Zingy

Bachelor of Science in Information Technology  
College of Computing Technology

Abstract

**\*write the abstract after we have finished the thesis\***

First paragraph: state what the thesis is about, give a simple statement of aims and  
methods  
Second paragraph: explain the structure of the thesis and say something about the  
content  
Third paragraph: give a concluding statement, including a short summary of the  
results

Acknowledgements

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**1.1 INTRODUCTION**

The purpose of our project is to explore which factors influence Irish university students’ eating behaviours and to then develop a tailored application to help better these eating habits. Development of an effective and tailored application aiming to improve a healthier option of eating behaviours in university students is our goal.

**2.1 OVERVIEW OF BACKGROUND**

The aim of our research is to investigate and identify the present status of the diet amongst university students. During the transition from secondary school to university, students need to adapt to a new environment. Students will have lived at home while attending secondary school, so more than likely, their parents will have prepared a balanced and nutritional dinner for them each night. Their parents will have also been responsible for maintaining the grocery shopping and purchasing healthy food for a balanced diet. Of course each student would have helped prepare meals at home from time to time, but the majority of students would have never had the responsibly of preparing an entire meal from start to finish. This entails deciding upon healthy ingredients to cater for a well-balanced meal, and followed by the next stage of cooking the meal. When a student transitions to college, their environment is much different. Some students may still live at home with their parents, while others may rent student accommodation. Either way, this student is now a full time student with a part time job. A students hours can vary entirely from week to week between attending lectures, studying, doing assignments, working shifts, and maintaining the social aspect of college too. When students fail to adapt their dietary habits adequately this can have negative consequences on their health. Negative consequences are, but not limited to:

1. Poor Brain Function: The human brain relies on glucose to function properly. Glucose is derived from carbohydrates and other nutrients such as healthy fats and antioxidants. According to a study published "The Journal of the Federation of American Societies for Experimental Biology" in Dec. 2009, fatty foods can have an immediate negative impact on the brain’s ability function. This study was conducted on a number of rats. During the study, these rats were fed a high-fat diet and those who were fed a high-fat diet tested significantly lower in cognitive abilities after eating the fatty fare compared to the rats who were fed a lower-fat diet. In correlation to students attending university, eating a restrictive diet or even skipping meals can have similar effects, including poor memory and poor concentration abilities.
2. Poor Exercise Capabilities: As students ourselves, we can be guilty of eating too much some days and eating too little other days. As a result of eating too much or too little, this can cause lethargy, fatigue and other effects that hinder physical activity. Referring to "The Journal of the Federation of American Societies for Experimental Biology" in the previous bullet point, after the rats had eaten high-fat food, the study ran 35-percent less distance than the rats who were fed lower-fat food. According to the National Eating Disorders Association, people who diet often experience poor muscle strength, endurance, oxygen utilization and coordination. Exercise is often incorporated into a university student's life, with the majority of universities having a gym available to students on campus. Exercising is recommended for a healthy brain. Exercising and healthy eating habits go hand in hand, but the general belief of the average student is that exercising and dieting goes hand in hand. Dieting can also cause physical weakness and fainting, particularly if one over-exerts themself through exercise.
3. Poor Sleep: It is a fair observation that students attending university get very little sleep, between studying full time, working part time, all while trying maintain a social life. We know this very well ourselves. Saying that, there have been many times we each have gone to bed hungry simply for being too tired to cook, while there have also been times where we each have overate. According to MayoClinic.com sleep specialist Dr. Timothy Morgenthaler, going to bed hungry and overeating can detract from one’s sleep. In return, poor sleep can then cause or worsen other short-term effects of an unhealthy diet, such as weight gain and reduced brain and exercise capabilities.
4. Mood Instability: Brain chemicals, such as serotonin and dopamine, promote positive moods. These brain chemicals rely on food and nutrients for proper function. The average student is slightly oblivious as to how their diet is affecting them in more ways than one. To keep up with academics, everyday activities, and to maintain grades it is essential for a student’s brain to be properly functioning. Calories and carbohydrates promote serotonin, so therefore skimping on calories or carbohydrates can cause depressive moods.

