

A STUDY ON LEARNING TO COOK: RWANDA

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Executive summary

Overview

This report presents the findings from a study conducted to explore how people living in urban and peri-urban areas of Kigali, Rwanda learn to cook. Through a mix of one-to-one interviews and focus group discussions, this study aimed to fully examine how and where people learn their cooking skills, what cooking practices they rely on, the differences in cooking between generations, their perceptions of the future of cooking, and what fuels and technologies they adopt during cooking and why.

The research consisted of the following:

- **Open-ended interviews** conducted in 10 diverse households living in peri-urban and urban areas across Kigali City. The interviews were conducted with the aim to fully understand how households in peri-urban and urban areas in Kigali learn to cook, what their cooking practices are, the composition of their cooking space, fuels and cooking technologies they are engaged with, and the cooking techniques they adopt.
- **Focus group discussions (FGDs)** conducted to obtain information about participants' stories of how they learnt to cook, their cooking practices and their perceptions of the future of cooking and/or eating. Three different FGDs were conducted:
 - A FGD with women of different ages and socio-economic status to determine whether learning to cook has changed across generations;
 - A FGD with men who have migrated to urban areas for work/studies and live alone or in shared spaces away from their family to understand how they manage to cook while away from their families, what they usually cook and what cooking practices they rely on;
 - A FGD with food celebrities and cooking personas in Rwanda to understand the contents, reach and methods that cooking vlogs have and the audiences that they attract, their motivation to engage in food vlogging activities/professional cooking careers, their ambitions and aspirations.

Key findings

How do people learn to cook?

- The majority of participants learnt to cook at home by observing their parents, siblings, relatives or house helpers while they were cooking.
- Women generally start learning to cook at an early age between 7 – 12 years old as they are the most responsible for cooking in their family. However, men tend to start learning to cook at an older age, either because they live alone after they have moved away from their families or for the purpose to earn income in the future as professional cooks.
- The learning to cook and cooking practices vary depending on the generation. While basic skills across all generations were taught at home from parents, additional sources of learning to cook include digital platforms such as YouTube and social media such as Facebook, WhatsApp and Twitter among the younger generation.
- Moreover, traditional cooking involved boiling a mixture of food items and using less spices, whereas nowadays frying food and cooking a variety of dishes are the most preferred practices.

Common dishes taught and mastered

- The most cooked dishes in households are maize meal (kawunga), cassava paste (ugali) and rice as staple foods. Some other staples include green banana and Irish potatoes. Meanwhile, beans with vegetables stew, cassava leaves, peanut sauce and meat stew are the common second dishes to take with staple foods. As for breakfast, it typically consists of igikoma (porridge), milk tea or coffee taken with bread or mandazi (doughnut).
- All those dishes were mastered at different age stages. At a young age, cooking activities consist of boiling some food items mostly rice and a dish of mixed potatoes and beans or vegetables. Meanwhile, advanced cooking skills such as frying, grilling or making barbecue and cooking meat and fish are taught to children at an older age. The laborious dishes such as maize meal and cassava paste are also mastered as the children get older.

Common cooking techniques and ‘cooking tricks’

- Different cooking techniques reported in this study include chopping vegetables, peeling tubers and roots, pounding or grinding cassava and peanuts, boiling, mixing and stirring foods, frying and stewing.
- Other common techniques and practices are also adopted for some food items that require a long time to cook such as old beans, meat and cassava leaves. For example, adding “gikukuru” salt – a kind of black rock salt – is believed to speed up the boiling of these food items, or cooking them in bulk to then reheat them the following days.
- In some other cases, precooked beans are preferred by most of the young participants who live in shared spaces because purchasing precooked beans at local shops is convenient and they save cooking time.

Perception about modern alternative cooking/eating

- Traditionally, Rwandan families like to share a meal with family members and people prefer to eat at their home rather than eating in a restaurant. This preference is driven by the cultural norms and economic and health benefits associated with home-cooked meals. E.g. cooking at home is perceived to be cheaper and healthier than many restaurants’ meals. However, some people may occasionally eat out because they cannot go home for a meal while at work.
- The stove and fuel stacking is a common practice in many urban and peri-urban households. Liquefied petroleum gas (LPG) is mostly used among the middle and high income households, while charcoal is sometimes used to cook foods that require a long time to cook. Occasionally, electric cooking appliances such as a rice cooker, a microwave and a juicer are also used to cook meals. Whereas low income households in peri-urban areas typically use firewood on a three-stone fire for cooking. They resort to charcoal in rainy seasons when dry firewood might not be easily available.
- The drivers to transition to modern cooking energy include cleanliness, convenience and time saving as well as increased income for the middle and high income households that can now afford the LPG fuel.
- Participants believe that in the future, many people will shift from charcoal to LPG and adopt electric cooking appliances. This will depend on the government’s policy to reduce solid biomass consumption, economic growth, increased awareness of modern cooking energies and the lack of time spent for cooking. This will also contribute to an upsurge of affordable fast food restaurants to allow people to save time on eating.

Cooking motivations and aspirations

- As for their motivations for cooking and their cooking aspirations, the majority of participants wish to improve their cooking skills, to adopt improved cooking stoves and modern cooking appliances which would help them to cook a variety of dishes for their families or to start their own food businesses.
- Some other participants would like to contribute to training the youth and to raise awareness of the opportunities available in the culinary industry in Rwanda. One participant has a dream to write a cookbook about Rwandan cuisine.

Key recommendations

Recommendation #1: Raising awareness of the benefits of teaching children how to cook.

It is noted that frequent and early involvement of children at home improves their positive attitudes towards cooking and is largely associated with a healthy diet.

Recommendation #2: Cooking programmes in schools should be increased in the country.

Adding cooking courses to primary school curriculum will not only provide young students with cooking skills at an early age, but also will help them increase their knowledge about healthy nutrition diet. Providing short and long time cooking programmes to those who were not able to get cooking skills at an early age would also allow them to acquire more advanced cooking abilities.

Recommendation #3: Parents should find time such as on weekends or holidays to teach their children some basic cooking skills at home.

This can be a good opportunity to keep the parent-offspring knowledge transfer and to increase the family bonding time. It can also be a source of motivation for the children to keep improving their cooking skills in the future as a way of keeping the family tradition.

Recommendation #4: Promote the adoption of modern cooking fuels, appliances and efficient cooking techniques.

Affordability plays a key role in adopting modern cooking fuels. Strategies and sound policies should be put in place to increase the adoption clean cooking technologies such as LPG, improved cooking stoves and energy efficiency appliances such as electric pressure cooker (EPC). Food celebrities and cooking persona such as vloggers and professional cooks could play an important role in raising awareness and promoting the adoption of the modern cooking energy. Through the influence they have on their viewers, they could also encourage people to use efficient cooking techniques so that they can transition to cooking with modern fuels instead of relying on charcoal and firewood.

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1. Introduction

1.1 Background of the study

Many think the new generation lack cooking skills compared to the previous generations. Several cited factors include the busyness and the demands of today's lifestyle, the readily available choice of ready to eat meals provided by fast food restaurants, food deliveries, and pre-cooked meals instead of cooking from scratch. These conveniences are seen as what influence the new generation not to bother to acquire cooking skills (e.g. [de A. Costa et al., 2007](#)). Another major contributing factor that affects the cooking skills of the new generation is that most of their mothers were busy working during the children's upbringing and they did not have time to teach the new generation how to cook. It has been shown that parents' dietary practices and behaviours heavily impact on their children's future dietary practices (e.g. [Mahmood et al., 2021](#)) and both father's and mother's home meal cooking impact on the likelihood of the children cooking home meals in the future ([De Backer, 2013](#)).

In Africa, mothers are considered to be the primary transmitters of cooking skills, thus women's labour participation greatly affects the transmission of cooking skills to the next generation. In Rwanda, before the internet era, cooking was a valuable life skill that was good to pass down to the next generations, especially the young girls. As it was also an essential skill to learn to prepare young women to become future good wives and mothers. So the mothers would work during the day and go back home in the evening where they would cook dinner at night and the weekend family meals or at least supervise the cooking activities in the kitchen. At that time, many families did not own TV, so during the night, the younger generation would sit around the fire talking and telling stories as well as watching and helping their mothers cook. As the children grew up they would be tasked to do some cooking for the family. This way it was easy for them to learn how to cook from a young age.

After the introduction of television and the internet, as well as other new technologies such as smartphones, the younger generations are not cooking as much as the older generations. As women have been increasingly entering the workforce, time became scarce and most working mothers have hectic schedules to earn more money to meet the high costs of today's living. The workload does not allow them to have enough time to teach their children how to cook. Furthermore, as the economic status increases, more and more families can afford to hire cheap house help (a house boy or a house maid) and therefore do not prioritise teaching their children how to cook. In those families, children go to school, come back home after classes and spend much of their time watching TV or playing games on their phones. It is when these children grow up and move away from their home for study or work reasons, often to peri-urban or urban areas, that they may need to cook for themselves. This is when self-teaching how to cook using the internet or by taking cooking classes becomes instrumental for young people entering adulthood.

There have been very few studies in Rwanda examining people's cooking and eating habits to date ([MECS & Energy4Impact, 2022](#)) and virtually none that have explored how people learn to cook. Yet, knowing how different people learn their cooking skills, how they make decisions about what to cook and how, or choices on modern alternatives to cooking and eating, is instrumental in informing transitions to cleaner cooking in Rwanda. This is particularly relevant in urban and peri-urban households where opportunities for transitions to modern

energy for cooking are greatest due to the access to energy supply chains and the well-functioning electrical grid infrastructure ([MECS, 2021](#)).

1.2 Learning to cook: overview

Knowing how to prepare and cook food is an important life skill. It should be encouraged because research showed that better cooking skills and more frequent home cooking have repeatedly been associated with a healthier diet in the short and long term ([Hartmann et al., 2013](#)). Whereas the increasing consumption of many convenience foods, such as ready meals, is mainly associated with lack of cooking skills and the lack of time due to change in lifestyle. Research also shows that learning how to cook at younger ages is associated with positive dietary outcomes in adulthood and the children retain these skills from adolescence to adulthood ([Lavelle et al., 2016](#)). However, in the modern society, cooking skills seem to be declining among the youth since the successful knowledge transfers of cooking skills from parents to their offspring are no longer guaranteed. This could become even more challenging in the future ([Lyon et al., 2011](#); [Lavelle et al., 2016](#)).

Despite the importance of cooking for a healthy diet and well-being, cooking skills may also contribute to adoption of modern cooking alternatives. In developing countries, home cooking practice is included in households' daily activities with many households still heavily relying on solid biomass for cooking. This causes indoor air pollution resulting in various respiratory diseases and premature deaths as well as deforestation. Therefore it is also important to understand how people acquire cooking skills, what cooking practices they rely on and their choices of food and cooking fuels to design effective interventions to disseminate modern cooking alternatives ([Quinn et al., 2018](#)).

According to research, mothers are consistently reported as the primary source among various ways for the acquisition of cooking skills. It is shown that when comparing cooking skills and food practices among women of different generations, there are only marginal differences in food preparation, the use of ingredients and the style of cooking undertaken at home which are merely attributed to the lifestyle factors rather than any food preparation or cooking skills ([Lyon et al., 2011](#)). Self-learning by trial and error, cookbooks, and social media and recipe websites were also found to be important sources for developing cooking skills; however, formal cooking classes at school are rarely stated ([Wolfson et al., 2017](#), [Seeley et al., 2010](#)).

It is often assumed that the young generation lack cooking skills due to the decline in the intergenerational transmission of basic cooking skills at home because of daily busy lives and time scarcity ([Lyon et al., 2011](#)) and cooking classes are no longer formally taught in schools. For instance, in Rwanda, from 1977 until early 90s, the primary school programme was 8-years-long, and the students in the final 2 years focused on art and rural education where they had cooking classes in their educational curriculum ([Gakuba, 1991](#)). This provided them with knowledge on nutrition and advanced cooking skills such as how to make tofu from soybeans or mayonnaise from chicken eggs, and other advanced cooking techniques before graduating from primary school.

Cooking skills may help people to meet nutrition guidelines in their daily nutrition supply and allow them to make healthier food choices. Improving children's exposure to a variety of food items and being involved in the cooking process can improve their willingness to try different foods ([Dean et al., 2022](#)). It is therefore essential to encourage and teach children at a young age how to cook so as to ensure they eat a balanced and healthy diet.

