluation process and techniques.

**Saylor, Alexander, and Lewis's model**, it considers the identification of educational goals and specific objectives, the point of departure, (Saylor, Alexander & Lewis, 1981:31; as cited in Isyaka Hamisu, n.d., p. 58-66). The goals and objectives are classified under four parameters: Personal development, social skills, continuous improvement, and specialization.

The concept of this model is relevant to culinary education as the four above-mentioned dimensions are applicable in the field. Personal development and social competence are required in the hospitality field, continued improvement is in demand in an industry that is continuously progressing, specialization is needed as the field is expanding due to globalization.

**Carl's Curriculum Model**, Carl Rogers made an influence on the curriculum design process through the introduction of the "learner-centered approach"; his theory is to put the students at the center of the contextual analysis through which all other components should be developed. He emphasized the dynamic nature of the different curriculum components and how they can be used at macro, meso, or micro levels. He claims that no one model fits all, each component is used according to its relevance to the situation and level where it is applied (Carl, 2002).

Carl summarized the common parts in the different curriculum design models as needs assessment; identification of objectives and outcomes; the organization of content; selecting delivery methods and techniques; identification of learning activities; and assessment and evaluation.

### ***Main Components of Curriculum Design as Described in Different Models***

Different design models were presented, and each one proposed a starting point, mainly gap analysis or needs evaluation, followed by a definition of objectives, and implementation and assessment.

For the sake of designing a framework for the culinary arts curriculum, the four main components of curriculum design are discussed in culinary arts.

**Needs Identification or Situation Assessment**, two issues must be considered, the context in which this curriculum is designed, society and industry, and the needs related to the specific curriculum subject. As Carl (2002) pointed out, different levels of design must be contemplated; for instance, a curriculum responding to the needs of a large sector of the population like skilled labor in the hospitality sector must be designed on a macro-level (considers the socio-cultural and educational system including curriculum policies); if the design will address a specific field of studies like food and society, it must be designed on a Meso-level (considers the institutional context); however, if it focuses on the content in a specific subject, the design must be on the micro-level (focused on the classroom activities and the student - teachers interrelation). Also, it must consider the opinions of most learners, professionals, and leaders in the field and the environment in which they operate. Other elements of market dynamics such as technology development, information technology, the increase in the number of learners, and culinary tourism, will affect the outcome of the design.

**Goals and Objectives,** goals are usually aligned with the national directives, while the objectives are more specific. The objective of the proposed framework will draw upon the needs assessment. These needs will be explored to define the specific goals and objectives of the culinary study curriculum. The development and organization of the content will follow.

**Content,** according to Carl (2002), the syllabus should highlight the core content. It must reflect the goals and objectives.

**Learning and Teaching Methodologies,** to preserve the dynamic nature of the curriculum, the learning strategies must offer learning experiences and opportunities, and make a good selection of learning material.

As discussed in this review, there is no unified definition of curriculum, it differs according to context and orientation. That is why any curriculum structure must be understood within the context where it is applied, it should mirror the philosophy and values of the society where it evolved.

The Tanner and Tanner definition of the curriculum emphasizes the importance of continuous personnel development and highlights the dynamic nature of the curriculum. These two concepts are relevant to culinary arts education, as it is a dynamic field of study, continuously subject to change and evolution because of globalization, and requires continuous professional development.

It can be concluded that the process of curriculum design embodies a cyclical flow of the components as discussed above, it is constantly influenced by the context in which they are applied. As there are different models of curriculum design, it will be necessary to recur to a synthesis between them to reach a model that meets the objectives of the study. These facts will shape the proposed curriculum framework in culinary studies.

In the proposed framework the researcher will use a combination of Tanner's definition "constructed learning experience based on knowledge and expertise" and Marks's holistic definition " curriculum is rather the sum of the learning experiences offered to the student ". Also, the researcher will adhere to the fact that the curriculum is not static, it must reflect society. The framework will not address a specific subject, rather it will propose a set of objectives and goals, possible core content, and some suggestions for the learning outcomes.

### **Competencies for Culinary Arts Education**

The hospitality industry is facing a growing challenge to satisfy clients and meet their ambitious demands. Customers are more exigent and are looking for innovative gastronomic experiences. To respond to these demands, the culinary industry must be oriented to creativity and innovation, and competencies are required to enable professional culinarians to succeed (Hu, 2010).

Analysis of the competencies will drive the field to more professional practice in developing educational and training programs. In 1988, Tas led the work on competencies identification in the hospitality industry, a lot of research work followed, and a substantial amount of knowledge was generated. However, most of the studies were related to the hotel sector and very few targeted the food sector alone.

Competency can be defined as a multi-component concept that includes, skills, expertise, intellectual abilities, values, and judgment (Birdir & Pearson 2000, p.205). Boyatzis (1982) believes that competency is an inner human trait that leads to effectiveness and high performance. Competency was defined by Tas (1988), as the ability to perform and accomplish the work duties related to the position. In the context of education, it refers to the acquired knowledge and skills of the learners through the offered program (Hartels & Foegeding, 2004; as

cited by Cheng, 2012). An education process based on competency relies on precise objectives, feedback, various delivery styles, and assessment (Cheng, 2012). Competency models can be considered as a criterion in designing a curriculum for culinary education (McLagan, 1996).

Culinary industry practitioners must keep on developing innovative competencies to maintain their competitiveness. According to Sundbo (1997), innovation is the development of new concepts with added market value. He distinguished two types of innovation, fundamental and incremental, he underlined the importance of maintaining an equilibrium between both. To satisfy their customers, chefs must keep on creating new recipes and gastronomic experiences. Also, they must develop their skills and knowledge continuously and combine them with creativity.

Birdir and Pearson (2000) classified the chefs into two groups, research-focused, and management-focused. Each category enjoys a different set of competencies, although they have some common ones. The research-oriented chefs can develop new products, and creative recipes they have a solid knowledge of food ingredients and different cuisines, twelve competencies were developed for this category such as the ability to formulate new recipes. The management-oriented ones have high presentation skills, 8 competencies were developed in this category such as the ability to communicate with customers on behalf of the employer and high marketing skills.

### ***Competencies Models in Culinary Art Education***

**Meng-Lei Hu Competency Model**, Hu (2010) developed a creative model for culinary competencies that covers many dimensions related to this field such as aesthetic design, creativity, technology, service, management, and technology. The model comprises seven

dimensions, each of which has a breakdown list of related applications, they can be summarized as follows:

***Culture***, covers, (1) the historical background of the place; (2) the cooking traditions; (3) Eating behaviour; (4) fusion cooking, mixing cooking styles; (5) awareness about different diets; (6) accepting internationalization; (7) spreading innovation.

***Aesthetic***, includes, (1) understanding the principles of aesthetics, and offering aesthetic value; (2) up to date on new trends in food design; (3) recognition and valorisation of beauty; (4) delivery of pleasant products; (5) sensitization to fashion; (6) sense of colour combination; (7) the proper estimation of portions.

***Technology***, includes: (1) knowing the principles of food science, cooking chemistry, and molecular cuisine; (2) familiarity with different techniques for preservation of fish freshness, minimizing cooking time, shortening service time, and improving food quality; (3) awareness about new equipment; (4) able to use communication technologies.

***Product***, includes: (1) the ability to present the product with a special savour and vitality; (2) can create products with added value; (3) can impress; (4) mastering safety and hygiene measures; (5) aspiring for uniqueness; (6) has an innovation drive.

***Service***, includes, (1) knowing how to match food and beverage; (2) being able to offer special gastronomic experience; (3) being able to coordinate with servers and communicate with clients; (4) being sensitive to complaints of guests and reacting positively; (5) able to manage and pleasantly control the service.

***Management***, includes, (1) sensitivity to cost; (2) being future-oriented; (3) Having marketing skills; (4) controlling the innovative culinary process; (5) ability to penetrate new markets; (6) openness to change; (7) having crisis management skills.

*Creativity*, includes, (1) mastering basic culinary science; (2) enjoying creative thinking, (3) having problem-solving ability; (4) being tolerant and accepting diversity; (5) optimistic.

In conclusion, Hu (2010), argues that culinary education must aim at producing culinarians with artistic talents, capable of using their physical sensory skills, knowledge, and imagination to convert raw food to delightful innovation. They must be lifelong learners, keeping pace with new ideas and changes in the local and global environment (ibis). Hospitality academics often overlooked the interrelation of food with natural science, nutrition, food safety, culture, aesthetics, and new technology-based equipment. Formulating creative competencies to be considered while developing the curricula for culinary studies, will improve the service quality in the food industry.

**American Culinary Federation, ACF, Competency Model**, ACF is the highest authority concerned with culinary arts competency in the United States of America. It is a professional association of chefs and cooks founded in 1929. It played a crucial role in upgrading the executive chef's profession to professional status as opposed to its earlier classification in the service category. Executive chefs are creative chefs who can use their innovative skills in developing new food concepts and recipes (Bureau of labour statistics, 2011; Cheng, 2012). The AFC established a council for accreditation in higher education in the field of culinary studies. The council developed a wide array of culinary arts competencies. It includes 12 topics in culinology, and the related competencies are described for each topic, it can be summarized as follows:

(1) Baking, to use the principles of baking science in the provision of different products. To master the handling of the tools used in a bakeshop, (twenty-four competencies); (2) Beverages, to know the various beverages and spirit drinks; to be aware of food and wine affinity; to respect

the laws related to alcohol serving, (nine competencies); (3) Business and mathematical skill, to make the necessary computing related to operational functions, (ten competencies); (4) Dining room service, to offer customized quality service, (ten competencies); (5) Food preparation, to master the use of different kitchen equipment safely and apply the principles of food preparation. To know the regulatory framework related to safety and sanitation in the kitchen, (seventeen competencies); (6) Human relation Management, to have leadership, interrelation, and communication skills, (sixteen competencies); (7) Awareness of the Hospitality Industry, to understand the dynamics of the industry about career opportunities, organizational structures in the field, publications, and professional development organizations, ( nine competencies); (8) Menu Planning, to master the principles menu planning for different occasions, (ten competencies) (9) Nutrition, to know the composition and function of ingredients, and storage rules, ( eleven competencies); (10) Purchasing and receiving, to know the fundamentals of purchasing, receiving and storing ingredients within quality standards, (sixteen competencies); (11) to be aware of the food safety and hygiene standards governing the field, ( eighteen competencies).

The two competency models presented here will be used in this study while designing the research instruments, the questionnaire, and the interview guide. Also, they will be synthesized and used in formulating the proposed framework for culinary studies.

## **Chapter 3**

### **Research Design and Methodolog**

In the previous chapters, the idea of the existing gap in culinary art higher education in Egypt was problematized. The perception of the field as well as the need for a framework for a new multi-disciplinary curriculum in culinary art was questioned. These problems were subject to deep investigation and inquiry.

This chapter presents the research design and inquiry strategy of the study, as argued by Hennin et al. (2004), the research design is the operational plan of the study. The selected research method and its rationale are explained, according to Hennin et al., (2004), the method means how we do things, and methodology points to how we use the different methods in a complementary way. The research instruments and how they generated data that contribute to answering the research questions and serve the aim of the study are explained. The trustworthiness process is highlighted as well.

#### **Research Design**

As the researcher previously conducted an action research project related to culinary art higher education in Egypt, the gap in the educational system was apparent. There was a need to confirm this gap through the exploration of the perception of the culinary art community in Egypt about their educational program.

This study is based on a qualitative research method. The qualitative approach will enable the researcher to collect deep information and thick data that helps in understanding the phenomenon under consideration. As argued by Denzin and Lincoln (2000), qualitative research is interpretive and naturalistic, it explores the issue under investigation in its natural setting which will allow the researcher to collect first-hand information related to culinary arts education

from the Egyptian perspective. According to Creswell (2018), in qualitative research, people's perception of a certain phenomenon is the basis for understanding and exploring this phenomenon. Thus, qualitative methodology is appropriate for exploring the perception of the participants about culinary arts education. Also, Merriam (2002), argued that the qualitative research method gives us the chance to explore the issue from the participant's point of view.

A case study strategy of inquiry was followed. A "case study is meant to study a system of people (a case) bounded by space and time" (Creswell & Piano, 2015, p.289). The research method and the strategy of inquiry of this study are designed to answer two research questions:

RQ1: How do the professors, students, and graduates of the Faculty of Tourism at Helwan University perceive culinary art higher education from a sociocultural perspective?

RQ2: What new framework, concepts, and core competencies could be recommended to change the culinary art higher education curricula in Egypt?

### **Place**

The faculty of Tourism at Helwan university was the place for the fieldwork in this study. This selection is based on two facts: (1) As discussed in the previous chapter, in Egypt, culinary art is not considered an independent field of study, it is embedded in the hospitality field that is addressed in the tourism higher education institutes (Agwa, et al., 2017); (2) the faculty of Tourism in Helwan University, (FTH), was established in 1975, to be the first of the kind in Egypt and the Middle East (Afifi & Wahab, 2010). Hence, the faculty of tourism at Helwan university can be representative of the current status of culinary art higher education.

### **Participants**

The participants were students and academic staff from the faculty of tourism at Helwan University. Graduates who pursued a professional career in the culinary field, hospitality, or

food-related industries will be also included to add a real-world perspective to the collected data based on their practical experience in the field. The participants were informed about the aim of the study and the process of inquiry. Purposive sampling techniques were used to select the participants, Patton and Creswell (1990; 2015), argued that purposive sampling is based on the use of predetermined characteristics for the participant's selection to include those who have expertise in the subject. The researcher focused on the research questions while selecting the participants to choose those who have good experience in the topic and can express themselves eloquently. Participants will sign an informed consent.