As students ourselves we are aware of our own diets, and we are also aware of the diet and behaviours of other students surrounding us over the past few years. For example, students having certain ingredients in their fridge but not knowing what recipes to make with these ingredients, so ordering takeaway appears to be the easiest option for them. A corresponding issue is that the student is spending a needless amount money for only one meal, while also proposing a poor and toxic diet for themselves in return.

**2.2 RESEARCH FOCUS**

The aim of our research is to investigate and identify the present status of the diet amongst university students. After having gathered our research, our goal is to collect ideas and recommendations in order to facilitate the diet of students. This research will be aimed in helping our application develop possible steps that college students can take to cater nutritional values, within preference. Relationships between nutrition and brain function have been the focus of much of our external research.

**2.3 RESEARCH PROBLEM**

There is a possibility that we may encounter certain problems while carrying out our research.

1. **Obtaining research:** As a group, we might all have different opinions regarding where and how we will obtain our research. Will we obtain our research over secondary data such as existing research and statistics, or primary data such as researching students within our own college? We will need to come together as a group and thoroughly discuss what each of us think is the best option suited for our project idea, before we come to an ultimate decision.
2. **Carrying out research:** If we decide to use existing research, we will all need to decide upon obtaining research within college students in general or do we stay locally within Ireland. Equally, if we decide to research students within our college, we will all need to decide how we will carry out this research – should we hand out surveys, gather a focus group to discuss more in depth with students, how many students, and so on.
3. **Application type:** We have three options for developing this application. Firstly, we have an option of developing a web application. A web application is a client - server software application in which the client (or user) runs in a web browser. Secondly, we have an option of developing a mobile application. A mobile application is an application software designed to run specifically on a mobile device. If we decide to develop a mobile application, we will then need to discuss about developing the application for iPhone users, Android users, or both. Thirdly, our final option is to design and develop both a web application and a mobile application.

**2.4 RESEARCH QUESTION**

At the end of carrying out our research, there are certain topics and questions we will need answered before we move forward with the design and development process of our application. Questions include, but are not limited to:

1. How are universities in Ireland contributing to accommodate the diet of their students?
2. Are universities in Ireland aware of the dietary habits of their students?
3. Furthermore, are universities in Ireland positively engaging with students regarding their dietary habits and needs?
4. Is there a niche in the market for an application to assist student diets?
5. Is there a need for a mobile application to assist with healthy recipe guidance for students studying in Higher Education?

**2.5 RESEARCH AIM**

The aim of our research is to make a final decision regarding the uncertainties we have of our application during the design process, and of course before the development process.

1. We aim to collect ideas and recommendations in order to facilitate the diet of students.
2. We want to know how universities are positively contributing to accommodate the diet of their students.
3. We want more of an insight into the diets of students.
4. Importantly, we aim to work effectively as a team!

With our intended research, we will use these results to help our application develop possible steps that college students can take to cater nutritional values, within preference. To best accommodate the diet of students we plan to develop an application with overall efficiency by providing appropriate recipes according to ingredients in the user’s fridge. We plan to have a nutritional notice for students to make themselves aware of what meals contain a higher nutritional value over other meals. A main aim in the design process will be how self-efficient this is for students. Self-efficacy would impact the student’s diet, which in turn would hopefully eat out less, and to also stabilise the student financially. Self-efficacy would play an important role in predicting nutrition behaviour among college students. When we build our app we will test a number of students to research this.

**2.6 RESEARCH METHODOLOGY**

There are a few methodologies available to us for data collection. In this instance we will probably be combining methodologies. Our research will be interpretive.

1. Surveying: There are different types of surveys. We have the option to choose from a written questionnaire or individual interviews. Written questionnaires contain the risk of leaving some open-ended questions as a result of asking such specific questions. While individual interviews contain the risk of asking broad open-ended questions. If we chose this option, we will need to decide which type of survey would be more suitable for our project.
2. Group discussion: Seeing as we are college students ourselves, we have the option of gathering a group of other college students for a group discussion. We can speak with them over a period of time to cover a set of topics. A group discussion is much more personal form of research rather than handing out questionnaires. In a group discussion, we as a group can speak directly with college students and also have the opportunity of asking any follow-up questions that may arise. A group discussion can be time consuming, but much more valuable to our project.
3. Statistics: Research and statistics already exist which cover certain topics of our project. We have an option of gathering and sorting through existing research. If we sourced enough research, provided it is there to begin with, those articles could answer a lot of our unanswered questions. If the quantity and quality of research meeting our criteria exists, there may not be a need to practice another research methodology.