2. Study aims and objectives

2.1 Research objectives

This study seeks to understand how people living in urban and peri-urban areas of Kigali learn to cook. In particular, it explores the dynamics of learning between family members, genders and age groups (e.g. the youth and the elderly). The study is based on a hypothesis that the acquisition of cooking skills has largely moved away from the family/household kitchen space – i.e., from mother to daughter or to son – with younger generations favouring learning to cook via digital platforms, such as YouTube and other social media platforms.

Through a mixture of one-to-one interviews and focus group discussions, this study aims to fully examine how and where people learn their cooking skills, what cooking practices they rely on, the differences in cooking between generations; their perceptions of the future of cooking, and what fuels and technologies they adopt during cooking and why.

2.2 Research questions

The guiding research questions for this study are as follows:

1. When and how do individuals learn to cook?
 - From whom?
 - Alternatively, from what digital and social media platforms?
2. If online media is an effective channel, why does it hold such appeal?
3. Are there different ways of cooking and learning to cook depending on generations?
 - What are they in Rwanda?
 - What makes them popular?
4. What dishes are taught and mastered?
 - What techniques or tricks in cooking do individuals adopt?
 - Are these dishes/techniques mastered at different life stages?
 - If so- why?
5. What influences people's long-term cooking practices?
6. How do people feel about modern alternatives to cooking/eating?
 - How do cooking and meal choices feed into perceptions of cultural identity, relationships?
 - What have been the key drivers for transitioning to modern alternatives of eating?
 - Do they prefer ordering ready meals or cooking in bulk for several days ahead?
7. What ambitions do people have for their cooking ability?
 - How are their aspirations formed/influenced?
 - How does it differ across age groups and gender?
8. What does the future of cooking look like?
9. What does modern energy look like to urbanites in Rwanda?
 - How will they learn to adapt to this transition?
10. What have been the key drivers for transitioning to modern energy to date, across different groups?

3. Research methodology

3.1 Methodological overview

The research was conducted using qualitative methods which involved open-ended interviews and focus group discussions to explore how people learn to cook.

3.1.1. Open-ended interviews

In order to fully understand how people learn to cook in urban and peri-urban areas in Kigali, this study conducted one-to-one interviews in 10 households across Kigali. This approach aimed to capture the overall picture of their cooking practices; the composition and organisation of their cooking facilities; fuels and technologies they are engaging with, as well as the techniques employed.

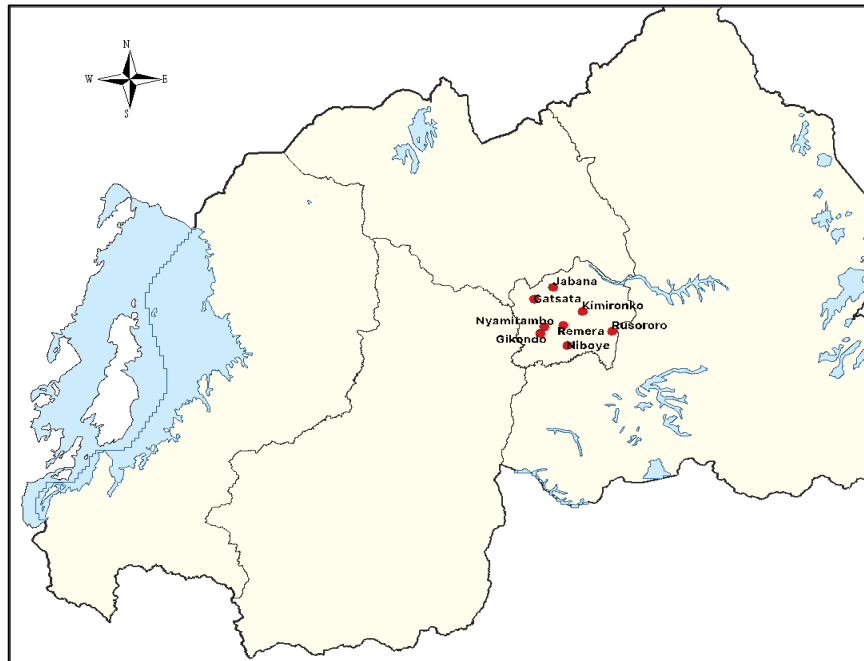
A questionnaire for the interview guide was developed and expanded based on the research key questions which were expanded to 21 questions with a few sub-questions each. This guide was designed to allow participants to provide more details about their cooking experiences and practices. The complete interview guide for the study is presented in Appendix 1.

The recruitment of 10 households consisted of a diversity of participants, including women and men of different ages, students, native urbanist, rural to urban migrants, refugee households, and people with disabilities. Interview locations were chosen from different geographical areas in Kigali, including Nyamirambo (a Muslim neighbourhood) and Kimironko (a commercial centre) - both urban; Jabana (North of Kigali City, a commercial centre on the main transit route to Uganda) and Rusororo (East of Kigali City, on the main transit route to Tanzania) - both peri-urban. The geographical sample was selected in order to understand the diversity in cooking practices in as diverse a group of urban and peri-urban population as possible. Study locations of all the interview participants are shown in Table 1 and their approximate locations can be seen in Figure 1 below.

Table 1. Study locations of interview participants

Province	District	Sector	Urbanization class	Number of households
Kigali City	Nyarugenge	Nyamirambo	Urban	1
	Gasabo	Jabana	Peri-urban	2
		Gatsata	Peri-urban	1
		Kimironko	Urban	2
		Rusororo	Peri-urban	1
	Kicukiro	Niboye	Urban	1
		Remera	Urban	1
		Gikondo	Urban	1

Figure 1. Approximate locations of interview participants



3.1.2 Focus group discussions

Focus group discussions (FGDs) are usually conducted to gain an in-depth understanding of social issues and to obtain data from a purposely selected groups of individuals rather than from a statistically representative sample of a broader population ([Van Eeuwijk & Angehrn, 2017](#)). It is suggested that participants of FGDs should share similar characteristics such as gender, age range, and social class background to fully engage in a group discussion. FGDs in this study consisted of open-ended questions designed to elicit information about participants' stories of how they learnt to cook, their cooking practices and their perceptions of the future of cooking and/or eating.

The questionnaire used for the FGDs was informed by the completion of the 10 open-ended interviews which have helped to identify any other relevant areas for discussion or questions to explore with the FGD participants. The complete guide for FGDs can be found in Appendix 2. FGD participants were selected through snowball sampling whereby open-ended interview participants would be asked to recommend FGD participants who met certain criteria. In addition, the research team approached participants via email or WhatsApp invitations, particularly in the recruitment of cooking bloggers/vloggers or other cooking personas. All the FGDs were conducted in accessible meeting rooms except one FGD which was scheduled to be conducted outdoors and was suddenly held at one participant's house due to unfavourable weather conditions.

Three different FGD guides were developed and expanded for the following three major FGDs:

3.1.2.1 Women FGDs

This category aimed to determine whether learning to cook has changed across generations. The category consisted of 3 women FGDs which represented different age groups and socio-economic categories, classified based on the tragic history of the genocide against the Tutsi which Rwanda experienced in 1994 and which has disrupted the cycle of knowledge transfer from parents to children.

The first group of women FGD consisted of 8 middle-aged women in a peri-urban area, whose age ranged between 36 – 51 years old. They are mothers with primary or no education level. During their childhood, they would spend much time with their parents, especially their mothers who were responsible for cooking for their families. The second group consisted of 6 master students whose age ranged between 25 – 35 years old. This generation was significantly affected by the consequences of the genocide against the Tutsi where many lost their parents at an early age. They passed through difficult time of social and economic hardship during their childhood. The third group consisted of 10 young women whose age varied between 18 and 24 years, and who are doing their undergraduate studies at university. They were born when the country had significantly started to reconstruct itself socially and economically. With an increased economy, many households had access to TV and internet access was spreading across the country, especially accessible through cybercafés.

This study distinguishes two generations of women: the older generation consists of the first group whose age is above 35 years old, whereas the younger generation consists of those whose age range varies between 18 – 35 years old (i.e. the second and third group). It should be noted that the eldest participant in the women FGD is only 51 years old. No genuinely elderly women were found to be included in this study.

Figure 2: Photos showing: the peri-urban area (top left); FGD with middle aged women in peri-urban area (top right); FGD with young women aged 25 – 35 years old (bottom left); FGD with young women aged 18 – 24 years old



3.1.2.2 Men FGDs

This category included men who have migrated to urban areas for study or work and who are living alone and renting apartments outside the campus/ their workplace. The FGDs with men aimed to understand how they manage to cook while away from their families, what they usually cook and what cooking practices they rely on. The group consisted of 8 men at

undergraduate level (age between 18 – 24 years old) and 8 at master level or above (age between 25 – 35 years old).

Figure 3: FGD with young men aged 18 – 24 years old



3.1.2.3 Local vloggers and cooks/chefs

This category of FGDs aimed to understand the contents, reach and methods that cooking vlogs have and the audiences that they attract. In Rwanda, food vlogging activities are still new. Access to the internet is low and expensive and only a relatively small proportion of households have internet access at home (NISR, 2016). Currently there is an insignificant number of food vloggers. Therefore it was challenging to find enough of them for this study. To complete the study, other cooking personas such as professional cooks and cooking trainers/teachers were interviewed. At the end, the group consisted of 5 vloggers and 5 cooks/chefs. For 9 participants a one-to-one interview method was adopted either face-to-face (7 participants) or by phone call (2 participants), while for the remaining 1 participant an online questionnaire was sent by email through which they submitted their responses.

Figure 4: (Left) One of the vloggers whose YouTube channel is **Hot250 TV** (right side of the photo). (Right) One of the cooks



3.2 Data collection

The data from interviews and FGDs were collected by a team of three researchers. One of the researchers conducted one-to-one interviews with participants and helped facilitate the FGDs; the second researcher gathered, recorded and wrote down the feedback from the participants while the third researcher was shooting videos and taking photos which were used to develop the vignettes (this was done in selected interviews and FGDs, rather than all of them).

Prior to taking part in any of the research activities, participants were given a short introduction about who the interviewers were, what the reasons for doing this research were, and what the interview would consist of. Participants were also briefed on the nature of the study, its aims and objectives, and they were given the option to refuse to participate if they wished. Furthermore, participants were asked whether they would consent for visual recordings (photos and videos) of themselves and/or their kitchen/household space to be used in research outputs. Oral and signed consent were then obtained from all participants to ensure high ethical standards. Researchers guaranteed to protect the integrity of participants by ensuring that their statement would be held confidentially and saved in a secured place where they would be used solely for research purposes. It was mandatory to obtain informed consent that was signed by each participant; this requirement is usually part of the study approval issued by an ethics advisory board of MECS. The participant information sheet and the consent form templates can be found in Appendix 3.

In the interview, the participants provided their background information by answering socio-demographic questions. All other questions of the questionnaire were open-ended. Participants were asked to be elaborate in answering the questions and to give examples where possible. In some cases, follow-up questions were asked additionally to the interview guide, to explore the answers in more detail. Finally, participants were given an opportunity to participate or ask questions openly. They were then thanked for their participation and offered airtime vouchers as a token compensating them for their time. All open-ended interviews lasted between 30 and 50 minutes, while FGDs lasted, on average, a little over 1h30min.

During the interviews, field notes were made by the interviewers to record important answers. Audio recordings were also used in case any ambiguities were discovered while reading the transcripts, so the researchers could listen again to the recordings and transcribe verbatim the participants' responses.

3.3 Data analysis

Qualitative content analysis was used to explore the qualitative data obtained from participants' shared experiences, understandings, engagement and feedback. The questions were divided into categories including learning to cook, cooking practices and common dishes, cooking energy, cooking aspirations, perceptions about the future of cooking and eating, and food celebrities and cooking personas in Rwanda. In some instances, descriptive analysis was used to quantify, and present the qualitative data collected. Excel spreadsheet was also used to plot tables of the analysed data.

3.4 Development of vignettes

The vignettes were developed using photo and video materials collected during interviews and FGDs (with the main focus on the former). The videos were recorded using the latest iPhone smartphones and edited by the research team. The photos were also taken using the latest

iPhone smartphones and were carefully selected and collated into a collage, accompanied by a written description, thus making them into photo stories. Both the videos and photo stories focus on how people cook and eat, their habits and practices, their stories of how they learnt to cook, the physical looks of the kitchens or cooking areas, and appliances used.

4. Findings

4.1 Participants profiles and demographics

A total of 60 participants were involved in the study and consisted of 10 participants for household interviews and 50 participants for FGDs, including 24 women and 16 men who cook, as well as 5 vloggers and 5 professional cooks. Additional 2 interviews were also conducted in 2 households but they were excluded from the study as they were test interviews. In total, 5 FGDs were conducted, each FGD consisting of 6 - 10 participants. Table 2 provides an overview of the most important characteristics of the study sample. The participants' demographic characteristics fit the study requirement. The participants included representatives of different gender and age, different social status and living situation, and various educational levels. They were recruited from across the Kigali City, with a few participants who commute to Kigali from secondary cities such as Musanze and Rwamagana.