## **Procedures**

### ***Instruments***

Different data collection instruments were used to compile rich material and triangulate the data. The strengths and weaknesses of each instrument will be considered. The study started with focus group discussions (FGDs) in phase one, and in-depth semi-structured individual interviews in phase two.

**Focus Group Discussions**, this is a semi-structured tool for data collection. It is usually seen as a relevant method to investigate the perception and views of a specific group of people on non-sensitive issues which allows the researcher to specify the topics of the discussions (Publications, open-access, 2017). The interaction between the participants leads to the development of collective arguments rather than individual points of view (Cohen et al., 2007). FGDs can motivate reluctant participants to contribute to the discussions and develop insightful impressions (ibid).

To avoid having interpretations specific to a particular group, it is advisable to have more than one group. Morgan (1997) argued that the number of participants in a group should be

between four and twelve; he specified six participants as the ideal number (Cohen et al., 2007). He claimed that a lower number, will be too limiting and a larger one will be difficult to control. The group will be diversified to ensure a profound contribution to the development of the proposed curriculum framework in culinary arts. These FGDs have several advantages: (1) they are not time-consuming and can generate a good amount of data in a short period; (2) they are economic; (3) they give room for the participants to expose their point of view freely; (4) they could be motivating and conducive to generate rich information as they present different personal experiences; (5) as the discussions are specific to a particular topic, they can assist in the development of themes and hypothesis (Cohen et al., 2007). However, FDGs have disadvantages like the complexity of the analysis of the collected data and the time it consumes, and the critical role of the moderator as he must guide the process without letting his personal biases interfere in the discussions.

The motivation behind using focus group discussions in this study is to obtain a diversified pool of opinions and perspectives that help in defining the profile and competencies of the successful culinarian and assess his educational and training needs. Also, they will help in identifying the appropriate pedagogy and the learning concepts to be included in the proposed curriculum framework. These discussions will also add to the trustworthiness of the study.

Two FGDs, six participants each, were formed.

Each group included one academic member, one senior student from Helwan University, 3 university graduates from the related educational fields working as a chef in the hospitality industry, a representative of the food industry, and a food entrepreneur, plus one career changer, who was not originally involved in culinary art and decided to make a career shift toward this domain.

The participants received the guide for the discussions beforehand ( appendix 1), it contained open-ended questions. Participants were requested to prepare themselves for the discussions and familiarize themselves with the questions and try to answer them before the meeting to construct their views around the topic beforehand. They were asked to keep track of the new changes in their views or opinions because of the discussions.

In qualitative studies, the researcher has an important role in producing and analyzing the collected data, she will moderate the sessions while abstaining from bringing into the discussions her opinion.

The consensus group technique was used in this questionnaire. This is a technique used in qualitative research, it is aiming at getting reliable information in focus group discussions. It relies on determining the level of agreement about a specific issue among group participants. Usually, a percentage is pre-set to reach a consensus (List, 2001)

Both FGDs revolved around five pre-defined themes: (1) The perception of culinary arts education; (2) the required competencies and skills in the culinary profession; (3) the challenges facing the discipline as part of the hospitality management field; (4) the recommended focus areas for a curriculum framework; (5) the core values for the proposed curriculum framework.

**Semi-Structured In-Depth Interviews**, Shao (1999) identified three types of interviews: (1) unstructured where the participants are allowed to move freely between topics, they are not guided; (2) structured interviews where a specific list of topics is identified by the interviewer, they are focused and timed; (3) semi-structured interviews, it is guided by a set of open-ended questions (Henning et al., 2004).

To meet the objectives of this study, individual in-depth semi-structured interviews were used. According to Creswell (2009), in-depth interviews are defined as “purposeful

conversations”. The purpose of the interview is to probe deeper into the topic guided by the findings from the focus group discussions. To enable the researcher to get a good response from the participants, the interviews were based on a mix of pre-set open-ended questions, this will give flexibility to the process of investigation. A guide for the interviews was prepared to guarantee the collection of information that responds to the research questions (Appendix 2). The participants were informed that this technique will be used to enrich and support the other data collection tools. The interview questions revolved around the purpose of the study and will target the research questions. These interviews had the advantage of being easy to arrange; they created an informal environment that gives the researcher the chance to stimulate and motivate the participant; they also allowed the researcher to probe deeper while investigating the topic. Interviews can be influenced by the interviewer’s opinions and guidance leading to bias. Also, they are time-consuming and can be easily side-tracked.

**Triangulation**, refers to understanding a phenomenon from different perspectives. Denzin (1987; as cited in Decrop,1999) identifies four types of triangulation techniques. (1) data triangulation by using multiple sources for data collection; (2) method triangulation, which means the use of more than one research method; (3) researcher triangulation refers to the interpretation of data by more than one researcher; (4) theoretical triangulation, points out to the use of different theoretical perspectives for the interpretation of data. The researcher will recur to data triangulation using multiple research instruments, to cross-check the data and have a comprehensive picture of the topic. In this study, the different instruments will contribute to answering the research questions as follows in Table 3:

**Table 3**

*Data Triangulation*

<b>Research Question</b>	<b>Data Source 1</b>	<b>Data Source 2</b>
<b>Q1:</b> How do the students, graduates, and professors of the Faculty of Tourism at Helwan University perceive culinary arts higher education from a sociocultural perspective?	<b>Focus group Discussions</b> Part one of the discussion's questionnaire includes 9 questions that explore the participants' perceptions and views regarding culinary art higher education	<b>Semi-Structured Interviews:</b> The guided questionnaire for these interviews contains 3 questions (number 3, 4, and 5) To explore the perception of the participants about culinary arts higher education
<b>Q2:</b> What new concepts, frameworks, and core competencies could be recommended to revolutionize the culinary arts higher education curricula in Egypt?	Part 2 of the discussions questionnaire targets the definition of the core competencies of a culinary professional. Parts 3 and 4 target the design of the framework of the curriculum.	Question 6 targets the details of the new curriculum in terms of content, pedagogy, media of instruction, outcomes, and infrastructure)

**Data Analysis**

According to Creswell (2009), data analysis is a process by which, the researcher can interpret and understand the gathered data and make sense of it. As argued by Babbie (2004), qualitative analysis brings up the underlying meanings and relational patterns in the collected data. After listening to the interviews, the researcher transcribed the data, made a verbatim record, removed the identifiers and used pseudonyms to guarantee anonymity, " Removal of the identifiers help maintain the ethical principles during data analysis" (Hennink et al, 2011). A digital copy of the transcripts was created. The researcher read the transcripts thoroughly to absorb the data and get a clearer understanding of all the answers. The researcher used the process of making memos, to

highlight the main ideas in the transcripts. Similar ideas were linked and labeled to create categories and codes. The codes were used to develop themes related to the research questions. A relational tree between the themes will be created. Data were collected and compared to the literature review, to mark the similar and opposing arguments.

### **Trustworthiness**

As pointed out by Meriam (2009), in qualitative research, it is essential to validate the research results. As argued by Creswell (2012), the trustworthiness of the research is a process to test if the research findings are reliable. It is based on 3 points:

#### ***Credibility***

The researcher used different forms of triangulation. Triangulation of participants by involving an acceptable number of participants from diverse backgrounds and gender balance was observed. Data triangulation was provided by using several data collection instruments.

#### ***Confirmability***

The researcher used different methods to validate the research findings. (1) Bracketing was ensured to avoid personal bias and increase the credibility of the study, bracketing is a process in which a researcher avoids having his experience, beliefs, or assumptions, interfere with his evaluation of the findings (Gearing, 2004); (2) members check, the participants reviewed the gathered data and confirmed their responses, this process is called respondent validation (Maxwell, 2012).

#### ***Transferability***

Rich and thick descriptions of the environment, context, and place of the research were provided to ensure transferability (Maxwell, 2012).

### **Ethical Considerations and IRB Requirements**

The researcher fulfilled the main ethical considerations such as informed consent, voluntary participation, confidentiality, anonymity, no harm, and restricting data collection to the relevant information only. All the necessary approvals were obtained and added to the appendices, it includes (1) Approval from the Institutional Review Board, IRB in the American University in Cairo (Appendix 4); (2) participants Informed consent form, which included a description of the researcher profile and the study main purpose (Appendix 6). It confirmed the liberty of voluntary participation and liberty of withdrawal of the participants at any stage of the study. (3) approval from the Central Agency for Public Mobilization and Statistics CAPMAS (Appendix 3).

## Chapter 4

### Data Findings, and Analysis

The previous chapter presented the instruments used in this research, focus group discussions and interviews, and the aim for their selection. These instruments intended to answer two research questions, (1) to explore the perception of culinary art higher education in Egypt among students and graduates of the faculty of tourism at Helwan University from a sociocultural perspective; (2) to define the gap in the current culinary art higher education in Egypt and propose a new curriculum framework for improvement.

As mentioned in Chapter three, the focus group discussions presented the first phase of the research. The target participants and focus of the personal interviews were determined based on the results of the focus group discussions. In this chapter, the findings will be presented, discussed, and analysed.

#### Focus Groups Discussions, FGDs

Two focus groups, including six participants each (5 Males & 7 Females), were formed. Each group included one academic member, one senior student from Helwan University, three graduates from the related educational field working as, a chef in the hospitality industry, a representative of the food industry, and a food entrepreneur, plus one career changer who was not originally related to culinary art profession and decided to make a career shift toward this domain. Purposive sampling techniques were used to select the participants, Patton, and Creswell (1990; 2015), argued that purposive sampling is based on the use of predetermined characteristics for the participant's selection to include those who have expertise in the subject. The researcher focused on the research questions while selecting the participants to choose those who have good experience in the topic and can express themselves eloquently. Participants were

selected among the academic staff members of the faculty of tourism at Helwan university who also recommended the students who can be interactive and contribute to the discussions. They also introduced the graduates among the alumni who are involved in the field and have valuable experience to be shared among the group members. The participants received the guide for the discussions beforehand to familiarize themselves with the questions and construct their views around the topic beforehand (Appendix 1). The guide was based on open-ended statements, they were asked to express their views and reflect on each of the statements.

The focus group discussions helped provide different opinions and views of the professionals in the field, especially since, even the students were involved in different jobs in the culinary field. The discussions in both groups revolved around four pre-defined themes: (1) The role of food in society; (2) the perception of culinary arts higher education in Egypt and the definition of the existing gap; (3) the recommended focus areas for the proposed curriculum framework; (4) the competencies and skills that must be promoted. The following table provides the profile of the respondents, who participated in these focus group discussions.

**Table 4***Profile of the Participants in the Focus Groups Discussions, FGDs*

<b>Code</b>	<b>Gender</b>	<b>Educational Background</b>	<b>Current position</b>	<b>Main Duties</b>
R1	Male	Bachelor's degree in tourism and hotel management, Faculty of Tourism, Helwan university (FTH) Ph.D. in Culinary art from Michigan university department of food science and human nutrition	Founder and Executive Chef of a locally renowned chain of restaurants	Food cost Food waste Menu creations Team training Food safety and hygiene
R2	Female	Bachelor's degree in tourism and Hotel Management, Faculty of Tourism, Helwan university (FTH)	Teaching Assistant Faculty of Tourism, Helwan university	Assistant in different teaching activities provides demonstrations, participates in conferences & lectures
R3	Male	Student in Faculty of Tourism, Helwan university	Worked as a cook in fast-food restaurants for 6 years then shifted to fine-dining restaurants	Preparing fast food components
R4	Male	Student in Faculty of Tourism, Helwan university	Worked as cook since 2004 in several restaurants and hotels	Preparing fast food components
R5	Female	Bachelor's degree in tourism and Hotel Management, Faculty of Tourism, Helwan university	Working as menu planner in "Jazz" hotel chain. Worked in several business incubators, non-profit organizations, restaurants, and hotels as a freelance trainer in culinary art.	Offers training in the preparation of food menus, and the food and beverage sector.  Prepare menus for different diets (Vegan, Gluten-free)
R6	Female	Bachelor's, Master's, and Ph.D. degrees in Hotel	Assistant Professor of Hotel Management,	Besides teaching, directing the quality

		Management, Faculty of Tourism, Helwan university	Faculty of Tourism, Helwan university	control unit in the faculty.
R7	Female	Bachelor's Degree in Marketing, American University Cairo Certified Chef from le Cordon Bleu.	Worked with food industry Brands, like Galaxy and El Bawady	Was the Better Half's brand ambassador
R 8	Female	Bachelor's degree in Psychology from the American University in Cairo. Diploma in Culinary Arts, accredited by City and Guilds	Junior Sous chef in a JW Marriot hotel in Cairo.	Managing orders Participating in menu design. Supervision of staff
R9	Female	Bachelor's Degree in Marketing, American University Cairo Diploma in Culinary Arts, accredited by City and Guilds	Working as a chef in 5 stars hotel on the red sea	Preparing and designing Menus for special diets
R10	Male	Bachelor of hotel management (FTH), Ph.D. in Hospitality Management	30 years of experience in different hotel Management Senior positions in Egypt and abroad Established his private coffee shop.	Different management, financial, and marketing responsibilities
R11	Female	Bachelor of hotel management (FTH),	Worked for 20 years in different hotels and restaurants	Worked in assisting professionals in the kitchen
R12	Male	Bachelor of Hotel Management (FTH)	Worked in Fast-food Restaurants	Participate in assembling fast food meals

The FGDs meetings were conducted at the faculty of tourism at Helwan university, after receiving the authorization from the Central Agency for Population Mobilization and Statistics, CAPMAS, and the letter that he addressed to the faculty to authorize and facilitate the research, and the IRB approval (Appendices 4 & 5). The meetings started with the introduction of the research concept and aim. The informed consent (Appendix 6) was explained concerning the voluntary participation and the approval for the audio recording. The informed consent letters were signed.

