



International Teaching Aid  
**Competition 2023**

Reconnoitering Innovative Ideas in Postnormal Times

**iTAC**

**2023**

**iTAC 2023**  
**INTERNATIONAL TEACHING AID COMPETITION**  
**E-PROCEEDINGS**

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eISBN : 978-967-2948-51-3

Published by : Universiti Teknologi MARA Cawangan Kedah,  
08400 Merbok,  
Kedah,  
Malaysia.

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## **PREFACE**

iTAC or International Teaching Aid Competition 2023 was a venue for academicians, researchers, industries, junior and young inventors to showcase their innovative ideas not only in the teaching and learning sphere but also in other numerous disciplines of study. This competition was organised by the Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch, Malaysia. Its main aim was to promote the production of innovative ideas among academicians, students and also the public at large.

In accordance with the theme "Reconnoitering Innovative Ideas in Post-normal Times", the development of novel ideas from the perspectives of interdisciplinary innovations is more compelling today, especially in the post-covid 19 times. Post-pandemic initiatives are the most relevant in the current world to adapt to new ways of doing things and all these surely require networking and collaboration. Rising to the occasion, iTAC 2023 has managed to attract more than 267 participations for all categories. The staggering number of submissions has proven the relevance of this competition to the academic world and beyond in urging the culture of innovating ideas.

iTAC 2023 committee would like to thank all creative participants for showcasing their innovative ideas with us. As expected in any competition, there will be those who win and those who lose. Congratulations to all the award recipients (Diamond, Gold, Silver and Bronze) for their winning entries. Those who did not make the cut this year can always improve and join us again later.

It is hoped that iTAC 2023 has been a worthy platform for all participating innovators who have shown ingenious efforts in their products and ideas. This compilation of extended abstracts published as iTAC 2023 E-Proceedings contains insights into what current researchers, both experienced and novice, find important and relevant in the post-normal times.

Best regards,

**iTAC 2023 Committee**  
**Special Interest Group, Public Interest Centre of Excellence (SIG PICE)**  
**UiTM Kedah Branch**  
**Malaysia**



## **GOPLATE**

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### **ABSTRACT**

A plate that is able to maintain the temperature of the food when it has been served to the customer. GoPlate is an innovation that we created where it has a heating plate system that is placed inside the plate. The customer or server can adjust the heat level on the knob placed on the side of the plate depending on the suitability of the food condition. The material we use to produce this product is ceramic on the outside, and inside, we use several types of electronic instruments for the heating system, such as aluminum, thermal insulation rubber, and others. On the outer surface of the plate on which the food will be placed, we put a non-stick coating to prevent food from sticking to the plate if the temperature is too hot. The size of this plate is the average size of a fine dining plate which is 10.5 inches. The problem that can be overcome when using our product is that the food served to the customer will remain hot, and the texture of the food will remain awake. Especially in a 5-star restaurant or when dining in fine dining, it is vital to maintain customer experience and satisfaction. For example, fatty foods tend to clump easily when left at room temperature, so with the GoPlate it can overcome this problem. As a result of our observation, this product is more or less the same as the multipurpose cooker available in the market where it can also heat food. Still, the design is less suitable to be served

to customers and placed on the table. The large shape also makes it difficult for customers to eat through it. Therefore, with the GoPlate, it can not only keep the food hot but can also give them a different experience because the design we designed is very interesting which is based on the design of the Nordic country plates. Having GoPlate will be the best investment for the F&B industry because it can please and raise their license status by providing the best dining experience to customers.

**Keywords:** electronic plate, temperature, food served, dining experience.

## PRODUCT CONCEPT

The concept of the product is to maintain the food temperature even if it has been served to the customer. We want the customer to enjoy their warm food until the last bite. The temperature level can also be adjusted to the customer's liking as our goal is to fulfill customer experience and satisfaction when eating at a 5-star restaurant or a fine dining restaurant. This GoPlate is rechargeable and wireless for convenience. It is easier to clean and doesn't ruin the heating system.

## ISSUES AND PROBLEMS

When a business owner runs a restaurant, they are called restaurateurs. As people know, there are lots of ups and downs in a business especially when they are involved in food and beverages services.

However, there are certain issues and problems that are often faced by food and beverages industries due to certain reasons such as shortening of workers. For instance, the food was prepared earlier to cater customers' orders during peak hour such as during lunch hour which is from 11.30am up till 3pm and same goes to dinner time as well from 6.30pm till 10.00pm. Thus, when the food arrives to customers, it becomes cold because some restaurants are running out of time to reheat or cook new meals for customers.

Next, certain foods can easily change their texture when it is cold, especially food that is produced from dairy products such as cheese, milk, butter and many more. Somehow the texture turns out hardened and obviously the taste is also different as well.

Furthermore, usually 5 star hotels with air-conditioning sometimes can be extremely cold which can affect the food temperature. Therefore, it will be difficult for the restaurant to reheat the meal in the microwave or their electronic name is electromagnetic radiation / wave. Since this process requires much time and with the assistance of staff to handle it as well.

After reviewing all these issues and problems faced by the F & B industry, our group has come

out with an idea to create a self-heated plate in order to facilitate the process of serving food to customers.

## **PRODUCT NOVELTY**

In the context of innovation, novelty is a key concept because it is a desired attribute of company concepts, services, products, and features. Genuinely original concepts that have been tested and show promise in practice advance the state of the art; they also present prospects for intellectual property (patents) and serve as differentiators for goods and businesses. We invented GoPlate that will bring ease to our customers especially to our target markets. Adding more new features to this invention will attract more people to buy this go plate and can see the uniqueness of it.