Table 2. Demographic characteristics of the study sample

	Open-ended Interview	FGDs			
		Men	Younger women	Older women	Vloggers/chefs
<i>Number of participants [n]</i>	10	16	16	8	10
<i>Age [n (%)]</i>					
18 - 24	1 (10)	8 (50)	8 (50)	NA	NA
25 - 30	2 (20)	7 (44)	5 (31)	NA	2 (20)
31 - 35	3 (30)	1 (6)	3 (19)	NA	2 (20)
36 - 40	NA	NA	NA	5 (63)	4 (40)
41 - 45	2 (20)	NA	NA	2 (25)	1 (10)
> 46	2 (20)	NA	NA	1 (12)	1 (10)
<i>Sex [n (%)]</i>					
Male	3 (30)	16 (100)	NA	NA	6 (60)
Female	7 (70)	NA	16 (100)	8 (100)	4 (40)
<i>Education level [n (%)]</i>					
Master or above	2 (20)	8 (50)	6 (38)	NA	NA
Bachelor	2 (20)	8 (50)	8 (50)	NA	3 (30)
High school	2 (20)	NA	2 (12)	NA	5 (50)
Middle school	1 (10)	NA	NA	NA	1 (10)
Primary school	2 (20)	NA	NA	7 (88)	NA
No basic education	1 (10)	NA	NA	1 (12)	1 (10)
<i>Social Status [n (%)]</i>					
Urban migrant worker/student	6 (60)	11 (69)	9 (56)	8 (100)	8 (80)
Commuting to Kigali for work/study	1 (10)	NA	3 (19)	NA	2 (20)
Refugee	1 (10)	NA	NA	NA	NA
People with a disability	1 (10)	NA	NA	NA	NA
Other/Native urbanist/Foreign student	1 (10)	5 (31)	4 (25)	NA	NA

<i>Occupation [n (%)]</i>					
Formal Job	4 (40)	NA	NA	NA	8 (80)
Student	1 (10)	16 (100)	13 (81)	NA	1 (10)
No job/ Hustle job or part-time job	5 (50)	NA	3 (19)	8 (100)	1 (10)
<i>Have children? [n (%)]</i>					
Yes	8 (80)	2 (12)	NA	8 (100)	8 (80)
No	2 (20)	14 (88)	10 (100)	NA	2 (20)
<i>Living situation [n (%)]</i>					
Live in their family/ home	8 (80)	2 (13)	6 (38)	8 (100)	8 (80)
Live alone in rented space	2 (20)	4 (25)	5 (31)	NA	NA
Live with friends in rented shared space	NA	10 (56)	1 (6)	NA	2 (20)
Students' shared apartments	NA	1 (6)	4 (25)	NA	NA

4.2 Summary of thematic findings

Based on the study key questions, the emergent themes were identified from the qualitative data analysis and interpretation. The themes were organised into 6 categories: (1) understanding how people learn to cook, (2) generational differences in cooking practices, (3) common dishes, cooking techniques and tricks, (4) cooking energy (fuels, stoves and cooking appliances) and perception about the future of cooking and eating, (5) cooking ambitions and aspirations, (6) food celebrities and cooking personas.

4.2.1. Understanding how people learn to cook

All the participants typically cook at least 2 meals every day. The majority of them (53 out of 60) learnt how to cook from home by observing and helping their parents, older siblings, aunts or house helpers during the cooking process. They first started learning to cook at a young age when they were in primary school between 7 and 12 years old. Among them, a female YouTube vlogger reported that besides having learnt to cook at a young age from her mother, she further attended a cooking training school to advance her cooking skills. The remaining 7 participants mentioned that they learnt cooking skills at an older age by observing cooks from school, friends or neighbours from whom they would ask some guidance on cooking. Interestingly, they were all male. Three participants among them additionally used YouTube and cooking tutorials from the internet to self-teach how to cook for themselves as they were living alone after they had moved away from home for their studies. Another participant started working as a cleaner in a school, and found interest in becoming a cook. He later would volunteer to help his friend who was cooking for weddings, then decided to attend a cooking training programme and now he has become a cook for weddings and parties. Three other participants learnt how to cook by attending cooking training programmes out of the motivation to earn income as professional cooks, since opportunities to cook in hotels and restaurants were increasing.

According to most participants, online media has become an effective channel and an easy way available to learn how to cook. Participants responded that they usually use social media and digital platforms when they want to eat some special dishes which pushes them to search online how/the techniques needed to prepare them. YouTube is more appealing due to the availability of a variety of more detailed tutorials and techniques on cooking with efficiency and time saving, as well as good guidance on which ingredients are needed for a particular dish and its step by step preparation. For example, some participants responded that they use mostly YouTube to learn how to cook dishes from other countries, such as India, and to learn different

techniques to prepare various salad and fruit dishes and then adapt them to local taste and preferences.

However, participants also mentioned some challenges of using social media including the lack of adequate equipment, and language barriers as there are some food items whose names they are not familiar with or which are not available on the local market.

4.2.2. Generational cooking differences, cooking practices

4.2.2.1 *Generational differences in how people learn to cook*

Participants agree that learning to cook is different depending on the generation and the location where someone was born. Both older and younger generations in the women FGDs were taught the basic cooking skills at home by their parents. However, the younger generation often use other sources such as online media platforms like YouTube, cooking books, TV cooking programmes to learn how to cook various dishes or improve their cooking skills. For the older generation, cooking was one of the house chores when they were children. Learning to cook was a must for most first-born children in the families as they had to help their mothers take care of their young siblings, which included looking after them and cooking for them when their parents were not around. During their childhood, they would practise cooking at an early age by imitating their home cooking practices through kids' games where they would boil food items using metal boxes and broken clay pots or bake sweet potatoes in heated dirty bricks. It is when they got a bit older (typically between 6 and 12 years of age) that parents would also teach them some household activities such as cooking, washing dishes and clothes, sweeping and mopping the house, which they then grew up enjoying. In contrast, nowadays young people tend to know how to cook well compared to the older generation, as they are exposed to easy access to information which could help them to learn how to cook. However, many of the young people usually feel lazy when it comes to cooking activities or they do not know how to cook at all.

4.2.2.2 *Generational differences in cooking practices*

From the participants' responses, it has been found that the cooking practices also differ between generations. Participants in the older generation who were mostly born in rural areas reported that when they were young, food items were harvested from family farms and the cooking involved boiling food and sometimes adding butter or a small quantity of palm oil. The most common dish typically consisted of "invange", which is a mixture of various food items boiled together in one pot, such as cassava and beans, or potatoes and beans. Food items such as sweet potatoes were usually cooked unpeeled, and some traditional vegetables such as umushogoro (beans leaves), ikora (taro leaves), and ibisusa (pumpkin leaves) were added to beans. People at that age liked eating dry and hard food due to the nature of their daily activities such as farming which required spending much energy. Nowadays, both young and old generations cook the food in a similar way, most of the food items cooked are purchased from the farm markets or supermarkets and the cooking involves frying using a lot of vegetable oil. Both generations also enjoy a variety of dishes which are cooked using various ingredients and spices.

As far as cooking technologies are concerned, for the older generation firewood and three-stone fire stoves were the common fuel and cooking stove, respectively. In rural and peri-urban areas, children were responsible for collecting firewood from the forest and fetching water from water springs in the valleys. According to participants, these tasks were somewhat challenging for them, as they had to walk long distances to be able to collect enough firewood for cooking, then to go back and fetch water. Charcoal was also used for barbecue in some

urban households. The clay pots were popular cooking pots particularly in rural and peri-urban areas because they were cheap and easy to replace when broken or damaged. In contrast, charcoal and liquefied petroleum gas (LPG) are currently the most used cooking fuels, with improved stoves as the popular cooking stoves. Particularly, the younger generation in urban areas prefer to cook with LPG only because it is clean and saves cooking time. A variety of modern cooking pots are also available, such as stainless steel pots and various electric equipment (such as a rice cooker, a pressure cooker, a blender and a microwave). However, the older generation still think that the food cooked in the clay pots tastes better. The photos displayed in Figure 5 below show different cooking spaces where firewood is used for cooking on a three-stone fire, and charcoal and LPG stoves are used. Clay pots are still utilised in peri-urban households; they can be seen on the bottom right of the far left photo.

Figure 5: *Cooking with firewood on a three-stone fire (left); a charcoal stove (middle); LPG stoves (right)*



4.2.2.3 Drivers for choice of meal cooked and long-term cooking practices

As reported by the participants, the main factors influencing their long-term cooking practices include the enjoyment of cooking for the husband and children, health benefits (acquiring special nutrition diet), economic reasons (save money since home meal is cheaper than restaurant food), improving cooking skills and confidence for young women, control of dietary intake, convenience for meal time especially for those who live alone away from their families, and practicing cooking to become a cook and as a hobby to some people who enjoy cooking. The difference in the choice of meal cooked between generations is also impacted by the change in economic situation and lifestyle, the habits they grew up with, and the availability of food items. While the older generation largely consumed locally grown food items and harvested products, nowadays, younger generations are able to buy any product from the market whether locally grown or imported, as they grew up in an environment marked with different technologies and rapid economic development. Cooking practices and facilities also have improved with the advancement of technology and economic growth.

4.2.3 Common dishes, cooking techniques and tricks

4.2.3.1 Dishes taught and mastered

According to the participants' responses, the current most cooked dishes for lunch and dinner are maize meal (kawunga), cassava paste (ugali) and rice as staple foods. Some other staples include green banana and Irish potatoes. Meanwhile, beans with vegetables stew, cassava leaves, peanuts sauce and meat stew are the common second dishes to take with staple foods. As for breakfast, it typically consists of igikoma (porridge), milk tea or coffee taken with bread or mandazi (doughnut).

It is found that learning and mastering how to cook these dishes takes different stages of life. At a young age, cooking is usually limited to boiling some food items such as rice since it is

easy to measure the rice-to-water ratio, potatoes, beans and vegetables. Parents would not allow children to fry food so as to avoid fire accidents or getting burned by hot oil. As children get older, parents teach them more advanced cooking skills such as frying potatoes, cooking various types of meat and fish dishes and different kinds of stew, baking cakes, etc.

Some reasons behind the choice of most commonly cooked dishes in Rwandan households include family background and income level. The choice of dishes may also be influenced by what type of food items are more available in the region, nutrition requirements and habits. For instance, banana meal or ugali are most commonly cooked in regions where green bananas or cassava roots are grown. Family meal preference, affordability and easy availability of food items, and easy to preserve food also play a crucial role in the choice of food among urban households.

Figure 6: Fresh food items and vegetables (top left); Boiling green bananas, cassava tubers and potatoes (top right); already cooked dishes (bottom left); meal served on a plate (bottom right)



4.2.3.2 Cooking techniques and ‘tricks’ adopted

Participants reported a number of techniques and ‘tricks’ they adopt for efficient cooking. The most used cooking techniques include chopping or slicing vegetables, peeling tubers and roots, pounding or grinding peanuts and cassava, mixing and stirring foods, frying and stewing food. According to many participants, adding “gikukuru” salt¹ while boiling hard and old beans, meat or cassava leaves will not only give them a better taste but also will reduce the cooking time and therefore save cooking fuel.

¹ Gikukuru salt is a kind of black rock salt which is naturally occurring and contains a high concentration of a number of essential minerals and nutrients including sodium, chloride, sulfates, calcium, potassium, copper, iron, magnesium, and chromium. In Rwanda, gikukuru has long been used to treat various diseases owing to its various health benefits and to cook food which takes longer to cook such as beans, meat or cassava leaves.

One participant reported using a different technique to prepare a tasty and well-cooked kawunga, otherwise commonly cooked by adding maize flour and salt to boiling water and stirring until well cooked. The technique consists of mixing maize flour with cold water to make it soft like porridge, then putting it on fire and stirring until well done. Some other ingredients such as grated carrots and beets could also be added to give it a nice colour and different flavour.

For some other participants, the fastest way of cooking meat involves mixing all ingredients and spices with meat, adding vinegar and letting it marinate for a few minutes, then frying the mixture with a little oil; and adding some other ingredients such as a Maggie cube or soy sauce to make the food tasty and flavoursome.

