



## THE ASSISTANCE OF THE BEJI VILLAGE TEMPE SUSTAINABLE PRODUCTION (PROJECT BRIEF)

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### Abstract

Learning Express (LeX) is a 12-day overseas program that equips students with the Design Thinking mindset in a social innovation context. In this program, students enjoy out-of-textbook experiences such as learning a new language and undergoing a community homestay. Students get to interact and build friendships with youths from Asia and gain a more profound understanding of the issues faced by the overseas community. SP students join the students from the University of Muhammadiyah as Overseas Partner Institutions to co-create purposeful, sustainable, and innovative prototype solutions to real-life issues. They develop an understanding of the issues the overseas community faces in the context of their social, economic, and political culture and analyze these issues from multiple perspectives. Through this program, students can apply their teamwork and communication skills, develop a better understanding of themselves and empathy for the community, realize the positive impact they can make in the lives of a community in need, and attain higher resilience.

**Keywords:** assistance, design thinking, Tempeh, production

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### INTRODUCTION

Learning Express (LeX) is a 12-day overseas program that equips students with the Design Thinking mindset in a social innovation context. In this program, students enjoy out-of-textbook experiences such as learning a new language and undergoing a community homestay. Students get to interact and build friendships with youths from Asia and gain a more profound understanding of the issues faced by the overseas community. SP students join the students from the University of Muhammadiyah as Overseas Partner Institutions to co-create purposeful, sustainable, and innovative prototype solutions to real-life issues. They develop an understanding of the issues the overseas community faces in the context of their social, economic, and political culture and analyze these issues from multiple perspectives. Through this program, students can apply their teamwork and communication skills, develop a better understanding of themselves and empathy for the community, realize the positive impact they can make in the lives of a community in need, and attain higher resilience.

#### 1. About The UN SDG Goals

The Sustainable Development Goals (SDGs) were adopted in **2015** by the 193 United Nations (UN) member states. Seventeen goals address economic, environmental, and social impacts. They are designed to form a blueprint to end poverty, protect the planet, and improve the lives and prospects of everyone, everywhere, by 2030.

#### 2. LeX University of Muhammadiyah Malang and Singapore Polytechnic Project

Beji village is in Junrejo District, Batu City, East Java Province, Indonesia. Beji has been known as the Tempeh Village because many residents work as Tempeh entrepreneurs. Every year, the Government and residents in Beji hold the Beji Kampung Tempeh Festival at Beji's Gelora Sakti Field. In 2019, Beji village achieved the Indonesian World Record Museums (MURI) for making Tempehsaurus, an enormous tempeh which has 7 meters in length and 5 meters in width. Beji is also known as Kampung Hijau (Green Village) due to the painted green buildings.

## **METHOD AND PROCEDURES**

1. Location: Beji Village, in Jun Rejo District, is located about 7 km away from the University of Muhammadiyah Malang (or about 16 minutes drive by car).
2. Population/Profile: Beji Village, Junrejo District, Batu City. It is about 20 km northwest of Malang and 7,3 km and approx. 16 minutes from UMM. This area is well known for its green buildings and tempeh production. It is the biggest village in the Junrejo District, with a population of 8,430. Their primary income comes from agriculture, farming, tempeh production, teaching at the local schools, and civil servants. Temperatures have brought several tourists to the village to see the making process of Tempeh.

### **3. Pre-Trip Task**

As part of the Sense and Sensibility phase of the design thinking process, conduct secondary research on your project challenge to have an initial understanding of the following:

- The issue/challenge
- Your target community
- Your target community's SPICE (Social-Physical-Identity-Communication-Emotional) needs
- Solutions in place to support your target community's SPICE needs and why these solutions may be inadequate

## **RESULTS**

This mentoring was carried out for - days with the following event details:

### **1. Day 1: Kick-off Session**

In the Kick-off session activity, an initial introduction regarding Learning Express (LeX) was carried out by the program facilitators and DPL. This activity introduces the program terrain in Beji Village, which will be traversed during LeX. Today also marked the first meeting for the activity participants, who were divided into several groups to discuss specific issues. Our group was given a digital marketing theme to help with online tempe promotion problems in Beji Village.

