Tampere University of Applied Sciences

Website Development for Jersey Boy Bagels

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ABSTRACT

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The aim of this thesis is to develop a website for Jersey Boy Bagels by focusing on the three main characteristics of a high-quality website which are performance, accessibility, and design. The thesis also attempts to answer how a high-quality website can impact small businesses. The first chapter introduces the business along with the thesis questions and objectives. The second chapter goes over the three main characteristics the website focused on and explains why they are important. The third chapter discusses how the characteristics mentioned in the previous section affect user engagement. The fourth chapter explains how user engagement can lead to more customers and increased order value.

The results of this thesis provide many small business evidence about the positive effects a high quality site can have. The thesis showed that performance and accessibility have a big impact on search engine optimization. By focusing on these two aspects the site will rank higher on search engines allowing new customers to find businesses that focused on constructing a high-quality site. The design of the website played a big part on ensuring user-friendliness. Having a design that users enjoyed led to an increase in user satisfaction which was shown to have a positive impact on potential sales. An increase in user retention was also shown which is important for continual business growth. Performance, accessibility and design used together should enhance the potential of a business for growth with new avenues for users to discover the business and better techniques to retain current customers.

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Key words: search engine optimization, performance, accessibility, design

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1   INTRODUCTION

During the last two decades ecommerce websites have become the new normal since the rise of companies like Amazon, Shopify, and Alibaba. While these companies might receive constant webpage traffic because of their size and popularity it was not always like this. When small businesses start out nowadays it is important to have an online presence and a website that goes along with it. "63 percent of all shopping journeys begin online, whether or not the customer ends up making their purchase online or in-store" (Ariella 2023). This shows how crucial it is especially for small businesses to enable people to find them and their products online. Internet exposure allows business to reach a larger number of customers that will engage with their products.

The alteration from in-store to online shopping has had a remarkable impact on small businesses that operate from a physical brick and mortar store. Since 2012 online sales have increased at a rate of 1.2 percent on year-to-year (Ariella 2023). Add the effects of the pandemic to this and it is clear that online shopping is here to stay. To ensure that small businesses remain relevant in a competitive industry it is crucial for them to not only have an online presence but be able to provide a seamless online shopping experience to a wide variety of customers. Regardless of the industry, the goal of any ecommerce website is to create sales and generate in-store traffic.

The purpose of this thesis is to develop a website for Jersey Boy Bagels. This business offers New York / New Jersey style bagels in Tampere Kauppahalli in the center of Tampere, Finland. While the store receives a fair amount of foot traffic through the halls of Kauppahalli especially on Saturdays, weekdays tend to be a lot slower. In order to increase online visibility to attract new customers and generate consistent traffic, a website was built to offer a one stop and shop experience for customers. The website increases chances of people finding out about the business during their internet browsing. It also allows people to learn about the history of the business, browse the menu, contact the owner, and most importantly place an order.

The following sections aim to explain the overall thesis plan. First the goal is to explain the topic of the thesis along with information about the company in question. Then, the chapter aims to clarify the question the thesis is attempting to answer. Lastly, the chapter explains the technical goals that were set for the project and how they were met.

1.1 Thesis Topic

Jersey Boy Bagels is a bagel shop located in Kauppahalli in the center of Tampere, Finland (Picture 1). It is run by a Finnish American man named Virgile Hero who is a professional chef. They offer a variety of New York and New Jersey style bagels from vegan options to Philly's. They are open Tuesday to Saturday, with Saturday being their busiest day by far as that is when Kauppahalli receives the most foot traffic. On other days their biggest customers are people who are more familiar with the concept of a bagel which most Finnish people are not. This leads to a scarce traffic during the beginning of the week.

This thesis aims to develop a website for the company that will serve as the face of the company online and offer customers new ways to find and interact with the business. The website will create a new source from which the business is able receive orders. Having multiple sources of orders increases potential orders and revenue. The goal is to discover how a high-quality site can lead to more constant customer traffic and increase revenue through online sales.

PICTURE 1: Jersey Boy Bagels Shop in Kauppahalli.