Meanwhile, precooked beans are mostly preferred by the younger generation who live alone or in a shared space with a relative or a friend. Using precooked beans is convenient as it is affordable and saves cooking fuel and time compared to dry beans. As precooked beans are readily available from local shops, the young men and women can purchase the needed quantity anytime. However, the technique of soaking beans before cooking was not preferred among all participants due to the perception that soaking beans reduces the taste and nutrients.

Another common technique of saving cooking time and cooking fuel in Rwanda, especially for beans and cassava leaves, is to cook them in bulk, keep them in a refrigerator (for those who own it) and then reheat them over a number of days. For some households, a large quantity of meat is also cooked to be stored and reheated for about 2-3 days.

4.2.3.3 Cultural perception of meal choices

In Rwanda, traditional meals usually have cultural perceptions attached to them. Boiled food items such as cassava, taro, pumpkin, corn and beans, rukacarara (sorghum meal), unpeeled sweet potatoes, or umushogoro (beans leaves), and imvange are often regarded as traditional meals. However, many of these traditional meals are not often cooked in households today, because people think that they are not delicious. Only beans and some root tubers, such as cassava and sweet potatoes, are still favoured by many people in Rwanda. But the food cooked today does not closely follow the cultural dishes and the cooking practices are more a mixture of different cultures. As the country has developed rapidly and has expanded its connections to the world, the urban lifestyle of Kigali has seen more impact from other countries and the way people cook has also been influenced by other cuisines, such as rice pilau and curry recipes from India; deep fried food, burgers, pasta and pizza from the Western cuisine; and kawunga and chapati from neighbouring countries.

4.2.4 Cooking energy and perception about the future of cooking

4.2.4.1 Perception about modern alternatives of cooking/eating

Traditionally, Rwandan families like to share a meal with family and people prefer to eat at their home rather than eating in a restaurant. Sharing a family meal is a cultural and a family bonding time. Cooking is something they like and enjoy doing. Therefore preparing food for the family, especially wives for husbands and children, is what influences many people's long-term cooking practices and drives the need for additional skills to prepare delicious food for a variety of dishes.

Additionally, there was a strong perception among all the participants that cooking at home was less expensive than eating at restaurants. Participants cited cooking at home as a way to save money and to avoid unhealthy or unsanitary practices in restaurants. For example, the working class who are not able to go home for a meal may occasionally eat out in restaurants.

However, many of them would rather buy some snacks such as mandazi, bread and milk or juice from shops mainly because they do not trust the food quality of average restaurants in terms of cleanliness and food hygiene (for example, some participants reported to have suffered stomach ache after eating in those restaurants), and they cannot afford to eat in nice restaurants.

4.2.4.2 Current cooking energy situation

In Rwanda, the stove and fuel stacking is a pervasive practice in many urban and peri-urban households where the cooking fuel choices depend on the size of the family, location, income level, education, and the age and gender of the head of the household.

In urban areas, large size and middle or high income families predominantly use both LPG and charcoal. LPG is used as primary cooking fuel while charcoal is sometimes used to cook foods that require a long time to cook such as beans and cassava leaves. And sometimes charcoal becomes a falling back fuel when the LPG is used up. Moreover, many families who have untrained house helpers often allow them to use charcoal as it is perceived to be more affordable and safer than using LPG, and it is easy to buy in small quantities which they can afford. Some middle and high income households also use several electric cooking appliances such as a rice cooker, an electric oven, a juicer, a kettle and a blender. Meanwhile, households with fewer members or young men and women who live alone or with a friend, prefer to cook with only LPG because it is quicker, cleaner and requires a small space. For example, one participant had a gas stove placed in the corner of a living room; another participant used a small portable gas cylinder integrated with a burner on top.

Figure 7: Photos showing an LPG stove inside the living room (left) and one burner LPG cylinder (right)



In peri-urban areas, most households have lower income and they use the three-stones stove and firewood as the main cooking fuel which they collect for free from the forest near where they live. However, they would also use charcoal for cooking especially during the rainy season when it becomes challenging to collect firewood. Many of those poor households do not own a kitchen. They usually cook outside in front of the house, and when it rains they either move the charcoal stove inside the room or may stop cooking and wait until the rain stops. Some other households have an outdoor small kitchen room which lacks proper ventilation and may

cause health problems due to air pollution. One participant particularly reported always getting a headache and itchy eyes due to smoke inhalation from firewood.

4.2.4.3 Key drivers for transitioning to modern energy

From the open-ended interviews and FGDs, the following key drivers for transitioning to modern energy for cooking were highlighted:

** Affordability and cleanliness*

One participant reported that when she grew up, her family used sawdust or coffee husk to cook which were cheaper but produced a lot of smoke and high heat that damaged the cooking pots. Her family then switched to firewood and charcoal. When she started her own family, she was using charcoal, but now she has shifted to LPG and electricity because these fuels are cleaner despite being more expensive. Most young participants, especially men, stressed on how they do not like to cook on charcoal because of how long they struggle to light the fire, and the problem of ash it produces they have to deal with, coupled with washing the charcoal residues on pots and cleaning the kitchen area. That is the reason why they mostly switched to LPG fuel after moving away from home. With their current income, they however use a small gas cylinder with one burner because it is what they can afford.

Nonetheless, despite LPG being the clear preference by many participants for its cleanliness, its affordability is still a challenge due to the frequent price fluctuations. Some participants reported returning to cook mainly on charcoal because they can no longer afford LPG, while other participants prefer to use LPG in the evenings and mornings for quick cooking or heating, but use charcoal for the rest of the cooking.

** Increase of households' income level*

Shifting to clean cooking fuels also depends on the income level of households. Lower income households typically use firewood, while middle and high income households tend to move away from charcoal as a primary fuel to other clean fuels such as LPG and electricity. For example, people who own a nice house feel the need to upgrade the kitchen and to use cleaner cooking fuels and electric cooking appliances such as blender, rice cooker, microwave and fridge.

** Safety awareness*

According to participants, there was a time when people were reluctant to use LPG due to its safety concern. But now with the availability of safety regulators to monitor gas consumption or to detect any gas leak, they are familiar with the LPG technology and feel safe to use it.

** Convenience and time saving*

Convenience and time saving are common drivers for urban households to use LPG. Many university students and workers who live alone in rented spaces cannot afford to spend long hours on cooking activities. They reported that using LPG requires only a small kitchen space and allows them to cook faster and save time. With LPG they are able to adjust the intensity of the flame which gives them the flexibility to cook a variety of dishes at different speeds. In addition, the LPG cylinders are easily accessible and available in different sizes from many local shops and delivered to the houses. This makes the cylinder refilling process quick and convenient.

4.2.4.4 How to adapt to modern energy transition

Participants were further asked how they will learn to adapt to transition to modern energy and they stated many ways in which this can be done:

- Increased awareness and training for using cleaner fuels, stoves and appliances. This will change some beliefs around cooking fuels and old mindset or perceptions about modern energy. For example, the older generation still believe that modern cooking technologies such as LPG or electric pressure cookers are for urban rich people. This mindset is often associated with the lack of knowledge and information about different choices and options for cleaner cooking fuels and stoves available such as small LPG cylinders which can be adopted by low and middle income households.
- Reduce and regulate the price of clean cooking fuels such as LPG and electricity to make them affordable to many users through government incentives such as subsidies to the poor and low income families, tax reduction or exemption on improved cooking stoves and fuels, and cooking equipment and appliances.
- As experience has shown, many government's initiatives for households' development have been well adopted and very successful in changing the lives of people. E.g. The "Bye bye Nyakatsi" initiative which has improved the poor families' dwelling conditions from living in grass-thatched huts to mud brick houses with metal roof sheets ([Global Press Journal, 2012](#)). Hence, creating clean cooking initiatives like "gas for every Rwandan household" with increased availability of alternative fuels which are very competitive compared to traditional fuels would help many people transition to modern cooking energy.
- Providing flexibility in payment such as paying in small instalments or PAYGO models can allow even the poor families to use modern fuels and stoves.
- Ensure the cooking stoves and modern fuels or appliances that enter in the market meet the standards in safety, quality, energy efficiency and good performance.

4.2.4.5 Perception about the future of cooking

The participants' perception about the future of cooking varies across the board. According to some participants, the cooking fuel use is gradually changing from firewood to charcoal and LPG and soon to electric cooking appliances. These changes will be accelerated by some factors such as the government policy to reduce solid biomass consumption, economic growth, increased awareness of various benefits of adopting clean cooking energy and gradual scarcity of time spent for cooking. However, some other participants believe that solid biomass use will always be predominant until the LPG becomes relatively affordable. They understand that LPG is more convenient, clean and efficient, but more expensive than charcoal and firewood.

The cooking practices and techniques have increasingly changed and will keep evolving, mostly focusing on the ways and time required to cook food, equipment and spices used. To save time, many households will adopt cooking food in bulk and then reheat later. Presumably, this comes with a wider availability of fridges and the ability of people to afford them. In addition, the modern alternative eating in restaurants will progressively become popular with technology development, rising income levels and increasing perception of time poverty which may incite the preference of convenience foods over home cooking. Restaurant businesses will become more competitive and affordable, and they will provide rich menus with a variety of dishes and services such as phone calls or internet ordering food and rapid home food delivery services. This will allow many people to eat out due to the availability of many food choices and the need to eat within a short time in order to save time and money on grocery shopping and cooking meals. However, many participants, especially men, believe that home cooking will always be a very important activity for the family due to cultural significance and financial reasons for cooking at home. For instance, all single men in FGDs hope to continue eating home-cooked meals in their own families once they get married. They reported that they still attach high importance on cooking skills as a major criterion on their checklist for dating a potential future wife.

According to participants, nowadays people do not value learning to cook and parents don't have time to teach cooking skills to their children. This will be more challenging for them in the future. The time spent with children or on cooking has decreased with employment status particularly for women employment while lower income is associated with increased time spent cooking. Currently many middle and high income households in Rwanda depend on house helpers for cooking and other household chores, this will be more challenging in the future since finding qualified house helpers (house boy or house maid) will be hard and hiring one becomes more and more expensive. It is therefore essential that all genders, especially young boys and girls should learn to cook as knowing how to cook is a basic survival skill. Before, cooking activities were considered to be women's tasks but this mindset that women should be the ones to cook at home is also gradually changing due to gender equality. Some parents still teach their children (regardless of the gender) how to cook for fear that someday the children will grow and move away from home to study or work, and they may struggle to survive because they will not know how to cook. Knowing how to cook can also be a source of income for men and women. For example, young people are learning to cook in order to become chefs because professional cooks are currently in high demand for employment. This comes with the increased number of restaurants and hotels in the country.

4.2.5 Cooking ambitions and aspirations

When participants were asked what ambitions they had for their cooking ability, improving their cooking skills was the recurring response. Some participants particularly wish to get in-person training as they do not get efficient results on digital platforms such as YouTube. Many female participants aspire to increase their cooking abilities to be able to cook for their families and guests, as well as to use the cooking skills to start food businesses. This will not only help them improve their confidence and healthy diet but it will also allow them to earn some income. These sentiments are demonstrated in the following quotes from interview and FGD participants:

“I would like to increase my skills in cooking vegetables and meat sauce, which are my favourite dishes.” (Woman aged 20, FGD with young women)

“I wish to learn how to cook other modern food like European dishes or be able to make pizza or snacks such as chapati and mandazi so that I could use them in case we have guests.” (Woman aged 34, interview 4)

“Increasing my cooking skills would help me to start small food businesses such as making and selling juice and tofu and being able to prepare a variety of nutritious food for my family.” (Woman aged 37, FGD with middle aged women)

Participants who do not own a kitchen room in peri-urban areas usually cook outside in front of the house, which is often challenging especially when it is raining. Those who live alone in urban areas have small space and no kitchen room. They all aspire to have a separate kitchen space with modern equipment such as improved stoves for peri-urban households, fridge or electric cooking appliances for those living alone in urban areas. This is reflected in this quote from a male FGD participant:

“I would like to own a modern kitchen with cooking equipment such as a convenient table to prepare food items, an adequate and improved stove (hopefully a big LPG stove) and a clean kitchen room.” (Man aged 30, FGD with men)

One particular participant in a peri-urban area vowed to buy an improved firewood stove called “*Canarumwe*” which she saw at her friend’s house. According to her, the stove saves the amount of firewood used, and would alleviate her burden of collecting a lot of firewood from

forests. In addition, she always gets a headache and itchy eyes from smoke inhalation. This stove would be beneficial to her and her family's health as it produces less harmful smoke.