We were still at home at the first member meeting because it coincided with the semester break, so it had to be done online. We discussed the program that would be carried out by the digital marketing theme given at the kick-off session. This theme was then developed into a business profile

video. Then, we started preparing the PMM proposal and filling out several forms required for community development administrative matters.

## **2. Day 2: Training of Trainers (ToT) Design Thinking**

On the ToT agenda, design thinking training was carried out by the facilitator and DPL to prepare us before carrying out the actual program. The case given on this agenda concerns campus WiFi, starting with interviewing campus WiFi users to find problems and needs that arise in the field. After that, we collected all the data and discussion results into solutions into personal paperwork to be presented to all LeX participants. This series of Design thinking is essential because it will be practised in Beji village in the future.

In this pre-program Project Planning, we consulted with DPL regarding implementing the work program closer to D-Day. We discussed implementing the main work program, namely making business profile videos and several other programs that will be carried out simultaneously with LeX activities. Apart from that, we also signed a statement letter by the members and Lecturers.

## **3. Day 3: Design Thinking Recap**

At the start of Design Thinking, we explained possible problems that might arise in the Tempe Beji Village community with some information we obtained from the Facilitator and DPL. We also prepare interview questions that will be asked when we come to the location another day. This activity is essential so that we have the provisions to explore the real problems in the Tempe Producer community in Beji Village.

On this friendly agenda, we got to know representatives from the Beji Village management for the first time. We came to the Beji Village Hall to attend speeches and provide information about the Tempe Industry there. The management of the Tempe Beji Tourism Village provided this information. We also conveyed the shared hopes we hope to achieve while carrying out this program.

## **4. Day 4: Conducting An Interview With The Owner of UMKM Tempeh-Ibu Siti**

In this interview activity, we, together with DPL and other LeX participants, conducted a question and answer session with one of the owners of tempeh MSMEs in Beji village, namely Mrs. Siti. We dig deeper into the tempeh business and collect as much data as possible, such as data regarding business history, owner experience, daily operations, production processes, obstacles, vision, and aspirations. The interview involves all members, some of whom act as questioners, recorders, and note-takers. Apart from that, we were also accompanied by DPL and other LeX participants. The questions we have created previously are asked with some development.

To gain deeper information about the tempeh business, we also interviewed another tempeh MSME owner, Mrs. Fika. In this interview activity, we conducted a question-and-answer session with Mrs. Fika, her husband, and several workers who were directly involved in the daily operations of the Tempe factory. We dig deeper into the Tempe business and collect as much data as possible, such as data regarding business history, owner experience, daily operations, production processes,

obstacles, vision and aspirations. The interview involves all members, some of whom act as questioners, recorders, and note-takers. Apart from that, we were also accompanied by DPL and other LeX participants. The questions we created earlier are asked with some necessary development.

#### **5. Day 5: Tempeh Factory Observation**

Observed the Tempeh-making place in Beji Village, starting from the burning room where the soya boiling process is carried out, then seeing the condition of the soaking container and the tables used as fermentation containers. We did this to see for ourselves the state of the tempeh-making place in terms of work safety and sanitation to look for potential problems.

Helped to move and distribute the Tempeh at Karangploso Market along with the workers; by doing this, we became closer and sympathised with the owners of the Tempe company in Beji Village.

#### **6. Day 6: Presentation of Findings of Problems, Needs, and Solutions**

The Team (lecturers and students) discussed and categorized categories from the observations and interviews to find solutions to the problems faced by the owners of tempeh production companies in Beji Village. Persona is a producer profile that is packaged like a poster. In addition to containing profiles, the charms also have problems faced by producers, producer needs, and solutions that can be realised. We analysed and categorized the observations and interviews to create a Persona of the tempeh production business owner to be presented during the gallery walk.

#### **7. Day 7: Making Tempeh Batik With Residents and Organisers oOrganizersllage**

Tempe batik is batik with an innovative motif/pattern in the form of Tempeh typical of Beji Village. We made batik with canting and printing techniques with tempeh motifs as a form of approach to the residents and administrators of Beji Village. In addition, this activity also aims to introduce batik to LeX participants. We took a group photo with the residents and Tempe producers and gave a short speech to the residents and Tempe producers in Beji Village to express our gratitude.