The English questionnaire was previously sent to the participants to familiarize themselves with the topic of the discussions. The discussions were conducted in a mix of Arabic and English languages to accommodate those who are not proficient in the English language. The original plan was to separate the discussions of the two groups so that each group tackles the issue from a different perspective. It proved to be difficult and limiting to restrict the discussions to one angle only whether managerial or industrial as the issues were interlinked. The discussions in the two groups proceeded to tackle all the questions in the guide, which added more wealth to the gathered data. Also, the duration of the meetings was much longer than planned, it took about 2hrs 30 minutes for each group meeting, which allowed the discussions to be comprehensive.

### **Data Analysis Approach**

According to Creswell (2009), data analysis is a process by which, the researcher can interpret and understand the gathered data and make sense of it. As argued by Babbie (2004), qualitative analysis brings up the underlying meanings and relational patterns in the collected data. The researcher resorted to a mix of both inductive and deductive data analysis approaches. The deductive approach relies on a framework of themes to guide the coding process (Bradley et al., 2007), this framework is known as, a start list, to be used in the analysis in the prediction of

some central concepts in the data (Miles & Huberman, 1994). On the other hand, in the inductive approach, the participant's experience drives the data analysis completely. Thomas (2006, in Azungah, 2018) argued that the inductive approach relies on the thorough reading of collected data to develop themes. This process necessitates the reading of the transcripts exhaustively to generate codes related to the research questions (Bradley et al.,2007). The researcher used the literature and the collected data, as the sources of information, to develop meaningful new concepts and themes, it is a recursive exercise back and forth between the two sources (Azungah, 2018).

The researcher started with a deductive approach, deriving codes from the reviewed literature about the topic under discussion given the research objectives, questions, as well as the focus groups, and interview questions. Categories were developed to form a start list. The table below shows the development of the start list, (deductive approach)

**Table 5**

*Start List*

<b>Research Questions</b>	<b>Focus group Discussions</b>	<b>Semi-Structured Interviews</b>	<b>Literature Review</b>	<b>Start List Categories</b>
Q1: How do the students, graduates, and professors of the Faculty of Tourism at Helwan University perceive culinary arts Higher Education from a sociocultural perspective?	Part one of the guiding questionnaire includes nine questions that discuss the role of food in society and explore the participants' perceptions and views regarding current culinary art Higher Education in Egypt. (Appendix1)	The guided questionnaire for these interviews contains 3 questions (number 3, 4, and 5) To explore the perception of the participants about culinary arts in Higher Education. (Appendix 2)	The Literature review and the inquiry instruments contained themes directly related to the research questions such as: Culinary Art: Cultural, Anthropological, and Social Perspectives	Multiple functions of food.  Important field not getting enough respect.  Role of media in the evolution of perception.  It is perceived as a male-dominated domain.  Females are becoming more involved.

				Resistance to change
				Poor resources and infrastructure, and the need for a State-of-the-art kitchen for training inhouse restaurant or cafeteria
Q2: What new concepts, frameworks, and core competencies could be recommended to improve the culinary arts higher education curricula in Egypt?	Part two of the discussion questionnaire target the definition of the core competencies of a culinary professional. Parts three and four targets the design of the curriculum. (Appendix1)	Question six targets the details of the new curriculum in terms of content, pedagogy, media of instruction, outcomes, and infrastructure. (Appendix 2)	Culinary Art Higher Education in Egypt  Global Models of Academic Culinary Arts Education  Curriculum Development and Related Theories Required  Competencies in Culinary Arts Education	The need for a culinary Art Higher Education Degree  The need for a multidisciplinary curriculum  Applied and experiential learning  Building the characters of culinarian, and stimulating creativity

Afterward, an inductive approach was used, the researcher started the analysis by organizing the data from the focus group discussions. After listening to the discussions, the researcher transcribed the data, made a verbatim record, removed the identifiers, and used codes to guarantee anonymity, the removal of the identifiers helped maintain the ethical principles during data analysis (Henning et al., 2011). A digital copy of the transcripts was created. Transcribed data were further discussed with participants to enforce a debriefing process, this was achieved by direct individual phone calls, and zoom discussions with the participants to review their responses and clarify any ambiguity or misunderstanding. The researcher read the transcripts thoroughly to absorb the data and get a clearer understanding of all the answers, in

addition to the memos that the researcher took during the meetings. According to Morse (1999), it is important to review the data thoroughly and reflect on it with open-mindedness. The main ideas in the transcripts were highlighted, and similar ideas were linked and labeled to create codes and categories. The table below shows the development of codes and categories from the data.

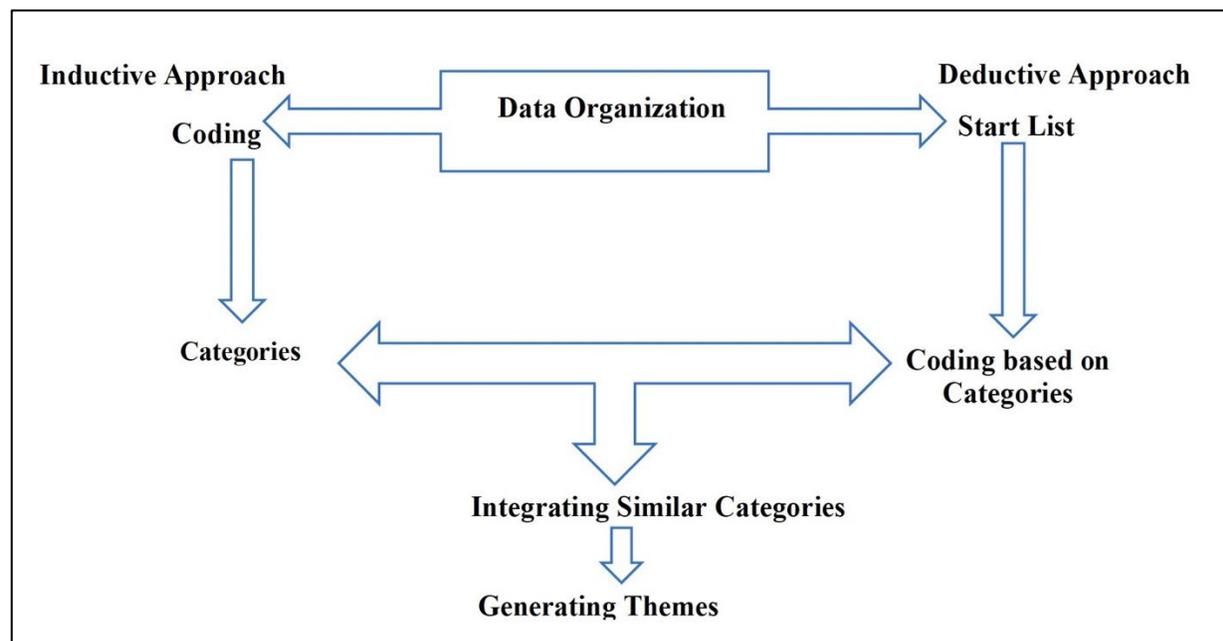
**Table 6**

*Codes and Categories Development*

<b>Categories</b>	<b>Codes</b>
<b>Social and Cultural Aspects</b>	Cooking is an Art Related to History Culinary art is a symbol of culture Multiple roles for food
<b>Perception of the Field</b>	<ul style="list-style-type: none"> <li>• Sarcastic perception, acceptance, divided Mindset.</li> <li>• Two groups, committed to the field, quick wins.</li> <li>• Media, U tube chefs, and food Bloggers changed the perception</li> <li>• Consultancy like medical TV shows</li> <li>• Lately, respect and recognition</li> <li>• The chef is a business leader</li> <li>• Struggle to accept the authority of Female chefs</li> <li>• Discriminative competition</li> <li>• Resistance to change. Old and new guards</li> <li>• Precision is time-consuming</li> <li>• Different operational models in hotels and restaurants.</li> <li>• Conceptual and design changes</li> <li>• Dynamic field, continuous change, Lifelong Learning</li> <li>• Business owners not from the field profit-oriented</li> <li>• Egyptianized the foreign concept</li> <li>• Orientation to global trends</li> <li>• Domination of foreign cuisines, loss of food heritage</li> </ul>
Dominating mindset	
Culinary Art Higher Education in Egypt,	<ul style="list-style-type: none"> <li>• Attracting students with high caliber to an interesting job.</li> <li>• Self-financing sustainable institutions</li> <li>• Tourism secondary schools, TVET training Program</li> <li>• Academic involvement changed z perception.</li> <li>• Old school and Resistance to change</li> <li>• Main challenge is people's Ego</li> </ul>
The Need for Change.	

	<ul style="list-style-type: none"> <li>• Bakery and Pastry as science</li> <li>• Recipe-based pedagogy</li> <li>• It is an independent academic field of study</li> <li>• Degree holders are better placed</li> </ul>
Skills and Competencies.	<ul style="list-style-type: none"> <li>• Required Skills, a long list (Meng-Lei Hu Competency Model ( Hu, 2010) American Culinary Federation, ACF, Competency Model, ACF ( Greenville Technical College,n.d.)</li> <li>• The need for qualified personnel</li> </ul>
Features of the proposed Curriculum Framework.	<ul style="list-style-type: none"> <li>• Global Models</li> <li>• The need for tertiary degrees</li> <li>• Comprehensive multidisciplinary curriculum</li> <li>• Limited resources, the high number of students</li> <li>• New framework to include, Psychology, anti-harassment training</li> <li>• Internships for high GPAs</li> <li>• Experiential learning</li> </ul>

This combined approach generated two sets of categories, subsequently, similar ones were merged to form an integrated list of categories, that was used to develop the themes.



**Fig 2:** *Process of Data Analysis*

The data analysis process directed the researcher to present the findings under five main

themes : (1) Social and cultural connotations of food; (2) Perception of Culinary arts Higher Education in Egypt (3) Culinary art Higher Education in Egypt, a Call for Change; (4) Required skills and competencies; (5) Proposed curriculum framework.

## **Themes**

### ***Social and Cultural Connotations of Food.***

In response to the first statement about the role of food in society, all participants acknowledged the critical role of food in society. They argued that food is related to all aspects of our lives, its function goes beyond survival and necessity. They added we express our love and joy through food, even some types of food became the symbol of special occasions, like “Kahk” a special kind of cookie, that became a denominator of our religious festival; “Ashoura” a kind of porridge that marks our Islamic New Year. Food is also memories, we still remember our grandmother’s marmalade, our mother’s stew and we think of it as the best. It is a social indicator, by knowing the food habits of a person we can determine his educational, social, and financial profile and it can even indicate his origins. Food is a determinant factor in our health condition, as claimed by Respondent 10:

If we adjust our diet to meet our body requirements and follow sound eating behaviour, we can avoid potential health risks. Many prevalent illnesses in Egypt, like Diabetes, can be controlled if we eat healthily (R10)

She added that it is also essential to depend on home-cooked food to avoid commercial elements, like preservatives, that carry many health hazards. The role of food is not limited to survival, it plays many roles in our life. It is a way of celebrating, respondent 8 claimed:

Food is a source of happiness; it is used as a celebration and entertainment tool. People can afford to use it regardless of their social or financial status (R8)

The double-fold relation between food and culture was highlighted by R6, she claimed that food and culture influence each other, and she argued that food creates societal norms. Several participants mentioned the food-related proverbs that prevail in Egyptian society to describe our emotions in different situations, for example, " Darb Al Habeeb Zey Aql al Zebeb" refers to how a person is ready to forgive his loved ones, comparing their mistakes to eating dry sweet raisins. Also, food is used in different analogies to describe situations, for instance, to wish someone a nice day, it is common to say your day is milk and cream" Halib, Eshta". Also, to compliment someone on his high sense of humor the word " Assal" is used, meaning honey. Food is correlated with our day-to-day life and emotion. As mentioned in the literature this gives a rappel of what was argued by the famous anthropologist Lévi-Strauss "Food is good to eat and good to think with" (Ameilda, 2017).

Participants added that food can trace our memories, and we start to accumulate our childhood memories about small pleasures, mainly eating; It builds a nostalgia immersed in maternal savor. Respondent six argued, that this is quite evident in immigrants who revive their homeland memories through food, it intensifies their sense of belonging.

Respondents four, five, and eight think that food is used to break the ice in a relationship, it is a way to connect people and bring them together. It forms bonds and creates fidelities to certain traditions that constitute our social norms. The food reflects the way of life and culture of people, and the eating habits of a person reveal his personality.

### *Perception of Culinary Arts Higher Education in Egypt*

In response to the second statement about the perception of the field of culinary arts as a vocational field, not highly valued, and not an academic field of study. The participants shared their views, the main ideas revolved around the traditional perception of culinary art, as a not highly valued field of study, not as a stable dignified profession. They also explained that the recent increase in the Media and TV shows about culinary art contributed to making a shift in this perception. Famous chefs became celebrities and appeared on the media offering advice and consultancies about different issues, such as choice of ingredients, cooking techniques, and nutritional facts of food, besides new kitchen equipment. It became comparable to medical TV shows and started to gain respect and value. Also, the high income of these culinary celebrities gave a new dimension to the opportunities that this career path can offer. Respondent three claimed:

I can see that there is a change in people's perception and they are beginning to put a value on the title of "Chef", it started to encompass a consultancy perspective which contributed to making an important shift in the perception of this field (R3).