“Cooking with an improved stove would reduce the health issues I have due to cooking with firewood. I saw a “Canarumwe” stove which not only saves firewood but also doesn't produce a lot of smoke. My kitchen is also small and with poor ventilation, if I can get enough cooking space that would be my dream come true.” (Woman aged 33, interview 1)

4.2.6 Food Vloggers and cooking personas in Rwanda

Vlogging or blogging are still new concepts in Rwanda where many people do not even understand their meaning. Food vlogging was introduced in Rwanda by some tourists who explored the Rwandan culture and often took pictures and videos of the local meals and how to prepare them. Until recently, people could sometimes watch cooking programmes on television or listen to them on radio stations. In recent years, with the increasing access to internet and smart phones with good camera functionalities and the availability of people skilled in video and photo editing, some Rwandans started making various videos and uploading them to YouTube or sharing them through other social media platforms, including Instagram and Facebook. However, all the Rwandan food vloggers have a YouTube channel as it is more popular for reasons including being free for everyone to download or listen to various music styles, to watch local and foreign movies, to watch educational materials for children, etc.

The Rwandan food vloggers in this study were identified on YouTube and Facebook through open-ended interviews and during FGDs with men and women. Participants were asked whether they knew any cooking celebrities in Rwanda. According to their responses, the following vloggers were contacted for FGD: Afia Murutasibo (with 10.7k subscribers); Hot250 TV (with 195k subscribers); Umubyeyi Magazine (with 13.7k subscribers); Udahogora (17.2k subscribers); Rose TV SHOW (105k subscribers); EASY DELICIOUS RECIPES (55.6k subscribers); and COOK WITH CLAIRE MBABAZI (40.3k subscribers). Interestingly, all the identified vloggers were women. In the end, only 5 vloggers agreed to participate in the study for FGDs. Since they could not all be available simultaneously, four of them were invited to participate in a one-to-one interview while one was given an online questionnaire and submitted her responses online. In order to increase the number of cooking personas, another 5 professional cooks/chefs were also added to the food celebrities FGD to further understand what motivated them to become professional chefs, and their cooking aspirations. They participated in one-to-one interviews, either in person or through phone calls.

4.2.6.1 Acquiring cooking skills

All 5 female vloggers learnt their first cooking skills at the age range between 9 and 12 years old by observing their mothers and older siblings cook at home. While one vlogger took further cooking training, others obtained their advanced skills mostly from other various sources, including YouTube, watching and helping friends to cook for parties, or hosting cooking programmes on the radio. Having learnt to cook at an early age, they cooked with firewood which they often collected themselves from the forests.

For the professional cooks, two of them started learning to cook from home, because they liked to cook and were happy to help their mothers to prepare meals while the other three cooks learnt to cook at adult age. All the cooks have taken cooking training from schools to become chefs. The training programmes varied between 6 months and 2 years.

4.2.6.2 Motivation to become a vlogger/ a professional cook

All vloggers report different motivations for starting to vlog. According to 2 vloggers, getting married was the starting point for their vlogging activities. One vlogger started vlogging after she got pregnant while the other one started when she was a stay home mother as she was taking care of her children. They both said that the purpose was to put the time they had to good use while sharing their knowledge as well as gaining some financial benefit from it:

“I started vlogging after getting married and becoming a mother in 2020. I became a full time stay home mother to fully care for my child and family. Then I started vlogging as a job to share my cooking skills with others as well as making financial gain on it. All the videos are shot at my home.” (Vlogger 1, female, aged 31, FGD with vloggers/cooks)

“I started vlogging in 2018 after getting married and being pregnant. During the weekend I could use the time to blog and share my knowledge with other women. Later I was advised by a friend to make the contents of my blogs into videos so that others can see what I was talking about. This helped me to occupy myself at home and use my time well.” (Vlogger 2, female, aged 35, FGD with vloggers/cooks)

Three other vloggers (all single) - including the one who obtained cooking skills from training- stated that the motivation to start the vlogging activities was the love of cooking and wanting to share with other people their knowledge on how to cook nutritious meals using local food items, ingredients and spices.

“My vlogging activities started in 2020. I wanted to share my knowledge and cooking skills with those who could join cooking school.” (Vlogger 3, female, aged 27, FGD with vloggers/cooks)

All 5 vloggers said that they were very active during the COVID-19 lockdowns because they were all staying at home and they had more free time for vlogging activities. Currently four of the vloggers occasionally do food vlogging when they have free time and one vlogger does it as a full time job.

It is worth mentioning an interesting fact that all 5 vloggers were female while all 5 cooks were male. For the former, the main reason would be that women are taught how to cook at a young age and they have cooked at home for a long time which makes them confident to share their cooking skills and their own cooking creativities. As most of them have their other professional careers, food vlogging is done as a hobby during their free time such as on weekends or as a stay at home mother. As for the latter, the motivation to become a professional cook is more about earning money than just being a hobby. However, until recently, being a cook was not considered as a respectable job.

On the one hand, among the youngsters who attended technical and vocational education and training (TVET) schools to acquire vocational training, men were those who mostly joined cooking programmes. Meanwhile, women preferred other less energy demanding programmes such as tailoring or hairdressing which also they believed would provide them plenty of career and business opportunities including being a personal tailor or creating their own hair salon. For all male cooks participating in this study, their passion and love for cooking as well as various opportunities such as working in hotels, restaurants and culinary events that come with being a professional cook were what motivated them.

“Once I visited my two big brothers here in Kigali where they were working as house boys in two respective families and earning a decent income. Then I decided that I would do it professionally. But cooking was also my passion. Therefore, right after I

finished my 3rd year of middle school, I attended cooking training at CFJ Kigese, Kamonyi, so that I could advance my cooking skills which would allow me to earn a good income as a professional chef in restaurants and hotels.” (Cook 1, male, aged 39, FGD with vloggers/cooks)

On the other hand, the majority of young men who cook have never had any professional cooking training. They only become cooks by observation and practice. This was noted by one participant who is a cooking trainer and has more than 15 years’ experience as a certified professional cook.

“Currently, young men get hired at first as kitchen cleaners, and little by little become involved in the cooking activities such as helping in peeling potatoes or washing vegetables. They then gradually improve their cooking skills by observing professional cooks who are cooking and practising alone at home. With further cooking experience, they end up being hired as cooks either in the same restaurant or elsewhere.” (Cook 2, male, aged 47, FGD with vloggers/cooks)

4.2.6.3 Video contents and targeted audience

The vloggers disclosed that they mainly rely on digital platforms and social media to reach their audiences. YouTube is reported to be the main channel where they attract a lot of viewers. The other channels such as Facebook, WhatsApp, Twitter and Instagram are also used. One vlogger further partners with the local BTN TV to participate in some of their cooking programmes. Their content focuses on improving people’s health by cooking the locally grown food items which are commonly used in many households and can be found anywhere in the local shops and farmers’ markets or household kitchen gardens. They also promote dishes that are cooked with less oil and using local ingredients and spices, with few utensils needed for cooking:

“I teach how to cook spicy food and low carb dishes because they help our body to fight many diseases. I use different cooking practices as I sometimes make cooking videos for people with diabetes.” (Vlogger 3, female, aged 27, FGD with vloggers/cooks)

Vlogger 2 who used to make cooking videos is now focusing on giving advice and guidance to women on how to take care of themselves and their families as well as to keep their homes clean and beautiful. According to her, the position of her kitchen is not convenient enough to make food cooking videos and she hopes to continue after she has upgraded her kitchen in the future.

“I don’t do food vlogging often because my current kitchen position is not suitable for shooting. I am planning to rearrange it in a way that will help me to shoot videos while cooking.” (Vlogger 2, female, aged 35, FGD with vloggers/cooks)

When asked who their target audience are, the vloggers responded that their videos contents are for everyone who want to learn how to cook and to eat healthy meal, and their followers consist of both men and women of different age:

“The content is for everyone who wants to cook because learning how to cook should be for everyone. My followers are mostly women, but men also follow my channel. Men account for more than 25% of all the followers.” (Vlogger 3, female, aged 27, FGD with vloggers/cooks)

“My videos are for all people. My followers are mostly the young men and women whose age ranges between 24 – 30 years old. But now I target people in rural areas because they grow most of the food items and they do not know how to cook them well and how to make various dishes. I see this through their comments. Some of the rural

people with access to the internet download the videos and share them with others in their communities.” (Vlogger 1, female, aged 31, FGD with vloggers/cooks)

4.2.6.4 The influence on viewers’ cooking behaviour

The vloggers reported that they have received numerous positive feedbacks from their subscribers on YouTube and Facebook. They also got nice comments from their followers whom they met at different public places. Their followers conveyed that watching the vloggers’ cooking videos have influenced them to improve their cooking skills and to eat healthy food:

“Some viewers reached out to me either on YouTube and Facebook, or when we meet at wedding parties or banks and schools. They admitted to me that the food videos I make have completely improved their eating habits. From the videos, they learn which ingredients to use or not use, and they are able to understand the health benefits that various food items, ingredients and spices have to their bodies. This means a lot to me and makes me happy to see so many people benefiting from my content.” (Vlogger 1, female, aged 31, FGD with vloggers/cooks)

Furthermore, subscribers expressed that the cooking skills acquired from the vloggers have allowed them to start their own small food businesses:

“Many subscribers reached out to me expressing the joy cooking delicious dishes to their families has brought to them, thanks to my videos. Some even disclosed to me that my videos allowed me to gain enough cooking skills and confidence to start their own small food businesses where they make snacks such as mandazi and bread for selling.” (Vlogger 4, female, aged 28, FGD with vloggers/cooks)

However, when asked about their perception on the future of food the vloggers believe that following cooking celebrities or cooks on social media or digital platform will not be the most effective way to learning to cook in the future:

“Following cooking celebrities may contribute to teaching how to cook a variety of dishes, but it is not a good way of learning basic cooking skills, because most of the cooking celebrities cook restaurant dishes. The family cooked meal should be different from restaurant style and focus on nutrition related contents.” (Vlogger 1, female, aged 31, FGD with vloggers/cooks)

4.2.6.5 Cooking aspirations for vloggers/professional cooks

Vloggers and cooks had different responses about what their aspirations for cooking are.

Four vloggers who are now based in Kigali aspire to improve their cooking space by upgrading to a modern kitchen in order to make the video shooting more convenient and attractive with clear videos. They also aim to purchase cooking appliances such as an electric oven, a deep fryer, a toaster, and meat grinders for cooking a variety of dishes, and other cooking utensils which serve different purposes including baking, roasting and grilling. Whereas one vlogger who is abroad said that she has all she needs for her vlogging activities, only that she wishes to see all Rwandans cooking good and nutritious meals.

Four cooks who are now working in restaurants reported that they aspire to increase the investment to be able to start their own food businesses. Two of them additionally hope to change the stigmatized perceptions many Rwandans have about cooks. For a long time, being a cook was considered a failure, someone who could not obtain formal education in high school or university. They would like to contribute in increasing the number of local professional cooks by training young men and women and letting them know that becoming a professional cook has a lot of opportunities and possibilities which can help them earn good income and be

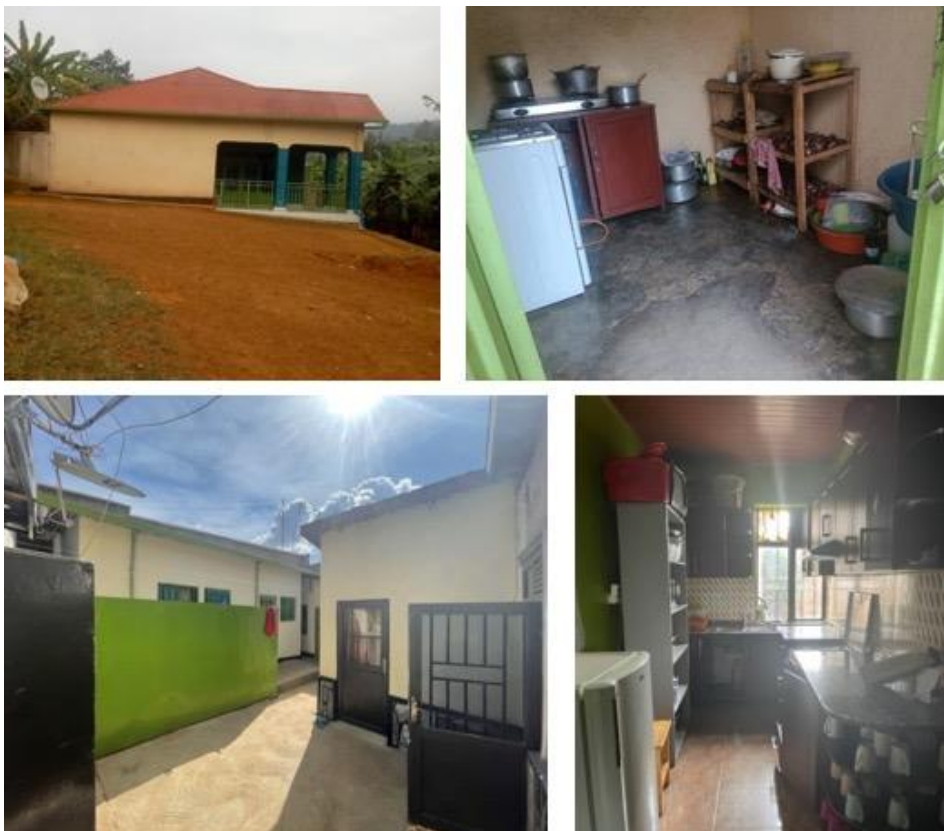
able to support their families. One remaining cook particularly has a dream to write a cookbook about Rwandan cuisine because he could not find a single one anywhere in the library.