1.2 Thesis Question

The question being answered for this thesis is as follows:
"*How can a high-quality website help businesses increase customer traffic and revenue?*"

This question attempts to solve a problem that many small businesses face with the constantly growing shift to online sales. Not only is an increasing amount of shopping conducted online, but most people who purchase products in store initially found said product on the internet first. The goal is that by answering the question above, the thesis will facilitate developing notable websites that allow small businesses to attract new users to their site to learn about their business and products offered.

1.3 Thesis Objectives

The following thesis objectives are meant to explain how the thesis question in section 1.2 can be answered:

1   Explain what characteristics make a website "good" and why they are so important when developing a website

2   Develop a website and show how these characteristics should be implemented during the development phase

3   Describe how these characteristics affect new user intake and user engagement on the site

4   Explain how new users and an increase in user engagement correlates with an increase in both in-store and online revenue.

2 CHARACTERISTICS OF A HIGH-QUALITY WEBSITE

The purpose of this chapter is to firstly explain what are the key characteristics that make a high-quality website. Another objective set by the chapter is to discuss how the key characteristics impact small business ecommerce specifically and how these characteristics are measured. Lastly, the chapter explains how these core concepts were implemented in the practical work and why they improve the quality of the site.

There are a variety of characteristics that make a website likeable and usable from a user's perspective. The following sections will focus on performance, accessibility, and design specifically. These are the three main characteristics that will make a website engaging and accessible to a broad range of potential users.

2.1 Performance

The performance of a website refers to the "objective measurement and perceived user experience of a website" (Mozilla 2023). Performance can include loading times, delays by API calls, and any wait times the user might experience. Performance is one of the most important aspects of a website because in the modern age, users will usually expect a fast and responsive site that will process their requests immediately. Especially when considering an ecommerce site, customers expect immediate action from the site if they are going to consider buying a product; they do not want to be troubled and have to question the integrity of the site. The customers must know that they can trust the site before they make a purchase. If a site is slow and not responding the user could get frustrated or believe there is an issue with the site, which increases the chances of them clicking away from the site which is bad for business.

A well coded and organized back end is key in this case to provide data quickly to the front end to display to the user. The backend will ensure great performance across the site and provide great reliability which minimizes any downtimes. Having a responsive back end allows the user to quickly navigate through the site and learn about products being offered. The back end must also be scalable in

case there is an unprecedented amount of growth in a short amount of time. As ecommerce businesses could grow very quickly because of an online post or trend, ensuring the whole business is scalable will allow the company to make the most of any growth opportunities. Any business will always be looking to grow their revenue and customer amount. This makes it vital to be able to adapt and scale the business in a quick manner.

2.2 Accessibility

Accessibility is how easy a website is to use for all users regardless of device, connection, or other capabilities. Accessibility is crucial because a website should be easy to use and navigate for as many people as possible. The user should never feel frustrated when trying to access a feature of the site. This usually means making a site that accommodates for people with disabilities such as auditory, cognitive, neurological, physical, speech, or visual disabilities. In the modern world it also means people who are accessing the site from something other than a computer such as a mobile device, smart watch, or TV or they simply have environmental limitations such as sun glare, inability to use audio, or slow internet connection. To be truly accessible to all additional devices are required. Many people with disabilities navigate through the web with a screen reader, so ensuring that the website can be accessed from any device and all the necessary information is still displayed correctly is important. All these possible limitations must be taken into account when developing a website; features have to be tested to make sure they can function as expected in all use cases.

Another aspect that must be considered is the language that will be used on the site. 60.4 percent of the top ten million sites use English as their main language to support an international audience (Bhutada 2021). If a company is based in a country where the official language is not English, the local language along with others should be offered as an option to accommodate for the local customers. The target audience and the countries they reside in will be the deciding factor on what languages should be available on the site. Making a site accessible enlarges the pool of people who can use the site thus increasing the numbers of visitors and potentially returning customers.

Part of being accessible includes using semantic HTML in the site. Using semantic HTML does not only make the site easier to navigate and read, but it also improves the site's search engine optimization (SEO) making it easier for new users to find the site. SEO is crucial especially for small businesses as they need to use every possible way to increase exposure for the business and simply get people to hear about them. For small ecommerce businesses that are trying to engage customers it is important to broaden the horizons of the website to accommodate as many people as possible. There is no way of knowing who will initially visit the site so making sure whoever it is feels welcome and interested is vital to get the first set of customers. This will in turn make it easier to gain new customers in the future and increase the amount of potential new customers.