Respondent one confirmed this argument, he pointed out that in the last 10 years the media contributed to the change of the mindset of people about this business. The audience was introduced to the technicalities of the field and became curious about the details, they ask for advice about different issues. Also, YouTube made a major shift in the business, it offered information and opportunities for knowledge exchange. YouTube chefs and food bloggers added attraction to the field. People are becoming more connoisseurs, he added:

I receive requests for advice from people on how to choose food ingredients like meat, or a question such as why my steak is dry and not juicy? how to handle spices and flavours? (R1)

Respondent two argued that there are mixed opinions about this issue, although she agreed with the above, she thinks that some people still conceptualize culinary art as a vocational domain, based on skilled workers, not highly ranked as a field with an academic theoretical foundation:

Those who take the culinary art track within the hospitality industry cannot reach the senior managerial position, as opposed to those who follow the management or tourist guidance tracks (R2).

Respondent seven added:

The social image is highly doubtful, and the career path and financial capabilities always raise questions. it is not a stable career (R7).

Respondent one, described his personal experience while getting married, his father-in-law did not quite understand what he was doing and was skeptical about his career path. He said:

I had to defend my career choice despite that I completed my Ph.D. in culinary arts in the United States (R1).

The respondents attributed the mixed opinions to the individuals' level of awareness and education. Respondent eight raised the issue of the difference between a cook and a chef, which affects our understanding and evaluation of the profession, she stated:

We need to raise awareness about the difference between a cook and a chef. The chef is not just cooking, he is responsible

for producing healthy and tasty food, and for presenting it artistically, and for developing new food concepts, besides the management of his team and the whole business (R8).

Respondent nine added:

A chef has a wider mission. He approaches the field, as an art based on nutritional knowledge and respect for the culture of the place. He is a business leader. He could be considered the ambassador of culinary art in society (R9).

Most of the respondents considered the integration of the academic dimension to the field instrumental in changing the perception of people about culinary art. Also, the NGOs and the platforms working in the field contributed to the change in this perception and to raising awareness about the importance of the field. The respondents raised the issue of gender, they claimed that a woman has difficulty being accepted in the kitchen, a male-dominated society, and her male peers think she cannot lead the work and have the authority over them. However, lately, it is improving.

The respondents highlighted the role of the Escoffier brigade in putting an organizational structure to govern the work in the kitchen, it became the *modus operandi*; it created a hierarchy and helped in institutionalizing the business.

Although all participants agreed that culinary art should be a combination of vocational and academic knowledge, they pointed out the tension between the old guards who believe in the traditional vocational apprenticeship model and the new experts who want to inject academic knowledge and approach the field from a holistic perspective.

They added that it is important to know how the culinary practice and business started in Egypt, to be able to understand the mindset that dominates the field. They told me how the story began. Historically the professional cooking business, related to the hospitality industry, started with the establishment of hotels in Egypt, especially in Luxor, where there is a wealth of historical monuments. In 1869, with the establishment of the Mena House Oberoi hotel in Giza, run by experienced foreign chefs, a new era began. They recruited staff to carry out the different tasks in the hotel from the nearby villages, mainly “Kafr El Gabal, Nazlet El Semman. These recruits were trained to do different shores in the kitchen like cutting, preparing, and cooking; they started to consider themselves the new experts, they trained others and transmitted the knowledge to their successors. Many of them worked with the old Egyptian aristocracy and even with the royal family. They were confined to their internal world and were limited to their society without exposure to different environments, they did not want to go beyond their comfort zone. Respondent one quoted one of those chefs telling him:

I used to think “Mena house Oberoi” is the whole world,  
and the universe revolves around it. We believed that without  
us the world will stop functioning (R1).

Respondent five added that one of the main problems with these old-guard chefs is that they work without following recipes, they depend on their skills and touch thinking that it surpasses the recipe, which leads to inconsistency and lack of precision. Another factor that adds to this problem in the Egyptian context is that chefs with academic backgrounds have high egos, they take supervision roles and refuse to be involved in the cooking process, which creates a paradoxical situation, those who are capable of being precise are not involved in the process, and

the ones who are doing the job are those who do not believe in precision. Respondent seven continued on this point:

The recipe is not about ingredients it's about steps, what, how, and when to put the ingredients, every step has an impact on the final product's taste. (R7)

Respondent one added

In some areas like pastry and bakery, this is a science, it depends on a formula and not a recipe, in the first one you cannot substitute or omit an ingredient or step, in the second you can allow yourself to make some substitutions.

We can conclude that the perception of culinary arts as a field for Higher Education in Egypt is divided between the traditional mindset led by the old guard who resist change and want to keep the field in the vocational boundaries based on the apprenticeship model, and the emerging new experts who can see its potential in becoming an academic field based on scientific knowledge.

From a socio-cultural perspective two main issues were highlighted: (1) the field is still trapped between those who considers it a blue collar profession not prestigious for higher social class, and those who view it through the optic of art and creativity, worth recognition and respect; (2) the field holds some controversy, culturally cooking is believed to be a female domain, even the literature review pointed to female researchers trying to avoid it as they correlate it with oppression, however in the culinary professional arena, senior positions are dominated by males. In addition, there is a cultural born aversion in accepting female chefs' authority which put a cap on their career path. Nevertheless, the enthusiasm and optimism among

female participants showed their determination and perseverance in establishing themselves within this field.

### ***Culinary art Higher Education in Egypt, a Call for Change***

In response to the third statement about the gap in Egyptian higher education in culinary art, the collected data were aligned with the literature review (Abdel Hamid,2010, Agwa et al., 2017, Baker et al.1995). The respondents pointed out the fact that there is no independent degree or concentration area in culinary art in the bachelor's or post-graduate degree programs in Egypt. Culinary art is addressed from a narrow perspective, and a limited number of courses are offered, using a recipe-based pedagogy that relies on the master-apprenticeship model, where the chef demonstrates a recipe, the student is asked to replicate it, there is no room for innovation, creativity nor inquiry.

The infrastructures and logistics such as training kitchens properly equipped, internship opportunities in hotels and restaurants, and ingredients supply for daily training that are expensive given the number of students, are minimal and do not support good learning practices. The curriculum contains some basic general outline of the subject, but it does not equip the student with the necessary skills and competencies required for the field. There is no proper benchmarking of the curriculum with the local or global educational model in the field.

Respondent six stated:

Besides the limitations in our curriculum, we also suffer from the poor facilities that cannot support training and demonstration especially since we have a continuous increase in the number of students that we are not prepared for. (R6)

Respondent ten added, in addition to the narrow perspective, the end-of-the-year assessment is superficial, it is based on a single cooking test on one of the very few recipes demonstrated in class:

I still remember my end-of-the-year exam Dawood Pasha, Meatballs, was one of the two recipes that were demonstrated in class. (R10); "Salad Niçoise", which was about all that I learned in class. (R11)

They all agreed that creativity, innovation, skills, and competencies were not considered. They added the program does not guide the student in planning for their career nor connect them with business opportunities in the field. Respondent eight stated:

The applied part is limited and short, one class per week, and it did not even give us the basic techniques or information about food ingredients and cooking skills. (R8)

They also confirmed what was stated in the literature review (Agwa, et al., 2017), about the problem of the lack of specialized educators who have applied industrial experience.

The respondents claimed that the problem of culinary art education in Egypt, is rooted in the conceptualization of this educational field from the beginning of the secondary school phase. They explained that the Egyptian public education system offers three tracks in secondary school education, either general secondary high school "Thanawya amma", vocational secondary high schools or tourism secondary high schools. Usually, the tourism track is at the bottom of the choice list, students join it only if they are obliged because their GPA is very low. They do not have a special preference for the field, but it represents their only option. Here starts the problem as Respondent one claimed. It is very common to hear a father saying about his son,

he is a failure let him join the tourism secondary school. He added that these schools are poorly funded, and the training budget for the student per year is 27 Egyptian pounds (R1).

Respondent eight talked about an important landmark in the path of culinary art education, in Egypt, that had its impact on the field. It is the creation of culinary training centres as non-profit institutions, it was initiated by the ministry of tourism and supported by the EU technical and vocational education and training program, TVET. Two main centres were established, the first one in Cairo, it was also sponsored by “Akhbar Al Youm” foundation who supplied the building in Dokki (an area in Cairo), it became known as the Akbar El Youm Academy; the second one was in Luxor, it is known as the Culinary Training Center, CTC. The project started in 2011 it worked successfully and powerfully for seven years. The financial support for the trainees was provided through the TVET, the student paid 10% only of the fees (25000 L.E per student). It worked until the TVET funds were consumed, the Cairo branch closed, and only the Luxor branch, CTC, is still running. The non-profit status was a mistake it is not financially sustainable. she claimed

The graduates occupied leading positions in important local and international institutions in the field. (R8)

Most of the respondents claimed that to develop education in this field, you must combine scientific knowledge and applied skills, inject the necessary fund, and have the patience to watch it grow without expecting quick wins. The institution should be self-sustaining to succeed and survive because the running costs of training are quite high (Ingredients, equipment, trainers, etc).

In response to the statements four and five about the acknowledgment of culinary art as

an independent academic field of study that deserves to have qualifying undergraduate and post-graduate degrees, most of the respondents agreed with the statement. They called for change. They mentioned that it is time to conceptualize this field differently and tackle it more profoundly and holistically. They argued that the market is looking for qualified culinarians, on the other hand, culinarians are searching for reliable institutions to qualify them according to the acknowledged higher education standards, so the demand is at both ends. This implies that a credible education in the field is needed, based on a scientific foundation to supply the market with skilled professionals.

They added, that having tertiary degrees in culinary art will assert a positive perception of the field and give it a better place in society. Respondent seven claimed that:

Culinary arts must be compared to other fields of art  
Like music that is acknowledged and developed as  
a higher education' field. (R7)

Respondent ten argued that one of the domains where we need a degree holder culinarian is the aircraft catering business where we must supply highly planned meals, for different people from different parts of the globe.

They argued that cooking is subjective the same recipe can produce different outcomes depending on the circumstances and interpretation of the cook, it is an art. It is not about the recipe only, but many other factors also interfere in the process, such as interpretation of instruction, choice of ingredients, and application of techniques. Respondent nine stated:

It is comparable to painting with variations in the palette of  
colors, the brush technique, and the environment where it  
happens. (R9)

Respondent two confirmed it is an art:

The students use their imagination and passion in the creation of a dish, this is like the way sculptors reflect their inner-selves in their creations. (R2)

Respondent six, representing academia, had a slightly different view, she stated:

Education offered in this field should be comprehensive, it must be a discipline on its own. However, I don't think that having culinary art as an academic field will enhance the professional field or impact it to a great extent. (R6)

In response to statements 6,7,8 about the features of the new proposed curriculum, to be oriented to the industry and market needs, to maintain a balance between theory and practice, and to value creativity and innovation in addition to practical skills. Most respondents agreed with the statements while having some remarks. Respondents one, five, seven, eight, and nine, claimed that the orientation to the market needs is key for success not only in culinary art but in any business, however, the market composition and dynamics must be considered. Egyptian market has its particularities, most restaurants' owners, are not from the field, they are rather profit-oriented, and not keen on introducing new sophisticated and refined concepts. They are establishing their business from an investment perspective. It is common to hear this:

I ate something very nice in Thailand I want to introduce it in Egypt. (R1,5,7,8,9)

The results are not always positive; however, we have a few success stories where food trends have been customized to suit the taste of the Egyptian consumer, a good example is the sushi case. It started by introducing sushi with grilled or smoked fish, when people got used to it, raw fish was introduced, and it ended up being popular and trendy. Respondents nine and ten argued:

We must maintain the balance between giving in to the consumer's demand and trying to introduce new concepts that relate the local market to global trends. (R9,10)

The respondents argued that the proposed new concept must be holistic, combining a strong theoretical foundation (liberal) plus hands-on application (vocational). Research, creativity, and innovation must be engrained within the curriculum. They pointed out the multidisciplinary nature of culinary art studies that should be mirrored in the proposed curriculum

In response to statement nine about culinary arts being a field that requires lifelong learning and continuous education, The respondents agreed with the statement. They argued that the field is very dynamic, it changes every day. Respondent one claimed:

In my first year at culinary school, I was told that coconut oil is cancerous. When I was about to graduate, coconut oil became healthy and trendy, one spoon early morning became magic. (R1)

They argued that every day there are conceptual changes, new food designs, different presentation and layout of tables, new ingredients are introduced into cooking, nutritional facts about ingredients become more available, and new food combinations are introduced, so it's very important to keep track and to follow new trends and evolution regularly, respondent five said:

Waves of food trends appeared like Quinoa and Kale. (R5)

Respondents pointed out the modern layout of kitchens and the continuous research to find solutions and techniques that support healthy and efficient cooking. They mentioned some examples:

The development of the Vacuum Deep Fryer decreases

the amount of absorbed oil from 40% to 7%. The Winston cabinet, one of the newest pieces of equipment, keeps the food warm while preserving its moisture and freshness for twelve hours out of the danger zone with the same juiciness and crispness as it was when produced. (R1,5, 7,8,9)

### ***Required Skills and Competencies***

The FGDs guide contained three statements related to competencies, the first was about the personal characteristics of a culinarian, the second was about the important skills in order of priority and the third was about whether Egyptian culinary higher education contributes to the development of those skills and attributes. This section aimed to define the personal characteristics, skills, and competencies to be contemplated in the proposed curriculum framework. The characteristics, skills, and competencies mentioned by the participants were assorted in groups, and a brief description of each of them was prepared according to the group's discussions. The list of characteristics and skills is summarized below:

**Personal Qualities**, comprised seven characteristics:

***Creativity, Innovation, and Originality***, these characteristics indicate the ability to produce tasty food and present it as a visual artistic treat. Originality refers to the introduction of new food concepts based on the combination of scientific food knowledge and new techniques.