4.3 Other findings

4.3.1 Observation of the kitchen space, kitchen tools, fuels and technologies

During the open-ended interviews, 7 out of 10 participants allowed the researchers to observe the surroundings of their house as well as their kitchen/cooking space. For more additional details, please see the photo story vignette entitled “The many faces of the kitchen”. The observation was enough to get a clear picture of the composition and organisation of the cooking space in both peri-urban and urban areas. It was found that families of more than 4 members typically live in a house of at least two bedrooms and a living room, while households with 1 to 3 members live in a one bedroom house with a living room. The kitchen sizes, location and the available equipment all vary depending mainly on the economic standing of the household. Middle to higher income households usually have an inside kitchen room and cook predominantly with LPG. The kitchen is clean, equipped with shelves or cupboards to store food items and its area varies between 4 to 10 m², which is big enough to accommodate all the stoves, pots and appliances they own, such as fridge, electric microwave, baking oven, kettle, blender, rice cooker. They may also have a separate outdoor kitchen room where they use charcoal on some occasions. The men and women who live alone or with friends in shared spaces, stated that they prefer to cook with only LPG and they use a small LPG cylinder with one burner stove. The cooking activities are done in the living room due to the absence of a separate kitchen room. However, they are often not able to use high power electric appliances due to inadequate electricity installation or insufficient supply of electricity.

Figure 8: House settings (left) and their respective kitchen rooms (right) for urban households



The lower income families who own a kitchen in peri-urban areas, have a small dirty kitchen with little or no ventilation (area typically around 3 m²), in which they cook with firewood either on a charcoal stove or on a three-stone fire. It was noted that some households even burn plastic bottles for cooking due to lack of firewood. They often use stainless steel pots but some still cook in clay pots and they do not use any electric cooking appliances due to the high cost of electric cooking appliances and to the lack of access to electricity or high cost of electricity for those who have electricity in their houses. The others who do not have a kitchen cook from outside the main house on the veranda and may have to move inside the house or stop cooking when it rains.

Figure 9: Surroundings (top left) and inside the kitchen room (top right) of the peri-urban households; burning a plastic bottle in a three-fire stone (bottom left); outdoor charcoal stove in front of the house (bottom right)



4.3.2. Cooking practices and organisation for men who live in a shared space

Many of the participants who live alone or in shared spaces reported that they learnt to cook using firewood on three-fire stones or improved mud stoves. They did not like to cook with firewood because of the smoke and dirty pots but they had no other choices or alternative fuels. They were taught cooking practices at early ages, mostly by their parents. They practised their cooking skills when asked to cook for family in case the parents were not around and they were the only ones at home. What prompted them to first start learning to cook includes parental respect. For example, being the firstborn child or the older child were the main factors for learning to cook so that they could prepare meals for their siblings. However, some participants were also motivated by the opportunity to eat healthier meals and the passion and love for

cooking, while others were inspired by the opportunity to earn income as a certified or professional cook.

When asked how cooking is divided and the cooking practices they rely on, some participants who live in shared spaces reported that the meal cooking activities are done in shifts where everyone has a day for cooking and the one who cooks should also do the cleaning after cooking and eating. For others, anyone who is available can cook while for most participants who live with their siblings, the younger siblings are the ones responsible for cooking as a way of teaching them or letting them practise their cooking skills. They mainly like to cook easy and quick meals whether boiled or fried, as long as the meals preparation does not require the use of many cooking pots or a long time and a lot of fuel to prepare and cook. For example, to make beans stew they would rather purchase precooked beans which they can use right away, instead of boiling fresh beans which would require not only a long time to cook but also would consume a lot of fuel and would need to be stored in a refrigerator which they do not usually have.

5. Conclusions and recommendations

This report documents the findings of the study on how people living in peri-urban and urban areas of Kigali, Rwanda learn to cook. The primary objective of this research has been to explore how, when and where people learnt their cooking skills, how the learning to cook and the cooking practices are compared between generations as well as their perceptions on the future of cooking.

The research consisted of the following:

- Open-ended interviews conducted in 10 households across the Kigali City, focusing on how they learnt to cook, the organisation/composition of their cooking space and the cooking technologies they adopt.
- Focus group discussions with men, women and food vloggers/cooks focusing on stories of how they learnt to cook, their perceptions about cooking and their cooking aspirations.

It was found that different generations mainly learn how to cook at home from their parents, family members or house helpers. However, while most women start learning to cook at their early ages, men who do not usually have cooking responsibilities in their families, tend to learn to cook at old age, mostly because they suddenly find the need to cook for themselves as they move away from their homes or because they want to pursue cooking careers and earn money as professional cooks. With the increased number of people who own smartphones and have internet access, some people acquire advanced skills from YouTube and other digital and social media platforms. Through their food videos on YouTube channels, vloggers also significantly contribute to help people in Kigali learn how to cook various dishes using local food ingredients and spices, and available cooking fuels and stoves.

The cooking practices differ across generations mostly due to the changing economic situation, availability and accessibility of food items, and different lifestyles. Nowadays, both the old and young generation cook in a similar way as the former have adapted to the new urban lifestyle. However the young people prefer to use LPG only for cooking as it is fast and saves time.

Participants believe that a lot will change in the future about modern alternatives for cooking and eating. Cleaner cooking fuels such as LPG will be highly adopted provided that their price is affordable. The cooking practices focusing on convenience and time saving will be favoured such as cooking in bulk and then reheating later and use of precooked meals. Eating out in restaurants will also progressively become popular with technology improvement and rising

income level. However, there is a strong perception among participants that the home-cooked meal will always have an important place in the way Rwandan families eat, because it is not only a cultural norm but also an economic and healthy way to feed the family. Therefore it is suggested that parents should find the time such as weekends or holidays to keep teaching their children how to cook, which is an indispensable skill.

The following recommendations to keep teaching future generations how to cook emerged from the participants:

Recommendation #1: Raising awareness of the benefits of teaching children how to cook. *It is important to know that frequent involvement of children in cooking and food preparation activities at an early age not only positively contributes to the development of cooking skills and cooking creativity but also improves their well-being associated with a healthy diet.*

Recommendation #2: Cooking programmes in schools should be increased in the country. *Cooking courses should be added to primary school curriculum to provide students with cooking skills at an early age as a basic life skill. This will help the students increase education and knowledge about the quality nutrition diet. Opportunities to attend short and long term cooking programmes should also be provided to people who were not able to get some cooking skills at an early age or for those who wish to acquire more advanced cooking abilities.*

Recommendation #3: Parents should find time such as on weekends or holidays to teach their children some basic cooking skills at home. *This can be a good opportunity to keep the parent-offspring knowledge transfer and to increase the family bonding time. It can also be a source of motivation for the children to keep improving their cooking skills in the future as a way of keeping the family tradition.*

Recommendation #4: Promote the adoption of modern cooking fuels, appliances and efficient cooking techniques. *As reported in this study, many people are willing to transition from firewood and charcoal to clean cooking fuels, improved cooking stoves and efficient cooking appliances. The main factor hindering this transition is the high cost of modern cooking technologies. There is a need to put in place strategies and policies to reduce the price of clean fuels and stoves and to create adequate financial mechanisms such as PAYGO or payment in small instalments to allow many households in Kigali, particularly in peri-urban areas to afford the cleaner cooking fuels. Cooking celebrities such as vloggers and professional cooks could play an important role in raising awareness and increasing the adoption of the modern cooking energy. By taking advantages of their viewers, all the information about the endorsed modern cooking fuels, improved stoves or efficient cooking appliances such as electric pressure cooker (EPC) would reach a big number of audience in short time. The vloggers and the professional cooks would also help to change the negative perceptions people have about modern cooking energy use due to the trust and influence they have over their followers. Furthermore, they may encourage people to adopt efficient cooking techniques such as soaking beans and to explore a mix of e-cooking and LPG to make cooking economical as well as time-efficient instead of stacking on charcoal and LPG fuel.*

6. Study limitations

As with any study, there were some limitations in the data collection:

1. Challenges during interviews and FGDs: Meeting face to face with participants was a challenge due to the busy life of people in urban Kigali. As the potential participants were not available during the weekdays, they would be asked to participate on weekends. However some of them had a change of heart, while others had to attend other social activities such as wedding

ceremonies on Saturdays and church activities on Sundays. This resulted in often cancelling interviews at the last minute. Other times, participants would often attend the interview past the schedule time, which affected the time of the remaining interviews of the day, resulting in being rescheduled for the following days. All the data collection ended up taking more than 8 weeks, instead of the previously scheduled 6 weeks.

2. Challenge in finding elderly participants: The population of Rwanda is made of mostly youth with 52% of the population aged 19 years or younger, while only 14.2% are above 45 years old and 3.5% are above 65 years old. In particular, the population of Kigali consists mainly of the youth who are often migrating there for work or education. This may have been the reason why it was challenging to find actually old people who would participate in this study. Only 4 out of 60 participants were aged above 45 years old, with the eldest aged 61 years old. This means that the comparison between generational cooking difference was actually done between the young and the middle age generation. However, all efforts have been made to make the analysis as robust as possible and to ensure all comparisons between how different generations learnt to cook are clearly presented and acknowledged.

3. Limitations in vloggers recruitment: Owing to the fact that vlogging is still a new concept in Rwanda, there is only a limited number of vloggers. Although a total of 9 vloggers were identified, only 5 of them responded to our invitation to participate in the FGD. The remaining 4 were contacted either by email, or through phone call or WhatsApp messaging, but never responded back. For this reason, professional cooks were also asked to participate to complete the study requirements.

Appendix 1: Open-ended interview guide + Translation in Kinyarwanda

Section 1: Basic information

- 1.1. What gender do you identify as (male, female)? Vuga igitsina cyawe (gabo, gore)
- 1.2. What is your age? Ufite imyaka ingahe?
- 1.3. Where are you located in Kigali (Nyamirambo, Kimironko, Nyacyonga, and Kabuga, other)? Utuye he (Nyamirambo, Kimironko, Nyacyonga, Kabuga, ahandi sobanura)?
- 1.4. What is your social status (student, rural to urban migrant, urban displaced/refugee, person with a disability)? Ubarizwa mu kihe cyiciro (abanyeshuri, Abimukira bo mu mujyi kubera akazi cg imibereho, Abimuwe mu duce dutuye nabi/impunzi, abafite ubumuga)?
- 1.5. What is your education level? Warangije ikihe cyiciro cy'amashuri?

Section 2: Learning to cook

- 2.1. Do you cook every day? How many meals do you cook a day? Uteka buri munsi? Uteka amafunguro angahe ku munsi?
- 2.2. How and where did you learn to cook? At what age was it? Watubwira igihe n'uburyo wize guteka? Wari ufite imyaka ingahe icyo gihe?
- 2.3. Who in the household you grew up in was the main cook? Did you watch them cook different meals? Were you ever asked to help cook them? Did you observe any differences in how different generations in your household (e.g. your mother, your grandmother) cook or cooked? If there were generational differences you observed what do you believe were the reasons for them? Mu rugo wakuriyemo ni nde watekaga? Wigeze ureba uko batekaga amafunguro atandukanye? Waba se warigeze gusabwa kubafasha guteka amafunguro? Waba hari itandukaniro wabonye uko generation zinyuranye ziteka cg zatekaga (Urugero: Nyogokuru na Mama wawe)?
- 2.4. Did you ever learn cooking skills from online platforms/media, such as YouTube, facebook or Instagram? Why did you choose to learn from them? Did you find learning from such online platforms/media effective? Ese waba ukoresha imbugankoranyambaga nka za YouTube, facebook cg Instagram wiga guteka? Niba ari byo, kubera iki wahisemo kwigira guteka kuri internet?
- 2.5. Did you ever learn how to cook in cooking schools or trainings provided either online or in person? If so- why did you choose to attend the training? Waba warigeze ufata amahugurwa cg kujya mu ishuri byigisha guteka haba kuri internet cg uhibereye? Niba warabikoze, kubera iki wahisemo gukurikira amahugurwa cg amasomo yo guteka?
- 2.6. Do you have anything else to share about how, where and when you learn to cook? Hari ikindi wadusangiza kijyanye n' uburyo cg ahantu wigiye guteka?