Projects often overlook accessibility and see it as an additional burden. This can be true if a site is being reconstructed to include accessibility but that is why Mozilla recommends that "when planning your project, factor accessibility testing into your testing regime, just like testing for any other important target audience segment" (Mozilla 2022). Testing is important to ensure features are not broken and remain accessible to all users; this can be accomplished by running automatic unit tests. When accessibility has been factored into the work it leads to minimal additional workload with a lot of added benefits. These benefits include a simple user experience, larger group of potential customers, and even compliance with the law as website accessibility is enforced by law in some countries. With Australia and Canada holding some of the highest standards regarding website accessibility both in the public and private sectors, more countries are sure to follow. In case the business operates in either of these countries it is important to comply to local regulations.

2.3 Design

Websites that focus on ecommerce and that are trying to sell a product to their users should be designed to have a modern look that is pleasant to look at and grabs the attention of the user. The design of a site represents the public image

of the company and is the first thing that people see when they search for a company. For this reason, it is very important for first impressions and ensuring the user has a positive experience.

The definition of a well-designed website may change with time as new trends come along. A site built in 2010 may well look outdated in 2023 but there are three main aspects that are meant to help build a brand that will last even if the overall design of the site has changes. The design aspects to focus on are target audience, color theme, and layout.

2.3.1 Target Audience

Target audience is the main item to focus on during the entire design process as these are the people who will ideally be visiting the site and have the highest probability of bringing value to the company. The audience should be considered for every visual component that goes into the site. Any pictures or icons should be familiar to the people and make them feel at ease.

Thinking from the perspective of the average user helps determine what images or patterns would fit into the page and what would not. Who the target audience is will determine if a site is made to look simplistic for a meditation business, exciting for a sports betting website, or professional for a banking business. The target audience will also play a part in what the layout of the site will look like, what colors will be used, and every design decision that must be made.

2.3.2 Layout

Next, layout should be focused on because it determines what the user will see first and the order of which the rest of the content will be shown. The first thing the user sees should be something attention grabbing to get them invested into the site. This way they are hooked immediately and are less likely to click off of the site before they explore what the website has to offer. Then, it should be clear to the user where to go next depending on what they are looking for. The user's

attention should be guided into features of the site the business wants them to engage with such as a menu or product list.

It is important that the layout is simple to follow and that it is clear to the user where the main features of the site can be found. The layout should not be changed often as many frequent users will get accustomed to a certain layout and would be forced to re-find items in the site every time the layout was changed Changing the appearance of the site and the location of features can cause the user to get frustrated. The navigation layout should also be made as simple to follow as possible to not let the user get lost in the different pages. Simple navigation is crucial as to ensure users do not get lost in the website and get frustrated when they cannot find items they are looking for.

2.3.3 Color Theme

Lastly, the color theme of a site should be chosen and made consistent along all pages to create uniformity. It should be clear to the user that they are still on the same website while they navigate through the different pages. When designing the site and its colors, it is common to use the 60-30-10 rule for UI design (Christina 2022). The rule states to use one color for 60 percent of the site as the primary color, use another color for 30 percent of the site, and use an accent color for the rest 10 percent of the site. That way it is pleasant to look at and the user is not bombarded with a bunch of different colors.

During the color choosing phase it is important to consider who the target audience is and what colors are they most likely going to perceive as proper colors for the website. The colors chosen should be relevant to the industry the company may be in and the mood the company wants to be conveyed throughout the website. In many cases the chosen colors are either similar to the logo of the company or are associated to the industry that they may be in. It should also be considered whether the site will be made in light theme, which is more of the standard, or dark theme, as one theme will fit better with the theme of the website.

2.4 Characteristics in practical work

All three characteristics including performance, accessibility, and design were the main topics focused on during the development phase of the website. Performance was prioritized to ensure the site ran smoothly and could handle all user made requests without hindering the shopping experience. Another reason why performance is so important, is that the website should be capable of handling a large surge of users without hindering anyone's experience on the site.