***Honesty, Loyalty, and Seriousness***, are important attributes to ensure loyalty to the customer, and the respect of values and ethics in a profession where there is tension between integrity and profit.

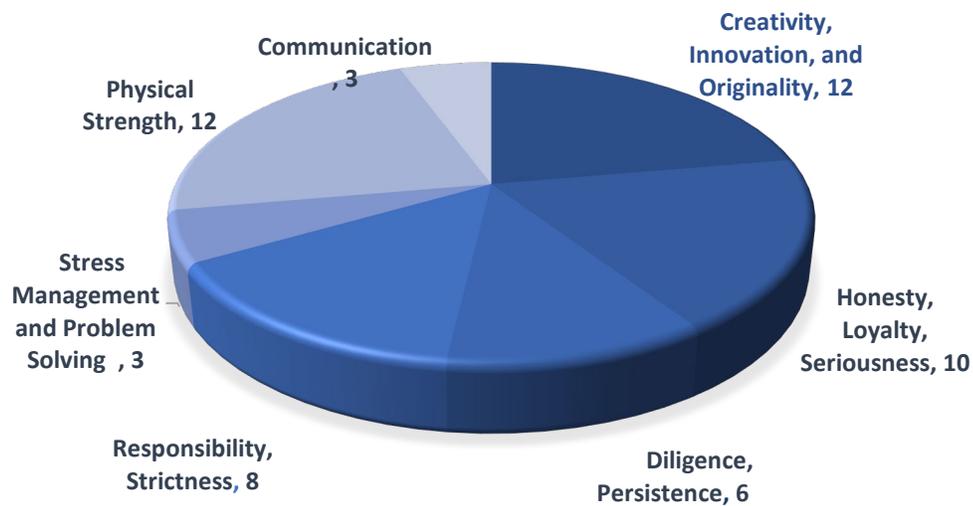
***Diligence, Persistence***, this is a demanding career where quality and attention to details are always required.

**Responsibility, Strictness**, refer to the ability to organize the work according to a strict plan are essential in a workplace where hazardous situations, like dealing with fire, using knives, and food safety-related hazards are likely to happen.

**Stress Management and Problem Solving**, refer to how to respond to unexpected situations without panic, find a practical solution, and keep a calm positive attitude.

**Physical Strength**, refers to the ability to endure physical stress like long hours standing, heat from ovens, and cold from chilled rooms.

**Communication**, refers to the ability to interact and connect with staff, colleagues, clients, and industry partners



**Figure 3:** *Personal Qualities Diagram*

This diagram about personal qualities indicates the total number of participants (12) and the number of participants who agreed on each of the personal attributes shown in the diagram.

There was a consensus over two skills, (1) Creativity, Innovation, and Originality; (2) Physical strength. It also shows the level of agreement on the other attributes.

**Skills and Competencies**, comprised eight main groups

***Strong knowledge Foundation in the Subject Matter and Practical Experience***, is a core competency required in a culinarian. As claimed by the respondents, not knowing the scientific base of each step in the cooking process turns the field into an amateuristic field where inconsistency and lack of precision prevail. Unfortunately, we face these situations very often during our work.

***Management Abilities***, refers to the management of the work plan, team members, and customers. As claimed by the respondents, the management abilities of the chef are sometimes more important than his cooking skills, he is the leader in the kitchen, he has to know how to run the daily work and more important to face unexpected situations, how to find alternatives and substitutes, and how to handle difficult clients.

***Science-based Innovation***, as cooking is a mix of art and science, it is essential to have the ability to be creative based on the understanding of the composition of ingredients that we are using, and how they are affected by factors, such as heat, additives like sugar, oils, acids, and their interaction with each other. As per the literature review, McGee (2004), in his famous book “The science and lore of the kitchen”, raised exciting questions such as why do eggs become solid when we cook them? Why does yeast make the dough bounce? Why do the fruits become dark after cutting them? Science can turn cooking into a thought-provoking experience, as it relates it to the basics of nature.

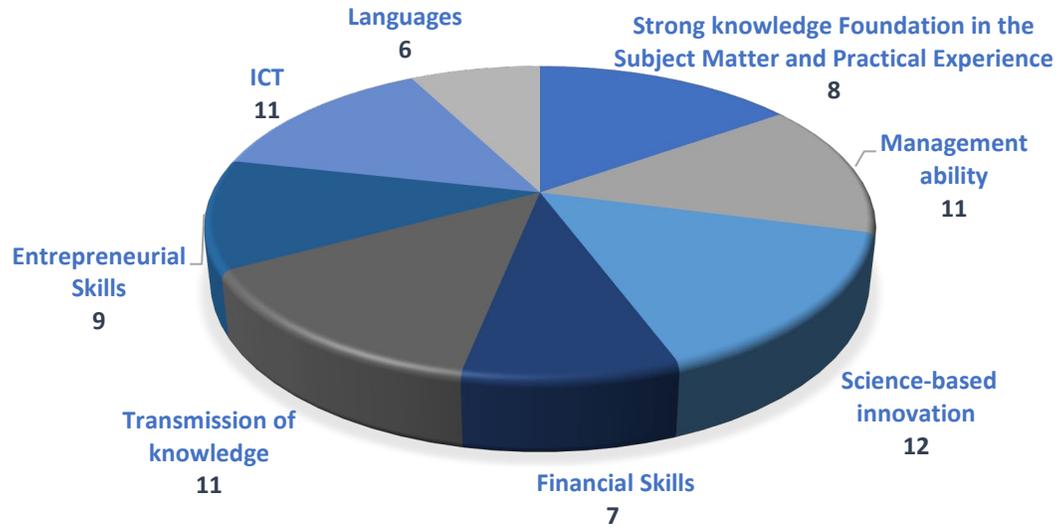
***Financial Skills***, refer to the ability to function within a pre-set budget, value the products, and monitor and assess the operational costs. The respondents argued that it may not be important to have broad financial experience, but there are some basic notions related to purchasing and cost analysis and budgeting that a culinarian must be oriented to, especially if he owns his business.

***Transmission Of Knowledge***, refers to the ability to transmit knowledge to the team and train them to upgrade their skills. The respondents claimed that one of the assets of a successful chef is his ability to train his team and share not only his knowledge but his inner self with his team (R8).

***Entrepreneurial Skills***, refer to the ability to be proactive and use the available opportunities that the industry offers unconventionally. As claimed by the respondents this is a very dynamic field that is affected by the changes not only in the surrounding environment but the global one too, the ability to adapt and try new concepts and engage in new experiences is becoming essential.

***Information Communication Technology, ICT***, is important to be oriented to ICT as it infiltrates the different aspects of the business. As claimed by respondent one, this is the demarcation skill between the old and new generations in the field, it will keep the person connected to the recent innovations and trends in the field

***Languages Proficiency***, is considered one of the main limitations of culinary professionals in Egypt. Mastering at least one foreign language will widen the horizon of knowledge exchange of the culinary professional and expose him to the up-to-date development of the field. All respondents agreed that this is one of the main barriers to the evolution of this field in Egypt, even among students, the inability to follow new material that is mainly in foreign languages is very limiting.



**Figure 4:** *Skills and Competencies*

This diagram shows the level of agreement on the skills and competencies as per the respondent’s opinions. The total number of participants is 12, and the number of participants who agreed on each of the competencies is shown in the diagram. There was a consensus about innovation, followed by the transmission of knowledge and ICT. As argued by many of the participants, the focus on management skills is not highly recommended as students who are not able to join business schools, will join the program as a back door to the field.

This was a summary of the personal attributes, skills, and competencies that were highlighted during the FGDs, based on the experience of the respondents. They recommended a curriculum that helps in developing those skills and competencies and prepare future culinarians to be practitioners, managers, and leaders in the field.

In response to the third statement in this section, whether Egyptian culinary higher education contributes to the development of those skills and attributes. The respondents affirmed that the current culinary art offered in higher education is far from promoting any of those skills

or competencies. They unanimously confirmed the need for a new concept, vision, and curriculum in culinary art, aligned with international standards and local needs. Respondent 6 stated:

It is not only the limitations of our curricula but also the poor infrastructure that does not support training and practical applications. (R6)

All respondents argued that employers are obliged to provide training for fresh graduates as they are not prepared for the job. They also expressed their doubts about this training approach through employers, because it does not offer a reliable scientific base, nor it is based on a vision or concept for culinary art education. To this effect respondent 3 recalled his training experience at a famous food chain where they received what he called robotic-style training. They were divided into groups according to the tasks that is allocated to them, the training was concentrated on this part of the process such as wrapping the sandwich, cutting the salad, spreading the sauce, and frying the potatoes, as if we were gears in a machine (R3). Respondent 8 added this cannot build knowledge in the field.

In response to the fourth question in this section about the recommendations for improvement of the culinary art higher education. The respondents argued that to save the new generation of culinary art graduates we must introduce new curricula and programs that promote the development of all the skills and competencies that we discussed earlier. They also suggested creating internship opportunities for students and educators through partnership and mobility programs with internationally renowned institutions in the field. Respondent three claimed that we can also depend on our experts, he said:

We have well-trained chefs if we consolidate our efforts and create our local body of experts, and support them with resources and infrastructure, we can offer training to a larger

number of trainees at affordable fees. (R3)

Respondent eight claimed that the model of the training institution must be modified and follow the successful models worldwide. We can follow the model of international institutions but customize it to Egyptian culture and context. She added, if we can create joint or dual degrees with renowned international culinary institutes, we will attract different categories of students who are interested in the field. Besides that, this will enhance the value of the graduates in the job market.

Respondent one claimed that the usual tourist who is only keen to visit the pyramids does not exist anymore, he needs a well-rounded vacation where gastronomy is not a marginal issue.

There was a consensus on the issue of hygiene as an area of major concern in the culinary practice in Egypt, this can be addressed through a comprehensive concept of education in the field, where safety standards and best practices are properly addressed. Also, values, ethics, and integrity are part of the skills that the proposed framework must promote.

The respondents confirmed that to make any evolution in the field we must create strict procedures to follow because many workers in the field, even if they know the procedure, do not understand the rationale behind it. Respondent seven added:

The most important aspect is the chefs who teach you. They need to be willing to open up and let you submerge into their world yet, still be tough on you and teach you that when you cook, you need to respect food. This means minimal waste and extracting the most flavour from one ingredient. (R7)

Business incubators for new start-ups were claimed to promote development in the field.

### ***Proposed Curriculum Framework***

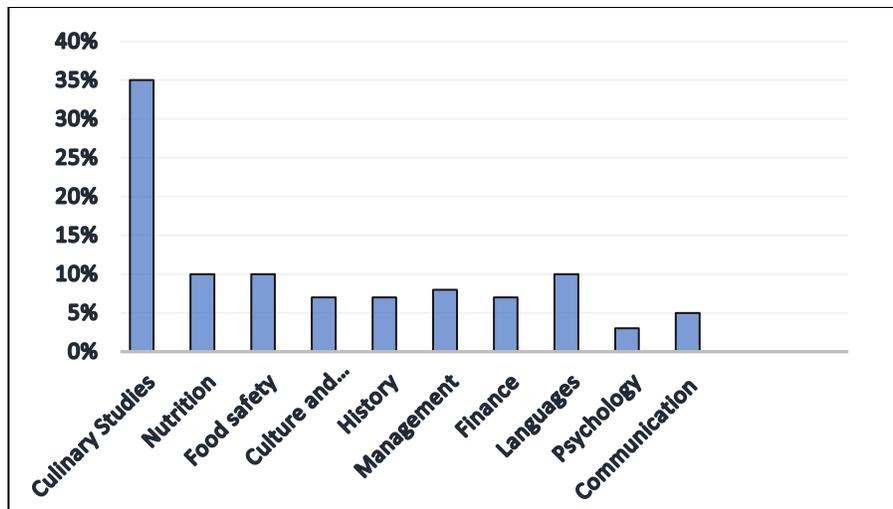
In section three of the FGD guide, the respondents were asked to express their views about the proposed curriculum framework. They shared a common vision about the proposed framework, it should be multidisciplinary, not focusing on management and business studies to target the students who are interested in the field and prevent those who want to use it as a back door to business studies. It should offer the right mix between theory and application. It must stimulate originality and innovation. Respondent eight claimed:

This curriculum must promote innovation, not imitation.

It should develop the personality of the culinary professional.

She added she would prefer to see private universities undertaking this project to provide the necessary support. (R8)

A table of topics grouped under different categories was presented in the FGD guide, they were asked to suggest the composition of the proposed framework. All respondents insisted on adding Psychology to the list of topics, as problems that arise in this male-dominated environment like sexual harassment, and discrimination need psychological orientation; they argued, that it is part of the formation of culinary professionals, and educators. The summary of the respondent's suggestions about the topic's combination in the proposed framework is presented in the diagram below as percentages.



**Fig 5:** Curriculum composition (Own construct)

They also argued that the infrastructure is a crucial element to support the implementation of this framework. State-of-the-art educational kitchens, supplied with modern equipment, and on-stage mirrors for reflection to allow all students to follow is not a marginal issue. They underlined the issue of trained educators with industrial experience as an important pillar of the new initiative. They emphasized that the self-sustainability of the institution guarantees its durability. Entrepreneurship is to be promoted as well. They expressed their wish to have a national certification body in the field, to develop standards and regulations contextualized to our local business environment.