Section 3: Cooking practices and common dishes

- 3.1. What dishes are the most commonly cooked and mastered in Rwandan households? Ni ayahe mafunguro akunzwekandi amenyerewe gutegurwa mu rugo?
- 3.2. What tricks, shortcuts or techniques are used for different dishes in your current household and the household where you grew up (if different)? E.g. do you soak beans? Do you use igikukuru for soaking and/or cooking beans? Are these techniques or practices different at different ages? Ese mwaba hari uburyo cg technique biryoshya cg bihisha ibiryo vuba mukoresha muguteka (e.g Gikukuru, kwinka ibishyimbo n'Ibindi)?

3.3. What are the main factors that impact people's cooking practices (what they cook, how they cook, what tricks and techniques they use etc.)? Ni izihe mpamvu (ibyho bateka, uko bateka cg technique bakoresha) zigira uruhare mu buryo abantu bateka?

3.4. What drives the choice of dishes most commonly cooked in your household and the households of your family and friends? How do the cooking skills (e.g. knowing how to cook a specific dish) impact on those choices? Ni iki gitera guhitamo ubwo bw'ibiryo bitekwa cyane mu rugo, mu muryango cg mu miryango y'inshuti? Kugira ubumenyi mu guteka amafunguro rukana bigira uruhe ruhare mu guhitamo amafunguro atekwa?

3.5. Do you believe cooking practices vary considerably across Kigali and across different regions of Rwanda? If you have family in different parts of the country, do they cook differently, different dishes or use different cooking techniques? If so, what are they driven by? Ese uburyo bwo guteka buratangukanye mu mijyi nka Kigali ugerenyije n'ibindi bice by'igihugu? Bitandukaniye he?

3.6. Do you ever cook meals in bulk and then reheat them over a number of days? If so- why do you do that? What advantages and disadvantages such a practice has? Mu jya muteka ibiryo byinshi (nk'iby'icyumweru) icyarimwe ubundi ukajya ushyushya? Niba ubikora biterwa n'iki? Ibyiza n'ibibi by'ubwo buryo ni ibihe?

Section 4: Cooking aspirations

4.1. Do you aspire to improve your cooking skills? Or do you believe you could benefit from improved cooking skills? Why or why not? Wifuzako kwiyungura ubumenyi mu guteka neza? Wumva ari iki byakumarira? Kubera iki (Sobanura)?

4.2. If you mostly cook at home, would you like to eventually be able to eat out? Niba ukunda kurya mu rugo, ushobora kurira hanze (e.g. Restaurant) rimwe na rimwe?

4.3. If you already eat out, how often do you do that? Would you like to be able to do it more frequently/less frequently? Niba urira hanze se, ubikora kangahe? Ni iki gituma urya hanze? Ese ushobora kubikora inshuro nyinshi? Kubera iki?

4.4. Do you order ready meals or cook in bulk for several days ahead? Why or why not? Utumiza ibiryo bihiye bihita biribwa (ready to eat) cg utekera rimwe byinshi ukabibika ukajya ubishyushya mu yindi minsi? Kubera iki wabihisemo?

4.5. What are your aspirations for cooking and your kitchen in terms of the kitchen equipment, the cooking fuels used etc.? Wifuzako aho utekera cg uko uteka (Igikoni, ibikoresho n'ibicanwa) bikunyuze byaba bimeze gute?

4.6. What do you believe the future of cooking to look like? How do you think people will cook and eat in 5, 10, 20 years from now? What will drive those changes (if any)? Ubona mu bihe bizaza (mu myaka 5, 10, 20) uburyo bwo guteka cg kurya buzaba bumeze gute? Impinduka zizaterwa n'iki?

Section 5: Modern cooking alternatives

5.1. What fuels do you currently use for cooking? Would you like to change them to other fuels in the future? Why or why not? Waba ukoresha ubuhe bwoko bw'ibicanwa uteka? Kubera iki aribwo wahisemo? Ushobora guhindura ubwoko bw'ibicanwa ukakoresha ubundi bwiza butangiza ikirere? Kubera izihe mpamvu?

5.2. Do you use LPG, briquettes or electricity for cooking? Why or why not? Are you aware of other modern cooking fuels such as ethanol or biogas? Ukoresha gaze, briquettes cg

amashanyarazi uteka? Kubera iki? Ese waba uzi ubundi bwoko bw'ibicanwa bisukuye bitangiza ikirere e.g biogas na ethanol?

5.3. What has made you choose the fuels you use? What were the key factors that encouraged you to switch to modern energy cooking fuels (where applicable)?

5.4. Do you believe cooking on different fuels changes the taste of food? Why or why not? Ese wemera ko hari impinduka ku mafunguro (e.g impumuro, uburyohe n'ibindi) ziterwa no gukoresha ibicanwa bigezweho? Izo mpinduka ni izihe?

5.5. What role did the cooking fuels play in your process of learning how to cook? Were there any beliefs surrounding specific cooking fuels, such as firewood or charcoal, or LPG (if it was used)? Ibicanwa ukoresha byagize uruhe ruhare mu buryo wize guteka? Wemera ko hari ibiryo biryoha bitekeshejwe ibicanwa cg ibikoresho runaka? Wataga urugero niba ubyemera?

Section 6: Cooking celebrities or personas in Rwanda

6.1. Do you know of any cooking celebrities in Rwanda? If so- who are they? Do you follow them? Hari umustar cg icyamamare mu guteka uzi mu Rwanda? Niba ari yego, waduha ingero? Ese urabakurikira ku mbugankoranyambaga bakoresha?

6.2. If you follow cooking celebrities, how do they influence your daily cooking or your cooking practices? Niba ubakurikira, ni gute bagira uruhare cg bagufasha mu mitekere yawe ya buri munsu?

Appendix 2: Focus group Discussions guide

Background Information

- 1.1. Please select your gender. Hitamo igitsina cyawe
- 1.2. Please select your age. Hitamo imyaka yawe
- 1.3. What is your address in Rwanda? Utuye he mu Rwanda?
- 1.4. If other, please specify. Niba wasubije ahandi, sobanura aho ari ho
- 1.5. Please select the category that match with where you live with. Hitamo igisubizo kijyanye n'aho uba ubu.
- 1.6. Please select the category that matches your current social status. Hitamo itsinda ubarizwamo rihuje n'imibereho yawe.
- 1.7. If other, please specify. Niba wasubije iyindi, sobanura
- 1.8. Please select your highest education level. Hitamo icyiciro cy' amashuri warangije
- 1.9. What is your profession? Ukora iki?
- 1.10. Do you have children? Ufite abana?

I. Men FGDs guide

Section 1. Learning to cook

- 1.1. Do you cook everyday? How many meals do you cook a day? Uteka buri munsi? Uteka amafunguro angahe ku munsi?
- 1.2. How and where did you learn to cook? At what age was it? Mwatubwira igihe n'uburyo mwize guteka? Mwari mufite imyaka ingahe icyo gihe?
- 1.3. Did you ever use these methods to learn or improve your cooking skills? Ese waba warigeze ukoresha ubu buryo wiga cg wihugura mu guteka?
- 1.4. Why did you choose to learn from them? Kubera iki ubu buryo aribwo wahisemo wiga guteka?
- 1.5. What type of dishes do you usually cook? Ni ubuhe bwoko bw'amafunguro mukunda guteka? kubera iki?
- 1.6. What cooking practices do you rely on outside of the family home? e.g boil, fry, roast, grill Ni ubuhe buryo bwo guteka mukunda kwifashisha cyane? e.g: gutogosa, gukaranga, kotsa n'ibindi?
- 1.7. If you live in share space, how is the cooking divided? Niba ubana n'abandi, igikorwa cyo guteka mukigabana gute?
- 1.8. What influenced your longer-term cooking practices? Ni iki cyatumye uhitamo kujya witekera?
- 1.9. How do you feel about modern alternatives of cooking/eating? E.g. modern cooking fuels, eat out or order ready meal. Mwumva cg mubona gute uburyo bugezweho mu guteka no kurya? urugero nko gukoresha ibicanwa byiza nka gas, kurira cg gutumiza ibiryo bihiye muri restaurant.

1.10. What ambitions do you have for your cooking ability in terms of the cooking skills, kitchen equipment, cooking fuels? Ni iki wifuza kugeraho cyagufasha mu guteka haba kwiyongera ubumenyi, aho utekera (e.g: Igikoni, ibikoresho) cg ibicanwa bitekeshwa?

1.11. Traditionally cooking was a gendered task such that cooking was only or predominantly a female responsibility? Has this changed? Kera guteka byari inshingano zagenewe igitsina gore gusa ku buryo ahanini aribo bagombaga gukora umurimo wo guteka. Ese byaba byarahindutse?

1.12. What do you believe the future of cooking to look like? Ubona mu bihe bizaza uburyo bwo guteka amafunguro nk'ibicanwa bikoreshwa cg bwo kubona amafunguro buzaba bumeze gute?

1.13. What nowadays motivates particularly men in Rwanda to learn to cook? Ni iki muri iki gihe gituma abahungu cyane cyane mu Rwanda bitabira kwiga guteka? Impamvu se zaba zitandukanye bitewe n'imyaka?

Section 2. Modern cooking fuels

2.1. What fuels do you mostly use for cooking? Ni ubuhe bwoko bw'ibicanwa mukoresha cyane muteka? Kubera iki aribwo mwahisemo?

2.2. What does modern energy cooking look like to you? And how will people learn to adapt to this transition? Mwumva gute ingufu/ibicanwa cg uburyo bugezweho bwo gute? Ni gute mubona abantu bazamenyera gukoresha uburyo bugezweho bwo guteka?ka

2.3. What role do the cooking fuels play in the process of learning how to cook? Ni uruhe ruhare ibicanwa bigira mugikorwa cyo gushaka/ gushishikarira kwiga guteka?

2.4. What have been the key drivers for men to transition to modern energy to date in Kigali? Ni izihe mpamvu z'ingenzi zituma abagabo bitabira gukoresha ibicanwa byiza bigezweho mu guteka

2.5. What should be done to increase the adoption of alternative cooking fuels in urban and peri-urban households in Rwanda? Ni iki kigomba gukorwa kugira ngo hatezwe imbere ikoresha ibicanwa byiza mu ngo zo mu mijyi wa Kigali no mu nkengero zawo?

Section 3. Eating out, cooking in bulk

3.1. Do you often eat out or order ready meals or take away to eat at home? Why or why not? Utumiza cg ugura ibiryo bihiye ukabitanahana kubirira mu rugo? Kubera iki?

3.2. Do you ever cook meals in bulk and then reheat them over a number of days? Why is this practice so popular? Mujya mutekera icyarimwe ibiryo byinshi mukabibika ubundi mukajya mubishyushya mugiyeye kubirya? Ni ukubera iki ibi bikunze gukorwa cyane?

3.3. What do you believe the future of cooking and eating to look like? What will drive those changes (think of three most important factors that will drive the change)? Mutekereza mu bihe bizaza uburyo bwo guteka ndetse n'amafunguro bizaba bimeze gute? Mwaduha nibura ingero 3 z'impunduka zizabitera?

Section 4. Training and cooking celebrities

4.1. Do you know any cooking schools or training centers in Rwanda? If yes, can you give us examples? Do you know anyone who has decided to get training there? Waba uzi amashuri yo guteka cyangwa ibigo bitanga amahugurwa yo guteka mu Rwanda? Ushobora kuduha ingero? Waba se uzi umuntu wahize cg uhigira guteka?

4.2. Are you familiar with any cooking celebrities? E.g. on YouTube, Instagram etc., particularly in Rwanda? If so- who are they? Do you follow them? And if so- why? Waba uzi ibyamamare mu Rwanda mu guteka, urugero kuri YouTube, Instagram cg ahandi? Ni bande? Ubakurikira ku mbuga nkoranyambaga bakoreraho? Kubera iki?

4.3. Do you think that social media or following cooking celebrities will be the most effective way to learn to cook in the future? Why or why not? Which other effective ways to learn to cook would you recommend to younger generations? Uratekereza ko imbuga nkoranyambaga cyangwa gukurikira ibyamamare mu guteka bizaba uburyo nziza yo kwiga guteka mu bihe kizaza? Kubera iki? Ni ubuhe buryo bundi bwiza bwo kwiga guteka wagira inama abakiri bato?