Accessibility was then focused on to increase the chances of all users feeling comfortable and welcome when they first arrived on the site. Another benefit from accessibility is that users could access and engage with all key features of the site regardless of their disabilities, language skills, or environmental limitations. Finally, the website design was planned to create a unique experience for the user, leaving them impressed while not limiting any functionalities of the site.

2.4.1 Practical Work Performance

The performance was first taken into consideration because of its importance in ecommerce focused sites. The first aspect to consider for performance is the technologies that are going to be used to build the website. While there seems to be huge array of JavaScript frameworks, ReactJS was chosen to build the front end of this website.

React was chosen because it allowed quick startup for the site along with great library support for many functionalities on the site. These functionalities included libraries for international phone numbers and SMS verification which were both used for user sign up. Another great library was Material UI as it allowed for quick and simple creation of many different modules such as text inputs and buttons. Material UI also created a uniform look for all modules used on the site ensuring the theme stayed constant throughout the site. While an external API, Twilio, was used for the SMS verification, a complete separate back end was built for the website to deliver user and menu information as necessary.

The back end was built using NodeJS and Express to create a fast and scalable back end that could handle a great number of orders while also being simple to setup and get running. This ensured a well running back end that will quickly serve data to the front end and leave the user satisfied. Having a fast - serving back end is critical for the user to have an enjoyable experience on the site. The menu data is received from the back end while the front end dynamically creates a menu item for each bagel. This allows the company to introduce new items and remove others without interruptions to the site and potentially lose out on business.

MongoDB was used to create the database in which all user and menu data was stored. MongoDB was chosen because of its simplicity and ability to get up and running quickly. The schemaless database also allowed for better storage of data in the beginning of the development process as the data structure experienced some changes throughout the process. This made it easy to make changes to tables and data that was already stored. The database was then hosted on a virtual machine that was provided by Tampere University.

2.4.2 Practical Work Accessibility

Accessibility had to be focused on when planning the layout and features before any implementation could actually take place. Navigation is an important part of accessibility as it is the way users are able to access everything on the site. Users should not be left wondering where certain features can be found. The navigation bar was made to be simple at the top to make clear to all kinds of users what the site has to offer. It also shows where to find different features as shown at the top of Picture 2.
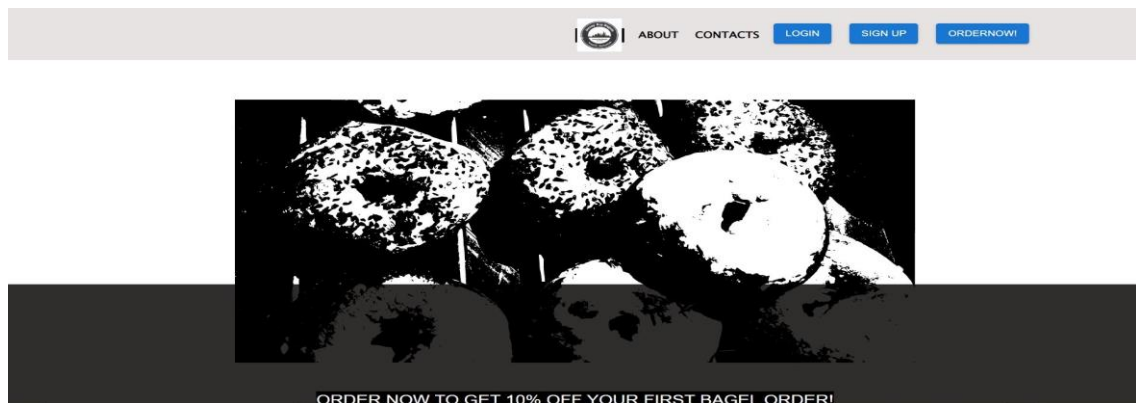
PICTURE 2. Main landing page of the Bagel Website.

The colors were chosen so the main items of the site such as the menu items and navigation were clear and easy to find and use for the user. They have different colors to the theme of the rest of the site to stand out more, making it easier to read for customers. The order now button was even highlighted next to the navigation which aims to encourage users to engage with the feature. This engagement is important to get the user to achieve the goal the company set for them which is to get users to add items to their cart and purchase a product. To ensure accessibility for people with disabilities all buttons and features were built so only a keyboard is necessary. Even the navigation bar can be accessed using the keyboard without the need of a mouse.