**2.7 DATA COLLECTION**

We decided to keep our research local to best tailor our application for Irish students. We researched multiple universities around Ireland to see if or how the nutrition of students were being catered for. Below are a list of our findings.

1. Dublin City University (DCU): DCU have a nutritional step by step guide on nutrition for students. This step by step guide includes top tips for healthy eating. The guideline also contains a student menu catering for specific students whom fall under different categories. It caters specifically for students on a budget, there is a menu catering for the ‘busy student’, and there are also nutrition tips catering for students sitting exams. DCU also has a healthcare professional on campus.
2. Trinity College Dublin: Trinity have nutrition tips for their students, but on a much smaller scale. Simply put, their ‘tips’ only display a detailed food pyramid. Trinity believe eating healthily on campus is a combination of knowledge and choice. However, the staff at catering services are well-informed about healthy eating and make every effort to provide healthy choices at all venues and at all times. Under their Mental Health Management on their website, they have a section dedicated to students suffering from eating disorders. ‘Proyouth’ aims to promote healthy eating habits and prevent eating disorders in college students around Ireland – however when we clicked on the link Proyouth is no longer available for students in Ireland. Due to the lack of update, we would not consider this as currently catering for students’ dietary habits.
3. Dublin Institute of Technology (DIT): Nothing available for students’ dietary habits.
4. University College Cork (UCC): After thoroughly browsing through their website, we noticed that there was only one single page on healthy eating. This page contained a suggested service that the college recommends to students. This service will bring dinner to the student from Mondays through Thursdays for a set price.
5. University of Limerick: Have a set meal plan for their students for a fixed price.

**2.8 DATA ANALYSIS**

Based on our research, it is evident that universities within Ireland do not cater for the dietary habits of students to the extend in which it would be impactful. The university we were most impressed by was Dublin City University. We were most impressed by DCU because this college contained a nutritional step by step guideline for healthy eating. What was most impressive, however, was this nutritional guideline catered for each individual student. It catered for an athletic student, a student who is always on the go, and it also catered for every student sitting their end of term exams.

Trinity College would be second in regards to informational, however we didn’t think it was half as impressive as DCU’s approach. Trinity believe eating healthily on campus is a combination of knowledge and choice independently, however are not providing information for the students’ knowledge, equally not leaving room for much choice. This is where our application will offer both knowledge and choice for students.

While UCC suggested a beneficial service to their students, we saw a problem arise with this. This service has delivery from Monday through Thursday only. This limits students’ choice, as there are three more days left in the week to prepare their own meals. Again, this is where our application will offer both knowledge and choice for students.

In conclusion, the vast majority did not positively contributing to accommodate the diet of their students.

**3.1 SYSTEM ANALYSIS**

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**3.2 DATABASE ANALYSIS**

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**3.3 DEVELOPING LANGUAGES**

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**4.1 SYSTEM DESIGN**

We chose the name Zingy for our application. To keep the name relatable to our application idea, we decided upon adjectives to describe food. Initially we liked Crunchy, but then when we saw Zingy we agreed that Zingy was much catchier! Especially for our target audience.

Talk about wireframes of Zingy, talk about logo, colours, user friendly, etc.

**4.2 WIREFRAMES**

Text.

**4.3 LOGO DESIGN**

Since we kept the application name relatable to our idea, we wanted to do the very same for our logo. We kept in mind that we are creating this application for mobile users. For any given mobile application, it’s the logo icon people see on their screen. Our aim was a good distinctive, yet simple, logo. We chose an apple because it is appropriate to our application and it is practical, yet simple. Fruit conveys an intended message. Out of all fruit, why decide upon an apple? Well, an apple a day keeps the doctor away!

**5.1 IMPLEMENTATION**

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**5.2 IMPLEMENTATION OF DATABASE**

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**6.1 TESTING THE DATABASE**

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**7.1 REFERENCES I have done my references. Add your own references in Harvard style. - Krystal**

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