Warming food to perfect temperature is the product novelty for this invention. GoPlate will help you to warm up your food to the perfect temperature and keep it hot for as long as you like. Meaning said, we have provided one button that has four temperature modes which is 50, 60, 70 and 80 degrees to your preferred temperature. A single press cycles through the settings, including turning it on or off.

Wireless and has a rechargeable heating plate designed to improve your cooking experience. To keep meals warm after it has been served, GoPlate will be made of ceramic plates with an embedded wireless induction multi-temperature warming base. When preparing a big family meal or serving up dinner, it is ideal. The base only heats up when inserted into the ceramic top plate thanks to sophisticated wireless induction. GoPlate is easy to use and secure because it has no wires or cords. With just a micro USB cord, the base heating device can be quickly detached and charged.

GoPlate will only heat up when connected, where the plate or base will not heat up unless both are connected. Meaning that there is no need to be concerned about any harm to your safety while utilizing it. In contrast to more recent inventions, the majority of older heating plates require hot water, gas or cable to work. This will result in greater clutter and take up room that you could be utilizing for additional dishes, etc.

## **CREATIVITY**

In order to solve issues, communicate with others, and amuse ourselves and others, creativity is defined as the propensity to develop or recognise ideas, alternatives, or possibilities. GoPlate has its own creativity and concept which is smart, safe and easy. GoPlate is so sophisticated and uses an effortless method of serving your favorite hot dishes. The scientists claim that as food temperature rises, our taste buds react in a much more powerful way, delivering a stronger electrical signal to the brain and enhancing flavor. Beveragedaily, 2008 quotes that, to ensure

that the entire meal is delicious from the first bite to the last, keep the temperature at which the food was served.

1 Button for 4 Temperature modes has become one of the creative invention features that we have already tested before we sell it to the customers later on. There are 50 degrees which is a good temperature to keep food warm while eating, 60 degrees perfect for buffet serving food, 70 degrees perfect for buffer multi dish liquid for example soup and 80 degrees great to keep it warm while waiting.

## **USEFULNESS**

A good product has a variety of beneficial uses for the user and it can give a strong trust in our product. One of the main uses of our plates is that they can maintain the temperature of the food when it is served to the customer. As we know, the food served will quickly become cold and its temperature will change to room temperature if it is exposed to environmental temperatures such as fans and air conditioners. Food that changes temperature from the original temperature will change the shape, texture and taste of the food. As an example we can see in foods such as fatty soup, the soup will clump because the fat will not remain liquid if the heat is lost. So with GoPlate, it can overcome this problem with the feature that we put on this plate which is the temperature that can be adjusted according to the suitability of the food.

The next use of GoPlate is to provide a high-performance dining experience to customers. We target the sale of our products to restaurants or hotels that care about their rating. When these restaurants use our plates to serve food to their customers, customers will have a different experience when they enjoy their meals on our plates. This is because our plate not only has a unique feature where it can maintain the temperature of food, but it can also give them a sense of luxury because the design we provide is quite exclusive. Contemporary Nordic plate-themed designs will further enhance the value of dishes served by prestigious restaurants or hotels. With a design like this, the restaurant will feel more confident and interested in having our plates on their premises.

Therefore, when customers are satisfied with the dishes served to them, they will give the best rating and feedback to the restaurant. By having a high rating, it can increase the reputation of restaurants that use GoPlate. Great competition in the market will make it more difficult for these restaurants to stay in the market. Therefore by owning this plate, it can be a stepping stone for them to continue to attract many more customers because of the uniqueness and technological sophistication of our plates.

## **ACCEPTABILITY**

To cover the above subtopic, a quick survey via phone call with a restaurant called the Horizon

Grill, Banyan Tree, Kuala Lumpur has been conducted. We believe that GoPlate is a much more suitable product for the food industry especially to the fine dining restaurants as it could enhance more experience to their customers.

Based on the result of the survey, Miss Ee Phing Lee, Head of HR Department, concludes that GoPlate is a unique and a good approach for the F&B industry as it could bring a new and pleasant experience to the customers.



**Figure 1.0.** Heating Device Attachable to the Plate

However, it is also notified that GoPlate would not be very practical for the staff to handle as there is a concern regarding the electrical components of the plate especially in the cleaning and washing of the plates' process. This implies that the staff may have to carefully ensure that the water would not interrupt the electrical components of the plate. As a result, it will prolong the time to wash the dishes. Therefore, an advancement has been made due to the comment, where a heating device that is attachable to the plate is created. This heating device is removable from the plate in order to ease the plate washing process.

Moving on, a survey via text on WhatsApp with a fine dining customer has also been conducted to get feedback on the GoPlate. Mr. Ezniel Kamal commented that customers could have the flexibility and personalization of their cuisine, at the same time customize their fine dining experience.

Ultimately, GoPlate can be a good product because it provides a convenient, time-saving, and versatile way to warm up food. It enhances the dining experience by ensuring that meals are served at the desired temperature and can be enjoyed at any time and any location.

## **ESTIMATED COST**

Cost plays an important role in the success of a product. We estimate the selling price for GoPlate to be as much as RM200 per unit. This RM200 is very suitable for sale because the products we offer are very exclusive and the materials used are very high quality. We found



this amount from the addition of ceramic plates, electrical material and production cost to produce this product. This ceramic plate that costs RM25 is very suitable to use because the ceramic from this supplier provides original and durable ceramics. RM100 was used to buy heating plates supplied by Jaye Heater Company. We chose this company as our supplier because the electrical tools produced by them are of high quality and durable. Our production cost is as much as RM45 which we will use to pay utility bills, employee wages and other costs involved in the production of this product.

The profit we will get is as much as RM30 where it is taken as much as 15% from the selling price which is RM200. The profit we will get is important to ensure the economic stability of our company and it can help us to do research and development of new products or repair existing products based on comments given by users.

## REFERENCE

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e ISBN 978-967-2948-51-3



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