In response to a question about the suggested duration of the suggested degrees, there was an agreement that the duration of a bachelor's degree could be four years including a preparatory year for basic sciences; the master's degree could be two years, and the Ph.D. two to three years. Internships are very important, they are part of the program, although it may be problematic because it is expensive, financial aid could be offered on a merit basis for students with high GPAs.

### Personal Interviews

The interviews were planned as the second phase of the research, to synthesize the data from the focus group discussions and find out the areas that need more in-depth information. The FGDs covered thoroughly the perception of culinary art in higher education in Egypt. It also portrayed the culinary world in Egypt, it described the work environment, the educational system in the field, and the gaps that need to be addressed. It highlighted the skills and competencies required in a professional culinarian, and the need for a new curriculum framework to promote those competencies and attributes. The researcher concluded that the area that still requires more focus is the details of the proposed curriculum framework. Therefore, the interviews targeted three different staff members involved in curriculum development, lecturing, and applied training in different tourism and culinary institutes in Egypt to be able to get more specific and specialized input toward the development of the proposed framework. The interviewees offered a deeper academic perspective on the details and composition of the proposed framework. The table herein presents the profile of the interviewees.

**Table 7**

*Profile of the Interviewees*

	<b>Qualification</b>	<b>Current Job</b>
Interviewee 1	<p>Graduated from Business School.            Changed career, trained, and certified from Akhbar Elyoum Academy, a branch of the Culinary Training Institute, CTC,</p> <p>Certified from City and Guilds as a professional culinary trainer, TOT.</p>	<p>- Lecturer in culinary studies in the faculty of Tourism, Helwan university.            -Senior trainer in the Egyptian Tourism Union,            -Curriculum developer for short courses for UN Immigrants programs.</p>

		-Worked as Executive chef in many five stars hotels in Egypt and abroad
Interviewee 2	Tourism secondary school, Diploma from The Higher Institute of Tourism and Hotels Egoth Bachelor's degree in hotel Management faculty of tourism Helwan university. Masters and Ph.D. faculty of tourism Helwan university.	Working as a professor of culinary studies in the faculty of tourism at Helwan University and many other culinary institutes. Worked as a chef in many five stars hotels in Egypt.
Interviewee 3	Graduate of The Higher Institute of Tourism and Hotels Egoth Bachelor's degree in Egyptology from the Faculty of Art.  Certified from City and Guilds as executive chef	Director of The Culinary training institute in Luxor, CTC. Worked for 20 years as Executive Chef in different hotels and restaurants

The interview guide addressed most of the questions discussed in the focus group discussions, but the focus was on the curriculum framework proposal in terms of contents, pedagogy, methods of education, and composition of the program. Interviewees agreed to what was concluded from the focus group discussions. Interviewee three presented the training program at the Culinary Training Center, CTC, which is considered by the interviewees a highly rated institute in Egypt. The duration of the program is six months, and it is certified by City and Guilds (<https://www.cityandguilds.com/>). The syllabus comprises 22 units or modules that span (cooking methods, safety at work, food safety, nutrition, different cuisines, etc..). It is divided into 70% practical skills and 30% theoretical knowledge. He claimed

We equip our graduates with the necessary skills that make them attractive to employers (R3)

Interviewee one claimed that a strong curriculum will add value to the field and change its perception by society. Our endeavor to get this field properly acknowledged, to make a shift in the mindset of society, and to cross the cultural barriers will not be an easy task, we need perseverance.

I recall the struggle of veterinary studies in gaining a place  
among other fields of study. (R1)

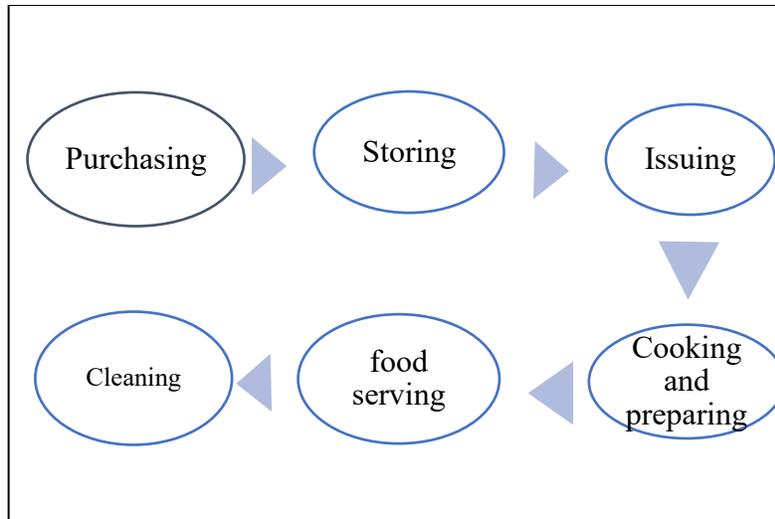
Interviewee two explained that what we offer in our culinary arts higher education institutions is insufficient, the topic is much broader. He added, the ministry of higher education is trying to introduce a new syllabus with a separate concentration track in culinary art, however, it is not yet implemented.

The interviewees agreed that to be considered for a bachelor's degree, the program should be 4 years; it can follow the credit hours system, it is a large field it can go up to 140 credit hours at least. However, we are still following the conventional terms system.

All interviewees claimed the importance of infrastructure in the design of any new institution to make success possible; the institution should have a back area like hotels to receive, store, and prepare the ingredients, plus a restaurant to learn how to present and serve food. The lack of proper infrastructure was instrumental in the failure of previous initiatives. They added

This is comparable to providing university hospitals for medical schools.

They also argued that the topic of culinary knowledge and skills must represent at least 50 to 60 % of the proposed framework. Graduation Projects and internships are also important, getting real-life experience is the only way to capture what the culinary field entails, a well-rounded experience that covers the whole cycle as illustrated in the diagram below.



**Figure 5:** *Work Cycle (Own construct)*

They raised the issue of the training and support of educators as a key issue for the success of the initiative. They recommended the enrolment of culinary professionals in teacher's higher education institutions to prepare them to become qualified educators in their field, in addition to continuous training for those who are already in teaching positions.

The interviewees advanced ideas that contributed to the development of the proposed curriculum framework which will be presented in detail in the next chapter.

## **Chapter Five**

### **Discussions**

The modernization of culinary art higher education started at the end of the 20th century, it progressed to become an academic discipline and reached tertiary education institutions. An advanced holistic multidisciplinary approach to culinary art higher education emerged, blending vocational and liberal art education (Dalton, et al., 2020). However, it is still at an early stage, and not sufficiently acknowledged in many countries worldwide (Dalton, et al., 2020). In Egypt, culinary art education remains to be a minor component of education in the hospitality field, addressed in the tourism higher education institutes (Agwa, et al., 2017).

#### **Discussion in view of the Research Questions**

The first research question, is how do the students, graduates, and professors of the Faculty of Tourism at Helwan University perceive culinary art higher education from a sociocultural perspective?

The findings in relation to this question agreed with the literature review on the main arguments: (1) food is related to all aspects of our lives, as per the literature, its function goes beyond survival and necessity, it infiltrates all the aspects of our lives, cultural, economic, political, and societal (Mitchell, Woodhouse, Heptinstall, & Camp, 2013); (2) many sociocultural connotations of food were highlighted such as, food embodies memories, it is a social indicator, it is an icebreaker, it builds a nostalgia immersed in maternal savour, and the binary relation between food and culture, these examples give a rappel of what was argued by the famous anthropologist Lévi-Strauss, “ Food is good to eat and good to think with” (Ameilda, 2017, p 1); (3) the findings pointed out to the traditional perception of culinary art, as a vocational field not

highly valued as an academic field of study, nor as a stable dignified profession, this agreed with Miles (2007), who argued that since the Middle Ages, culinary art education was considered a vocational field that has been traditionally delivered through a master-apprentice model; (4) the research exposed the tension between the traditional mindset led by the old guard that considers culinary art a vocational field and the emerging new experts that can see the potential of this field in becoming an academic discipline; (5) the findings and the literature agreed on the fact that, in Egypt, culinary art is not considered an independent field of study, it is embedded in the hospitality field that is addressed in the tourism higher education institutes (Agwa, et al., 2017).

On the other hand, contradicting what was stated in the literature review about females avoiding tackling research in the field as they correlated culinary art with oppression (Avakian, 2014), several female chefs participated in the research, and they expressed their dedication and enthusiasm for the profession and were determined to fight for a better career path within this field. This represents a noticeable evolution of the female's perception of the field.

From a socio-cultural perspective, another issue to consider is the fact that the role of a "cook" slash "chef" in oriental culture is still under appreciated. Many still view these professionals as representing blue collar work with limited prestige. The profession is also associated with lower societal classes. This however has been evolving with the advent of "star chefs" who have gained worldwide recognition for their culinary achievements. The advent of the star chef could change societal perception and help propel culinary art into a fully recognized academic field and discipline. At the same time, it seems clear that this is a field that women want to conquer, and that there is an appetite for them to excel in the field. In other words, we have not yet heard the last word on the issue of gender balance in culinary art. The situation will undoubtedly evolve as this field grows in importance, gains official recognition as an academic

discipline, and they will continue to break the glass ceiling that has limited their prospects in this field.

The second research question explored the new concepts, frameworks, and core competencies that could be recommended to revolutionize the culinary arts higher education curricula in Egypt.

The findings in agreement with the literature review confirmed that there is a gap in Egyptian higher education in culinary art, it is addressed from a narrow perspective. A limited number of courses are offered, using a recipe-based pedagogy that relies on the master-apprenticeship model, the curriculum contains some basic general outline of the subject, but it does not equip the student with the necessary skills and competencies required for the field (Abdel Hamid,2010, Agwa et al., 2017, Baker et al.1995).

The participants called for a credible education in the field combining a strong theoretical foundation (liberal) plus hands-on application (vocational). Research, creativity, and innovation must be engrained within the curriculum. This agreed with the literature review, there is a need for a critical shift in the field toward a deeper understanding of culinary education, and a more flexible and creative pedagogy (Lugosi, et al., 2009).

The findings also pointed out several issues related to this field of education such as the undefined scope of culinary art in higher education, there is a disagreement between researchers, professionals, and intellectuals working in the food production and hospitality industry about the scope of culinary art education. This field of education is trapped between science-based versus vocational-based models (Wilk, 2012 in Erin,2018). It is important to give the student in the culinary field a food-science foundation in addition to the applied training in kitchen laboratories, a hybrid curriculum is needed (Cheng et al., 2011). This mixed approach

can stimulate further research in culinary art and help to bridge the gap between culinary art and food science. Culinary art education, besides focusing on the role of the culinary profession in world society, must cover the essential components of culinary sciences defined by Hegarty (2005), as “the knowledge of food design, manipulation, and processing to make food suitable for human consumption” (p. 10). Despite that culinary art education can play an important role in the tourism industry, culinary education programs are still rooted in a limited and narrow perspective (Sharpley, 2011 in Eren, 2018). This is due to the influence of the traditional perception of the field and the old-school mindset that is resisting the infiltration of more scientific-based paradigms in the field.

Results from both the focus group discussions and interviews pointed out the importance of internships as an essential component of the educational pathway in culinary arts. It exposes the students to industrial experience, it is an exemplary model of experiential learning (Yiu and Law, 2012). As argued by Kolb (2014), experiential learning is a repetitive cyclical process based on reflection on a specific experience to create a hypothetical concept that can be further investigated. It is becoming more evident in education, that exposing students to actual situations gives them the chance to relate theory to real-life experience (Ruhanen, 2005). It also exposes the students to new opportunities for their future careers. Professional employers and educators in the field must cooperate to ensure the success of these internships. The lack of internship-acknowledged standard guidelines gives room for experimentation, the design of the internships should be based on pre-defined outcomes and the expected skills of the graduates. A favorable work environment and work-directed social assistance are required to guarantee the efficacy of the internship (Stansbie & Nash, 20116). The involvement of industry professionals and educators in the design of those internships can increase the chance of their success.

The study showed that the facilities, infrastructure, and logistics of institutions providing culinary art education in Egypt are basic and do not support good learning practices. Capar (2002) claimed that in culinary art education the amenities, the tools, and the condition of the educational kitchen and facilities are critical in shaping the practical experience of the student. Culinary art higher education institutions must be equipped with facilities capable of offering the student a real-life experience that covers the full work cycle. As mentioned by the participants in this study, this must be compared to providing equipped hospitals to medical school students.

The lack of specialized educators was a point of concern among the participants, this confirmed what was stated in the literature review about the lack of specialized educators who have applied industrial experience (Agwa, et al., 2017). The participants stated that, in Egypt, educators in this field are divided into two groups, either academic experts or professionals in the field. On very few occasions we can find educators with well-rounded experience who can master theory and practice. Also, the lack of industrial experience among educators is a challenge that needs to be surmounted. As suggested by the participants, training support of educators is a key issue for the success of this modernization attempt. They recommended the enrolment of culinary professionals in teacher's higher education institutions to prepare them to become qualified educators. In addition, continuous training of educators must be an established principle.

This study attempted to address the absence of a specialized approved curriculum in culinary art higher education in Egypt. It aimed at developing a shared understanding of a standardized curriculum framework to serve as a base for higher culinary art education.

The results of this study are a step towards designing the way forward for this educational field in Egypt. The researcher synthesized the collected data and the literature review concerning curriculum design to propose a curriculum framework that could be a "guiding reference" for culinary art higher education in Egypt. As argued by Stabback (2007), the curriculum framework defines the guidelines for the curriculum and the context (the existing resources, the available human expertise, and the operating system) within which the syllabus will be developed by specialists. It also sets the criteria that allow an array of curricula to be developed. Thus, it offers flexibility and diversity among institutions, and countries, which allows adapting the curriculum to a specific identity. Hereinafter is the outline of the proposed curriculum framework.