#### **8. Day 8: Discussion and Presentation of Ideas as Solutions To Problems**

We discussed and presented the problems. Persona, data and solutions to tempeh producers' issues in Beji Village. Based on our collected data, we debated and designed solutions to the issues faced by tempeh producers in Beji Village.

#### **9. Day 9: Shopping For Prototype**

We visited two supermarkets to buy materials and tools needed for prototyping, such as cardboard, hot glue, mosquito nets, etc. A prototype is an example/early model created as a test of a concept/idea that has been introduced previously. The best three pictures were selected, and three prototypes were made. The three prototypes are a furnace cover net, tempeh mould/cutter, and poster. As the first prototype, the furnace cover net was made from mosquito nets and sacks that were cut lengthways and then sewn on the edges of the net. The sack was used as a rope holder. The prototype tempeh mould/cutter was made from cardboard and aluminium foil as a wrapper, which

is likened to stainless steel. The mould is shaped like a cookie cutter but rectangular. The poster contains information about the impact and solution of untreated tempeh water waste. The poster was created with the help of the Canva platform - and printed as additional information.

#### **10. Presentation of Prototype Results to Tempe Producers and Tempe Village Management**

The tempeh producers from Beji Village visited us, and we explained how our prototypes work, including the cover net prototype, tempeh mould, and poster. From the presentation results, the tempeh producers provided feedback that we will consider improving the prototype in the future. In addition, a photo session with the tempeh producers was also one of the mandatory agendas after the presentation.

The prototype improvement process was conducted after the presentation. This activity aims to improve the prototype after getting input and suggestions from Tempe producers, tempe village administrators, and facilitators from SP and UMM. In addition, we also prepared for the gallery walk, such as table arrangements, installation of our working papers on the blackboard, and others.

#### **11. Day 11: Gallery Walk Prototype**

Gallery Walk is an exhibition-like activity where prototypes that have been made are displayed. If visitors come, we explain the background of the formation of the prototype, its benefits and its purpose. Vice Rector I opened the Gallery Walk activity, Prof. Dr Syamsul Arifin, M.Si, by giving a few remarks. The core process of this Gallery Walk is that visitors and tempeh producers walk to various booths to see and observe the prototypes.

Our prototype was handed over to Mrs Fika as a symbol of gratitude, and she remembered to try the prototype. The furnace cover net was attempted to be installed, and the results were entirely satisfactory.

#### **12. Day 12: Discussion with Producers Regarding the Creation of a Business Profile Video**

We discussed some of the ideas/concepts we had and shared them with Mrs Fika. Mrs Fika also shared some of her ideas for the concept of her business profile video. We also looked for ideas through videos on YouTube and the internet. After yesterday's discussion with the tempeh producer (Mrs Fika), we had another meeting with the entire formation. The profile video conceptualization compiles the parts that Mrs Fika will deliver. We hope the profile video can help promote Mrs Fika's tempeh business to be more advanced and developed.

## **CONCLUSION**

MSMEs need reasonable and sustainable assistance to grow and develop. Support from the Government, financial institutions, and non-governmental organisations overcome their challenges. Learning Express (LeX) is a 12-day overseas programme that equips students with the DesignThinking mindset in a social innovation context. Mentoring is critical to the growth and sustainability of small and medium-sized businesses. With proper support, MSMEs can become the economy's main driver

and create jobs. Mentoring Tempeh-Ibu Siti MSMEs is critical to the growth and sustainability of small and medium businesses. With the proper support, MSMEs can become a vital driver of the economy and create jobs.

#### **ACKNOWLEDGMENTS**

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#### **REFERENCES**

- <https://www.umm.ac.id/id/berita/bersama-kampus-singapura-mahasiswa-umm-bikinenam-prototipe-produksi-tempe.html>
- <https://rejogja.republika.co.id/berita/s1bawt291/gaet-kampus-singapura-umm-ciptakanprototipe-produksi-tempe>
- [https://jurnal.republika.co.id/posts/237315/mahasiswa-umm-dan-sp-kolaborasi\\_buatprototipe-alat-pondukung-produksi-tempe](https://jurnal.republika.co.id/posts/237315/mahasiswa-umm-dan-sp-kolaborasi_buatprototipe-alat-pondukung-produksi-tempe)