II. Women FGDs guide

Section 1. Culture and generations cooking

1.1. Are there different ways of cooking and learning to cook depending on generations?

1.2. The younger generations (boys and girls) in Rwanda are not very interested in learning to cook. Do you agree or disagree? Why?

1.3. How and where do you think current generations are learning to cook? Do you think it is essential to acquire cooking skills at young age? Is it still important now? Why?

1.4. What dishes are taught and mastered in most Rwandan households?

1.5. Traditionally cooking skills were taught to young women in order to prepare them to become good wives/ mothers once they get married. Is cooking still a gendered task such that cooking is only or predominantly a female responsibility?

1.6. Now most households have a paid house helper who can do the cooking and other housework. What nowadays motivates men and women in Rwanda to learn to cook? How does it differ across age groups and gender?

Section 2: Modern cooking fuels

2.1. Cooking practices, equipment and cooking fuels have improved compared to what older generations used. Do you see younger and older generations adopting those improved cooking stoves and fuels? Which way do you think is better between the way older generation cooked and the way younger generation cooks? Could you explain why? Uburyo bwo guteka, ibikoresho hamwe n'ibicanwa byo guteka byateye imbere ugereranije nibyakoreshwaga kera. Ni gute ubona uruburiko n' abakuzwe bitabira gukoresha Imbabura zigezwe n'ibicanwa bigezweho? Ni ubuhe buryo ubona ari bwiza hagati y'uburyo abakera batekaga n'uburyo ubu bateka? wadusobanura impamvu?

2.2. Many households in Rwanda still mainly rely on firewood and charcoal as cooking fuels, are you aware of any modern cooking fuels available in Rwanda? Could you give us examples? Ingo nyinshi zo mu Rwanda ziracyashingira cyane cyane ku nkwi n'amakara nk'ibicanwa byo gutekesha, waba uzi ibicanwa byo gutekesha bigezweho biboneka mu Rwanda? Waduha ingero?

2.3. Which modern fuels are most adopted by young urbanites in Kigali? Why? Ni ibihe bicanwa bigezweho bikoreshwa cyane n' uruburiko ruba mu mujyi wa Kigali? Kubera iki aribyo bakoresha cyane?

2.4. What role do the cooking fuels play in the process of learning how to cook? Ni uruhe ruhare ibicanwa bigira mugikorwa cyo gushaka kwiga guteka?

2.5. What have been the key drivers for transitioning to modern energy to date, across different households in Kigali? Ni izihe mpamvu z'ingenzi zituma abantu bakoresha ibicanwa byiza bigezweho mu ngo zitangukanye i Kigali?

2.6. What are the main reasons that affect current adoption of modern cooking fuels for urban households? How will they learn to adapt to this transition? Ni izihe mpamvu nyamukuru zituma ibyo bicanwa bititabirwa gukoreshwa mu ngo ku rugero ruri hejuru? Ni gute bakamenyera kwakira impinduka z'ibicanwa?

2.7. What should be done to increase the adoption of alternative cooking fuels in urban and peri-urban households in Rwanda? Ni iki kigomba gukorwa kugira ngo hatezwe imbere ikoreshwa ibicanwa byiza mu ngo zo mu mijyi wa Kigali no mu nkengero zawo?

Section 3: Eating out, cooking in bulk

3.1. In Rwanda people don't often eat out or order ready meals. Do you think it's mostly related to cultural or economic reasons? Mu Rwanda abantu ntibakunze kurya hanze cyangwa gutumiza amafunguro yatekewe hanze. Utekereza ko ahanini bifitanye isano n'impamvu z'umuco cyangwa ubukungu?

3.2. Many families cook meals in bulk and then reheat them over a number of days. Which meals are commonly cooked in bulk in households in Rwanda? And why is this practice so popular? Imiryango myinshi hari amafunguro iteka menshi icyarimwe hanyuma ikayashyushya. Ni ayahe mafunguro akunze gutekwa ku bwinshi bakayaboresha igihe kirekire? Ni ukubera iki ibi bikunze gukorwa cyane?

3.3. What do you believe the future of cooking to look like? Utekereza mu bihe bizaza uburyo bwo guteka ndetse n'amafunguro bizaba bimeze gute?

3.4. How do you think younger generations will cook and eat in 5, 10, 20 years from now? What will drive those changes (think of three most important factors that will drive the change)? Utekereza ko mummyaka 5, 10, 20, uburyo urubwiruko ruba ruteka cg rubonamo amafunguro buzaba bumeze gute? Niki kizatera izo mpinduka (tekereza kubintu bitatu byingenzi wumva bizatera impinduka)?

Section 4: Training and cooking celebrities

4.1. Do you know any cooking schools or training centers in Rwanda? If yes, can you give us examples? Do you know anyone who has decided to get training there? Waba uzi amashuri yo guteka cyangwa ibigo bitanga amahugurwa yo guteka mu Rwanda? Ushobora kuduha ingero? Waba se uzi umuntu wahize cg uhigira guteka?

4.2. Are you familiar with any cooking celebrities? E.g. on YouTube, Instagram etc., particularly in Rwanda? If so- who are they? Do you follow them? And if so- why? Waba uzi ibyamamare mu Rwanda mu guteka, urugero kuri YouTube, Instagram cg ahandi? Ni bande? Ubakurikira ku mbuga nkoranyambaga bakoreraho? Kubera iki?

4.3. Do you think that social media or following cooking celebrities will be the most effective way to learn to cook in the future? Why or why not? Which other effective ways to learn to cook would you recommend to younger generations? Uratekereza ko imbuga nkoranyambaga cyangwa gukurikira ibyamamare mu guteka bizaba uburyo nziza yo kwiga guteka mu bihe kizaza? Kubera iki? Ni ubuhe buryo bundi bwiza bwo kwiga guteka wagira inama abakiri bato?

III. Vloggers/bloggers FGDs guide

Section 1: Learning to cook

- 1.1. How and where did you learn to cook? At what age was it? Watubwira igihe n'uburyo wize guteka? Wari ufite imyaka ingahe icyo gihe?
- 1.2. What fuels did you use then and what fuel do you currently use for cooking? Wakoreshaga ibihe bicanwa ugitangira kwiga? Ubu ukoresha ibihe bicanwa?
- 1.3. Did you ever learn cooking skills from online platform/ media or cooking schools or trainings provided either online or in person? Ese waba warakoresheje imbugankoranyambaga, amahugurwa cg ufata amasomo mu ishuri ryigisha guteka?

Section 2: Vlogging activities

- 2.1. When did you start the food vlogging and what motivated you to start vlogging? Ni ryari watangiye inyigisho zo kwigisha guteka? Ni iki cyatumye ubitangira?
- 2.2. What contents do you focus on in your vlogs? Ni ibihe bintu wibandaho mu nyigisho utanga?
- 2.3. Who is your targeted audience? Why? Ese inyigisho zo guteka utanga zagenewe bande? Kubera iki?
- 2.4. Which methods do you use to reach and attract a high number of audience? Ni ubuhe buryo ukoresha kugira ngo inyigisho utanga zigere ku bantu benshi?
- 2.5. How do you think your video contents help the audience? Ni gute inyigisho utanga ubona zifasha abantu mu kumenya cg kwiga guteka?
- 2.6. What dishes are taught and mastered in most of your contents? Ni ayahe mafunguro wibandaho cyane mu guteka mu nyigisho utanga? Kubera iki ari yo wahisemo?
- 2.7. What cooking practices do you teach in your vlogs? Ni ubuhe buryo bwo guteka wigisha?
- 2.8. Is vlogging something you do as a job which you can financially benefit from or is it just a hobby? Ese kwigish guteka kuri YouTube ni ikintu ukora nk'umwuga kigutunze cyangwa ni ibyo ukora iyo ufite umwanya bitakungukira?
- 2.8. What are your aspirations for cooking in terms of the cooking skills, the kitchen equipment, the cooking fuels used etc.? Ni iki wifuza kugeraho cyagufasha kurushaho gutera imbere mu nyigisho utanga zo guteka haba mu buryo bw'ubumenyi mu guteka, aho utekera, ibikoresho cg ibicanwa bitekeshwa?

Section 3: Modern cooking alternatives and eating

- 3.1. What do you believe the future of cooking and eating to look like? What will drive those changes? Utekereza mu bihe bizaza uburyo bwo guteka buzaba bumeze gute?
- 3.2. Do you think that vlogging activities are good opportunity to promote the modern cooking energy? Ese mu bikorwa /videos z'aba vloggers, mubona bwaba uburyo bwiza bwo gushishikariza abantu gukoresha ibicanwa byiza?
- 3.3. Do you think that following food vloggers/ professional chefs on social media will be the most effective way to learn to cook in the future? Uratekereza ko imbuga nkoranyambaga cyangwa gukurikira ibyamamare mu guteka bizaba uburyo bwiza bwo kwiga guteka mu bihe bizaza? Kubera iki?

Appendix 3: Participant information sheet and consent form templates

Participant Information Sheet

Learning to cook in Rwanda

Investigators Details:

Dr Marie Claire Mukeshimana

mukeclaire@gmail.com

We would like to invite you to take part in our study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study before making a decision if you wish.

What is the purpose of the study?

This study has been commissioned by the Modern Energy Cooking Services (MECS) Programme, which is an FCDO-funded research programme nested at Loughborough University. The purpose of this study is to understand how different people in Rwanda learn to cook, what their cooking practices and preferences are, and what the future of cooking and eating looks like in Rwanda. This study includes open-ended interviews and focus group discussions to gather data which will help answer the above questions.

Who is doing this research and why?

This research is conducted by Dr Marie Claire Mukeshimana - the Study Lead, jointly with Dr Iwona Bisaga (Technical Advisor) and Divine Cyusa (Research Assistant). All three team members have experience conducting research in Rwanda, and specifically research on energy access, including clean and modern energy for cooking.

Are there any exclusion criteria?

Yes. Persons under 18 years of age are excluded from this study.

What will I be asked to do?

You will be asked to respond to a set of open-ended interview questions asked by the project enumerators. Your responses will be recorded in a KoBoToolbox database and they might also be recorded (upon your consent to do so).

Once I take part, can I change my mind?

After you have read this information and asked any questions you may have if you are happy to participate we will ask you to complete an Informed Consent Form or provide verbal consent to the enumerator. However, if you wish to withdraw from the study you can tell the enumerator at any time and leave the interview. This can be for any reason and you will not be asked to explain your reasons for withdrawing. Any responses recorded up to that point will not be used in the study.

However, once the results of the study are aggregated (Nov-Dec 2022) and published, it may not be possible to withdraw your individual data from the research.

How long will it take?

The household interview should take no longer than 1 hour to complete.

Are there any disadvantages or risks in participating?

No. Participation is voluntary and if there are any questions which you might consider

sensitive, you are not obliged to answer them.

Data Protection Privacy Notice

Loughborough University, where MECS is based, will be using information/data from you in order to undertake this study and will act as the data controller for this study. This means that the University is responsible for looking after your information and using it properly.

What personal information will be collected from me and how will it be used?

We will not collect any personal or identifiable data. Any quotes used in the research will be anonymised.

Will my taking part in this study be kept confidential?

Yes. Appropriate steps will be taken by the project team to ensure confidentiality and security of the collected data. Data will be stored in encrypted files and shared only among the project team.

How will the anonymised data/results collected from me be used?

The results of the study will be used in reports, journal publications, blogs or other research outputs.

I have some more questions; who should I contact?

You can contact Dr Marie Claire Mukeshimana (mukeclaire@gmail.com; +250 791 542 174) with any further questions.

Informed consent form for research participation

Taking Part Please initial to confirm agreement

The purpose and details of this study have been explained to me. I have read and understood the information sheet and this consent form. I have had an opportunity to ask questions about my participation.

I understand that taking part in the project will involve answering questions about learning to cook and cooking practices, the responses to which will be recorded by the enumerator.

I understand that I have to sign a consent form for the use and reproduction of photos/videos featuring me and/or my institution or kitchen/household spaces to be used in research outputs, which I can say yes or no to.

I understand that I am under no obligation to take part in the study, have the right to withdraw from this study at any stage for any reason, and will not be required to explain my reasons for withdrawing.

I understand that information I provide will be used for research outputs. I agree that information I provide can be quoted anonymously in research outputs.

Consent to participate

I voluntarily agree to take part in this study and I also agree to take pictures /videos featuring me and/or my institution or kitchen/household spaces to be used in research outputs

Signature -----

Phone No -----