### **Proposed Curriculum Framework for A Bachelor's Degree in Culinary Art**

In designing this framework, the main components of a curriculum as summarised in chapter two by Carl (2002), will be considered, needs assessment; identification of objectives and outcomes; the organization of content; selecting delivery methods and techniques; identification of learning activities; and assessment and evaluation. Stabback (2007), states that the common components of a curriculum framework are: Contextual analysis; vision and goals statement; general objectives and learning outcomes; learning fields and suggested content; resources (teachers, textbooks, and learning material; pedagogies; and assessment.

The researcher will adhere to the fact that the curriculum is not static, it must reflect society. The framework will not address the specific subject matter, rather it will propose a set of objectives and goals, learning outcomes, and suggested core content.

### ***Overview***

This program will cover fine dining art, palate training, and taste refining, and will promote innovation in cooking using a freestyle. It will introduce the student to the binary

relationship between food and culture. Life and food sciences will be combined. Nutrition and food safety standards will be included as well. It will address the business perspective covering, marketing, menu design, and strategic hospitality business planning to enable the student to apply what he learned to develop his private business in the hospitality or food catering field. Graduates will be qualified to hold senior positions in the food service industry.

### *Vision*

To develop a holistic curriculum framework in culinary studies, integrating culinary arts with life and social sciences, while mastering modern and ICT technologies.

### *Values*

Our essential values are integrity, loyalty and commitment to society, continuous development of culinary professionals, respecting lifelong learning, and creating an enabling work environment.

### *Contextual Analysis*

It is important to consider the context within which this new curriculum will be implemented, and the different stakeholders acting in the field (society, students, and educators).

The different stakeholders are: **(1)** higher education institutions, they are required to acknowledge culinary studies as a higher education discipline. To achieve this, they must define the qualifications and the programs for under and postgraduate degrees as well as the research in the field; **(2)** private training institutes, are required to initiate specialized accredited training programs in the field. To achieve this, they must develop benchmarking curricula to evaluate their program; **(3)** hospitality industries and associations, are required to enforce best practices throughout the industry. To achieve this, they must enforce skills and qualifications standards in their employment policies. Collaboration between these stakeholders will generate a unified

vision for a new approach to this field of study. It will also assist in the development of expertise, and work practices that place the profession in the global arena. This cooperation is important for the definition of the goals and objectives of the proposed curriculum framework.

***Goals and Objectives***

The table below will present the different goals and their related objectives

**Table: 8**

*Goals & Objectives*

<b>Goals</b>	<b>Objectives</b>
<p><b>Goal 1: Market- Based Driven Graduates</b></p> <p>To develop highly creative and competitive graduates, capable of addressing market demands</p>	<p>To develop a multidisciplinary curriculum to equip the students with the competencies needed for the rapidly changing market</p> <p>To Develop futuristic, creative, and flexible pedagogies and teaching strategies.</p>
<p><b>Goal2: Quality Education</b></p> <p>To apply quality standards throughout the educational process</p>	<p>To enforce quality standards in teaching and assessment</p>
<p><b>Goal 3: Evidence-Based Innovation</b></p> <p>To promote research and innovation to reinforce the place of culinary art in the academic sphere and the hospitality industry</p>	<p>To create an enabling environment for research and entrepreneurship</p> <p>To provide research opportunities for students and faculty</p> <p>To support demand-driven research projects</p>
<p><b>Goal 4: Internationalization</b></p> <p>To follow the international guidelines and best practices of the profession</p>	<p>To enhance international engagement and knowledge exchange through partnerships, mobility programs, and internships.</p>
<p><b>Goal 5: Community engagement:</b></p> <p>Considers the Egyptian context and involves the main stakeholders to drive the development of the field</p>	<p>To collaborate with public and private-sector stakeholders to contribute to the advancement of the profession</p> <p>To conduct a needs analysis that identifies the market needs</p> <p>To sensitize the Egyptian community to the importance of the field.</p>

### ***Content***

It will be a 4-year program, 8 semesters, 5 courses (3 credit hours each) per semester, targeting 130 credit hours in total. The guiding principle in the elaboration of content is the combination of innovative culinary new trends with the well-established traditional fields of science like natural and life sciences. Addressing the multi-disciplinarity of the field represents a challenge in building the contents of the proposed framework. This framework will help in building a foundation for placing this field of study in the rightful place as an academic discipline not confined to basic technical skills.

As this is a field in development, it is still taking early steps in selecting and combining the different subjects to strike a balance between the theoretical and applied parts. In other words, the discipline is struggling to adopt a holistic approach.

From the data gathered and analyzed during research and the review of the programs offered in various international culinary-oriented institutions, the researcher identified four focus areas of knowledge: (1) culinary arts and gastronomic sciences; (2) life and food sciences; (3) Management and business practices; (4) Arts and modern technologies. The table below presents the proposed topics within each of these areas of knowledge and the suggested workload and modality.

**Table 9**

*Content of the Framework*

<b>Domains</b>	<b>Suggested Topics</b>	<b>Credit Hours</b>	<b>Theoretical</b>	<b>Applied</b>
Culinary art and gastronomic sciences	Basic cooking- cooking techniques-baking principles- food production methods- food components-studies of food and beverages-kitchen	Total 72 credit hours  18 credit hours per year (6 courses)	25%	75%

	equipment, design, and organization, food hygiene and safety standards- different cuisines - food crafting and design- new cookery concepts and technologies	divided into two semesters		
Food and Social Sciences	Food science (refers to a multidisciplinary area that combines microbiology, chemistry, biochemistry, engineering, and nutrition, to offer solutions to several food system challenges).  Social sciences (history of cuisines- sociology and food cultures- anthropology of food- philosophy of food- food heritage). Sustainability of the agroecosystem  Psychology	Total 27 credit hours  9 credit hours per year (3 courses) for the first 3 years	100% theoretical	
Management and business practices	Hospitality industry management (Hotels, restaurants, food production companies)- marketing and finance- entrepreneurship- legislations and food laws- Leadership- innovation	Total 15 credit hours 5 courses distributed in 4 years	100% theoretical	
Arts and modern technologies	Arts (Music, painting, Drama) Media tools – journalism and photography in food- information and communication technologies	Total 18 credit hours 6 courses distributed in 4 years	25% theoretical	75% applied
Internships	2 internships (two months each)	6 credit hours	One local & one international internship in a well-established hospitality business.	

Graduation Project	Final year individual project	4 credit hours	Guided individual applied projects based on creativity and innovation according to pre-defined criteria.
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These suggested topics offer a wide range of selections for the different programs, in both undergraduate and postgraduate degrees in the field. It can ensure the flexibility and possibility for adaptation of the programs according to the needs of society and the institution.

### ***Learning outcomes***

After completing this program the learners will be able to: (1) link culinary art to culture, history, and life sciences; (2) apply the nutritional principles in cooking; (3) respect the health and safety standards as applied internationally; (4) master different cooking principles and techniques; (5) be oriented to different cuisines; (6) manage and market a hospitality enterprise; (7) identify the required tools and equipment in the kitchen; (8) deploy entrepreneurial approach in work; (10) communicate effectively within the institution and with the external world.

### ***Personal Characteristics, Competencies, and Skills***

These programs will help in developing the required competencies and skills for future culinarians.

**Personal Characteristics**, the graduate will be (1) Resourceful, creative, and has imaginative skills; (3) responsible, loyal, and committed; (4) efficient, competent, and perceptive; (5) able to perform in stressful conditions and deploy a constructive approach in problem-solving.

**Competencies and Skills**, the graduate will have (1) a sound base of knowledge related to the discipline in theory and practice; (2) Capabilities of effective management (plans,

staff, facility, and challenges); (3) good organization; (4) uses science to innovate; (5) can manage budget and make projections; (6) Capable of marketing his business; (7) can support, guide, train, and motivate people; (8) has an entrepreneurial spirit; (9) well oriented to modern and ICT technologies,

### ***Pedagogy and Teaching Methods***

The teaching methods will be premised on a constructivist approach, where critical thinking and problem-solving are applied. The students will be involved in group research and engaged in synchronous and asynchronous assignments. Pre-set activities will be combined with self-directed ones. Educators will support the students and provide them with all the required knowledge and material. The multidisciplinary nature of the field necessitates the use of a variety of learning and instructing strategies ranging from face-to-face to virtual encounters; from theoretical lectures to applied hands-on practice; from reflective to experiential learning. In this field, there is a large component of demonstrations, applications, experimentation, and internships. Assessment will include individual self-assessment through feedback mechanisms.

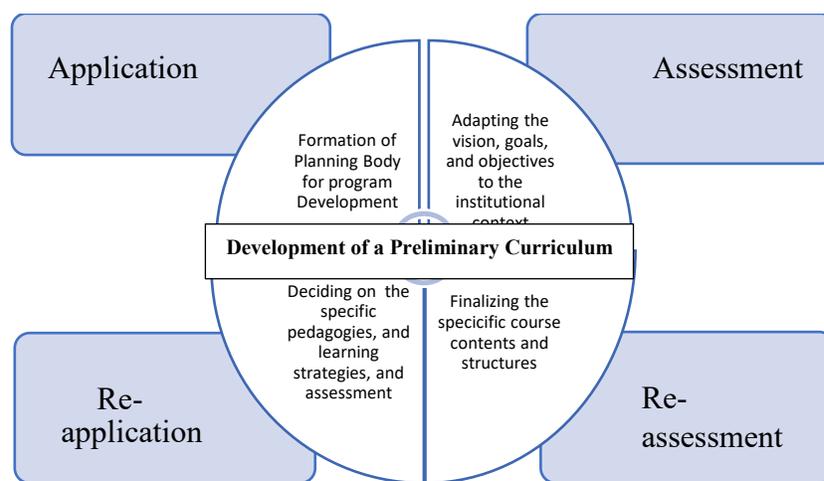
The involvement of tutors from the industry is recommended. One of the concerns raised during this research is the availability of qualified staff that can deliver these recommended programs. Providing the institutions with proper infrastructure and facilities should go parallel to the development of these new programs, as their application requires well-designed and equipped kitchens, attached restaurants, broadcasting facilities, and kitchen laboratories.

### ***Assessment and Evaluation of the Framework***

This study proposes a double assessment of this curriculum framework, an internal

assessment that each institution can undertake to assess its ability to realize its goals and readapt the curriculum accordingly, and an external assessment run by an external body of experts to determine the quality of the curriculum framework.

The scope of this study is limited to the design of a proposed curriculum framework. The framework presented here is theoretical, it is generated out of the literature review and the research findings from the collected data. Therefore, it will need further assessment and evaluation after its implementation. As further research work needs to be done, and a multistakeholder planning committee should be put in place involving the higher education institutes, the industry, and the government to develop a final complete curriculum ready for implementation and evaluation. The application, implementation, and evaluation of the curriculum should be subject to future research through an action research project. A suggested conceptual framework for future studies is proposed based on Kolb's learning cycle (Kolb,1984). This is a cyclic process that may require several cycles of implementation, reflection, evaluation, adaptation according to the assessment results, and re-implementation to reach the right curriculum.



**Fig 5:** *Conceptual Framework for Future Studies (Own construct)*

### **Limitations and Constraints of the Study**

The limitation of this study is primarily related to the size and type of the sample. This study used a qualitative methodology, targeting a limited number of participants, which can raise a concern about the generalization of the results. Also, it targeted the public sector higher education institutions, so the results may not apply to private universities which have different contexts and learning environments. The interpretation of data was done by one researcher which can lead to subjectivity. The limited local literature sources on the subject and the broadly outlined available curricula presented a constraint to the researcher.

### **Challenges**

The challenges that the application of the proposed framework in Egyptian higher education will face could be (1) acknowledgment of the field as an academic discipline; (2) the official approvals of the proposed program; (3) the provision of the necessary fund to establish an equipped culinary educational institution according to international standards.

### **Recommendations**

The study recommends the formation of a culinary art education council that includes policymakers, representatives of the tourism and hospitality industries, educational and training institutions in the field, culinary professionals, non-governmental organizations, and associations. This council must have a mandate to continuously update the culinary art higher education programs to be holistic and comprehensive, keeping pace with global development, future-oriented, and promoting critical thinking and innovation.

A second recommendation is to create specialized post-graduate degrees, master's, and Ph.D. programs to support the development of the field and produce qualified educators.

## Conclusion

Traditionally, food science and culinary arts in higher education were offered separately at different institutions. Educators were focusing on theoretical science-based knowledge, while culinary practitioners developed their techniques and repertoire with a minimal scientific foundation. It is timely to have culinary educators, and professionals start a reconciliation of sciences and culinary art in a common framework that combines vocational and liberal perspectives (Hegarty, 2005). Understandably, this merge was a challenge as there was a lack of theoretical foundation to support the consideration of the field as an academic discipline, according to Barham (2001), this is an area for potential future research in culinary art education. Also, the tension between the needs of the industry from an applied standpoint and those of the subject matter education concerning science and theory was challenging.

This study was conducted to explore the gap in culinary art higher education in Egypt. A situational analysis was performed through focus group discussions and interviews. The major issues identified through this study are the complex multidisciplinary nature and the ill-defined scope of the field. There was a unanimous agreement on the need to conceptualize this field of education more profoundly and determine its scope and boundaries. A proposed curriculum framework was designed to fill the gap and make this field of education in Egypt globally competitive. This framework tried to offer a holistic multidisciplinary perspective based on a strong scientific foundation while being oriented to creativity and innovation. Also, it promotes moral values and develops technical skills.

In Egypt, tourism is a major contributor to the gross national income, GPI, which generates about 12% of the Gross Domestic Product GDP (Central Bank of Egypt, 2019).

Putting culinary art in its rightful place at the heart of the tourist industry could have a valuable impact on promoting this industry (Ramadan, 2020).

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## **Appendix 1**

### **Focus Groups Discussions FGDs**

#### **Agenda of the FDGs Meeting**

##### **Opening Remarks**

Introduction of the Topic and the motivation for conducting this meeting 5 minutes

##### **Themes of the Discussions**

- Perception of culinary profession and role of food in society. 15 minutes
- The required core competencies for a professional culinarian? 15 minutes
- What are the gaps in the current curriculum, and the suggested content of a culinary art education syllabus 15 minutes
- Other areas for further development, entrepreneurial skills, management design, new technologies, especially concerning cooking, media, and marketing. 15 minutes
- What are the challenges that the development plan can face? 15 minutes
- Conclusion

**FGD protocol**

Please complete this form before attending the Focus groups discussion's meeting.

All information will be confidential, and the final report will not include names.

Profile of the Participant

Name: -----

Gender: -----

Address: -----

Phone: -----      Mobile: -----

Email: -----

Qualifications:-----  
-----  
-----  
-----  
-----

Professional History (Please provide details about your tasks)  
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Do you belong to any association or union in the field? If yes, please specify.

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Do you agree or disagree with the below statements, and what are your reflections on each subject?

**One: Introducing the Gap**

1. Food plays an important role in society ( historical, philosophical, social, cultural, and ethical.)

Reflections -----

2. Culinary arts are perceived as a vocational profession that is not highly valued in society, it is not considered an academic field of study

Reflections -----

3. What are the gaps in the current culinary higher education, and the suggested content of a culinary art curriculum.

Reflections -----

4. Culinary arts and food deserve to be an independent academic field of study especially after the expansion of culinary programs and cooking schools.

Reflections: -----

5. Culinary arts curriculum must provide content-oriented to client, industry, and market needs

Reflections -----

6. This field must be an academic field with degrees at the undergraduate as well post-graduate levels.

Reflections -----

- 7. Maintaining the balance between theory and practice in culinary education is critical

Reflections -----

- 8. New curricula in culinary arts must offer a blend between innovation, creativity, theory, and practical skills.

Reflections -----

- 9. It is a field that requires continuous training and lifelong learning

Reflections -----

**Two: Competencies**

- 1. What are the most important characteristics of a culinary expert?

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-----  
-----

Consensus

- 2. Enumerate in priority order the important skills of a culinary expert

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-----  
-----

Consensus

- 3. Do you think that culinary arts education programs in Egypt promote the development of those skills? (Please support your answer with your insights about the existing gap that you experienced).

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Consensus

4. What are your recommendations for the improvement, and development of culinary art education based on your personal experience.

Consensus

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**Three: Opportunities and Challenges**

1. What are the challenges that can oppose the evolution of this field of education?

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 -----  
 -----

Consensus

2. What could represent an opportunity for the development of this field of education?

-----  
 -----  
 -----

Consensus

**Three: Curriculum Framework Design**

1. From the topics listed in the table below, please indicate which ones you consider important and those that you think are irrelevant.

Culinary studies	Cooking Concepts Cooking Methods & Techniques Cooking Skills (knife skills, carving skills, etc..). Food Science Food Chemistry Food Microbiology Food safety
------------------	---

	<p>Food Design</p> <p>Kitchen Hygiene</p> <p>The Different Cuisines</p>
Nutrition	Diets Design
History	<p>Food Historical Footprint</p> <p>Evolution of Gastronomy Concepts</p> <p>Agriculture and Food</p>
Culture and food	<p>Food Anthropology</p> <p>Food Sociology</p>
Law	Food Laws
Marketing	Food Marketing
Management	<p>Management of Culinary Enterprises at Different Scales (hotels, restaurants, small businesses).</p> <p>Entrepreneurship</p>
Communication	<p>Food Through Story Telling</p> <p>Food Memoires</p> <p>Photography</p> <p>Digital Tools</p>
Economics	Finance

	Accounting Entrepreneurship
--	--------------------------------

2. Do you think that a preparatory year to study basic sciences is useful?

-----

3. What could be the optimum duration of each the proposed culinary education program

Professional certificate -----

Bachelor's degree-----

Master's degree-----

Doctoral Degree-----

Your involvement in the design of the proposed culinary arts curriculum is very much appreciated. Thank you.

## Appendix 2

### Semi-Structured In-Depth Interviews Guide

1. Please share your educational profile
2. Please share your professional history (duration and type of expertise)
3. The different ways of perceiving culinary arts education will be presented to the participants, they will be asked to explain their perception of the field.
4. How is the culinary profession perceived in society? ( value, gender, acceptance, evolution)
5. How do you see the role of food in a society? I will highlight the multiple perspectives of food (social, cultural, etc.) and give them the opportunity to express their understanding and perception of the issue.
6. Do you agree with this statement “Culinary arts should be acknowledged as an independent higher education field”? do we need to establish a tertiary degree a in culinary arts? I will present the current global models and give them the opportunity to express their views this
7. In the framework for a new curriculum in culinary art, what can we propose in terms of:
  - Content (Food design and crafting, cooking techniques & methods, nutrition, microbiology, safety standards, sociology, anthropology, history of world cuisines, entrepreneurship, marketing, management, accounting)
  - Outcomes in relation to acquired skills (Experiential, analytical, Applied) please provide some real-life suggestions based on your experience in the field).
  - How can this be achieved? Examples
  - What do you recommend as media of instruction? Examples
  - Which pedagogy can you recommend? Explain
  - Briefly describe the most important required infrastructure.

### Appendix 3

#### Brochure of the Programs in Culinary Art Degrees at Ecole Ducasse/ Paris

<https://www.ecoleducasse.com/en/brochure>



2021 PROGRAM PORTFOLIO  
Essentials - Diplomas - Signature  
- Bachelors - CAP

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## Appendix 4

### CAPMAS Letter

الجهاز المركزي للتعينة العامة والإحصاء الإدارة العامة للأمن	
١١٨٦	صادر رقم
٢٠٢٢/٦/٩	تاريخ
قرار	مرفقات

الجهاز المركزي للتعينة العامة والإحصاء

القييد : .....

الموضوع : .....

التاريخ : / /

المرفقات : .....

السيد الأستاذ الدكتور/ مستشار الجامعة الأمريكية بالقاهرة

تحية طيبة وبعد ،،،

بالإشارة لكتاب سيادتكم الوارد للجهاز في ٢٠٢٢/٦/٩ ومرفقاته بشأن طلب الموافقة على قيام الباحثة / قدرية على محمود عبد المتعال / المسجلة لدرجة الماجستير بقسم الدراسات التعليمية كلية العلوم الإنسانية والاجتماعية بالجامعة الأمريكية بالقاهرة - بإجراء دراسة ميدانية بعنوان : ( فنون الطهي في التعليم العالي بين الرؤية والتطبيق : الحالة المصرية ) .

وذلك وفقا للإطار المعد لهذا الغرض.

يرجى التكرم بالإحاطة بأن الجهاز المركزي للتعينة العامة والإحصاء يوافق على قيام الباحثة / قدرية على محمود عبد المتعال - بإجراء الدراسة الميدانية المشار إليها بعالية وفقا للقرار رقم ( ٧٦٨ ) لسنة ٢٠٢٢ للام في هذا الشأن وعلى ان يوافق الجهاز بنسخة من النتائج النهائية كاملة فور الانتهاء من إعدادها طبقا للمادة رقم ( ٧ ) من القرار .

وتفضلوا بقبول فائق الاحترام

محمد إبراهيم بخيت  
مدير عام الإدارة العامة للأمن



جمهورية مصر العربية



الجهاز المركزي للتعبئة العامة والإحصاء

قرار رئيس الجهاز المركزي للتعبئة العامة والإحصاء  
بالتفويض رقم (٧٧٩) لسنة ٢٠٢٢

في شأن قيام الباحثة / قديرية على محمود عبد المتعال / المسجلة لدرجة الماجستير بقسم الدراسات التعليمية كلية العلوم الإنسانية والاجتماعية بالجامعة الأمريكية بالقاهرة - بإجراء دراسة ميدانية بعنوان : ( فنون الطهي في التعليم العالي بين الرؤية والتطبيق : الحالة المصرية ) .

رئيس الجهاز

- بعد الإطلاع على القرار الجمهوري رقم (٢٩١٥) لسنة ١٩٦٤ بشأن إنشاء الجهاز المركزي للتعبئة العامة والإحصاء .
- وعلى قرار رئيس الجهاز رقم (٢٣١) لسنة ١٩٦٨ في شأن إجراء الإحصاءات والتعدادات والاستفتاءات والاستقصاءات.
- وعلى قرار رئيس الجهاز رقم (١٣١٤) لسنة ٢٠٠٧ بشأن التفويض في بعض الاختصاصات .
- وعلى قرار رئيس الجهاز رقم (١٥٥٢) لسنة ٢٠٢١ بشأن التفويض في بعض الاختصاصات .
- وعلى كتاب كلية العلوم الإنسانية والاجتماعية بالجامعة الأمريكية بالقاهرة - الوارد للجهاز في ٢٠٢٢/٦/٦ .

قـرر

- مادة ١: تقوم الباحثة / قديرية على محمود عبد المتعال / المسجلة لدرجة الماجستير بقسم الدراسات التعليمية/ كلية العلوم الإنسانية والاجتماعية بالجامعة الأمريكية بالقاهرة - بإجراء الدراسة الميدانية المشار إليها عالية.
- مادة ٢: تجرى الدراسة على عينة عشوائية حجمها (١٦) ستة عشر مفردة موزعة كالتالي:  
(٦ مفردة من الطلبة والأساتذة بكلية السياحة والفنادق بجامعة حلوان)  
(١٠ مفردات من الخريجين في المجالات المختلفة في الطهي والغذاء والغير المتخصصين بالفنادق او المطاعم).  
بمحافظة القاهرة.
- مادة ٣: تجمع البيانات اللازمة لهذه الدراسة بموجب الاستمارة المعدة لذلك وتطبق (باللغة الانجليزية) وعدد صفحاتها تسع صفحات معتمد كل صفحة منها بخاتم الجهاز المركزي للتعبئة العامة والإحصاء.
- مادة ٤: تقوم جامعة حلوان والجهات المستهدفة - وتحت إشراف السيد / أمين عام تلك الجامعة- وتحت إشراف إدارة الامن بكل منهما بتيسير إجراء هذه الدراسة الميدانية ومراعاة الضوابط الخاصة بتقييم درجة سرية البيانات والمعلومات المتداوله مسبقا بمعرفة كل جهة طبقا لما جاء بخطة الامن بها.
- مادة ٥: يراعى موافقة مفردات العينة - وسرية البيانات الفردية طبقا لقانون الجهاز رقم (٣٥) لسنة ١٩٦٠ والمعدل بالقانون رقم (٢٨) لسنة ١٩٨٢ وعدم استخدام البيانات التي يتم جمعها لأغراض أخرى غير أغراض هذه الدراسة.
- مادة ٦: يجري العمل الميداني خلال شهرين من تاريخ صدور هذا القرار .
- مادة ٧: يوافق الجهاز المركزي للتعبئة العامة والإحصاء بنسخة من النتائج النهائية كاملة لهذه الدراسة.
- مادة ٨: ينفذ هذا القرار من تاريخ صدوره.
- صدر في: ٢٠٢٢ / ٦ / ٨



محمد إبراهيم بخيت  
مدير عام الإدارة العامة للامن

**Appendix 5**  
**IRB Approval Letter**



Case# 2021-2022-168

Heba El Deghaidy



“ ”

Please note that IRB approval does not automatically ensure approval by CAPMAS, an Egyptian government agency responsible for approving some types of off-campus research. CAPMAS issues are handled at AUC by the office of the University Counsellor. The IRB is not in a position to offer any opinion on CAPMAS issues, and takes no responsibility for obtaining CAPMAS approval. This approval is valid for only one year. In case you have not finished data collection within a year, you need to apply for an extension.

A small rectangular box containing the handwritten signature "H. Kotb" in black ink.

## Appendix 6

### Informed consent



#### **Documentation of Informed Consent for Participation in Research Study**

**Project Title:** Perception of Culinary Art Higher Education in Egypt: The Way Forward  
**Principal Investigator:** Kadria Ali Abdel Motaal

[kkmotaal@aucegypt.edu](mailto:kkmotaal@aucegypt.edu)

You are being asked to participate in a research study. The purpose of the research is to explore the perception of the students, faculty, and graduates of the faculty of tourism about culinary art higher education in Egypt, and to propose a new framework to change the existing culinary art curriculum. The findings may be presented in conferences and meetings. Publications related to this research is a possibility as well.

The expected duration of your participation in the focus group discussion, FGD, will be 30 minutes preparation in advance and one hour for the actual meeting.

There will not be any risks or discomforts associated with this research.

You will benefit from the exchange of views during the focus group discussions and interviews. It could give you a wider perspective and context to the field. It can also help you in your future career orientation and in the development of your business.

The information you provide for purposes of this research is confidential, it will be kept with the researcher without any access grant to others. It will be used for the purpose of the study only. According to AUC policy, data will be kept for three years.

In case of any pertinent questions about the research and research subject's rights, you may contact Kadria Abdel Motaal at [kkmotaal@aucegypt.edu](mailto:kkmotaal@aucegypt.edu)

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.

Signature

Printed Name

Date