During Kristine Bardsen's research regarding customer interaction rates on websites with call to actions she concluded that it is the call to action text that leads to a significant increase in click through rate (Bardsen 2022). This research led to the decision to implement similar text in the call to action seen at the bottom of Picture 2 and the order now button seen on the navigation bar at the top of Picture 2. The similar text creates a link between the two for the customer. The call to action text increases the value of the deal in the eyes of the customer making them more likely to click on the order now button.

Below the call to action, the menu shown in Picture 3 includes buttons to switch the language of the menu items between Finnish and English. The language feature was implemented to make more users feel comfortable looking through the items. Since the store is local to Finland it should accommodate to the locals who are most likely to be customers, but by also having the items in English it shows an international mindset. This is for any tourists that may be interested or simply

anyone who does not speak the Finnish language. Giving the customers the option to shop in the language of their choice enlarges the pool of people who are able to understand the information that is being conveyed.
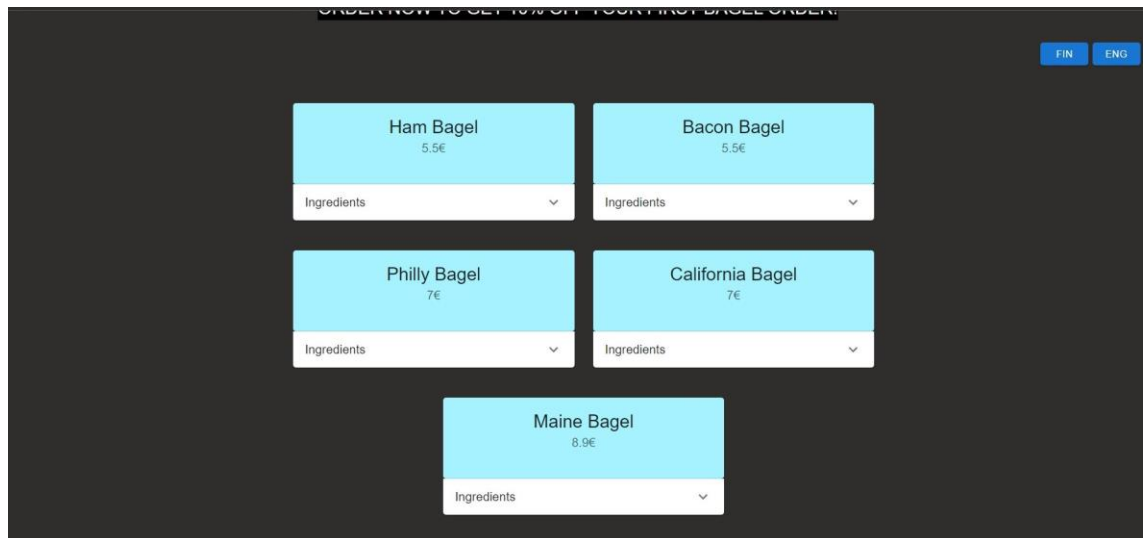
Picture 3. Bagel menu at the bottom of the main page.

2.4.3 Practical Work Design

Finally, the overall design had to be planned out; this included how all the different pages looked, how the menu would work, and how to add and remove items from the order now section. To get the frontend quickly up and running the Material UI library was used. The library allowed for quick output of prebuilt components such as text fields, buttons, and modals. By using a UI library, it also ensured that all the components on the site followed a similar theme and nothing looked out of place.

Each feature was placed in their respective places after much thought on what should the user see first and how they are most likely going to interact with the site after that. That is why the main page has a big picture of the bagels, the main product, as it grabs the attention of the customer and leaves them wanting more. All the user needs to do to find the menu of products that is being offered is to scroll down; this way the customer does not even have to go to a new page to find what they were looking for. The user is guided to scroll down by the call to

action text (see Picture 2) by raising their curiosity on what might be after the call to action text. The menu can be seen in Picture 3.

The colors of the site were chosen based on the requests of the business owner. The colors are present in the logo of the company and are considered the business colors, so it was important to keep the theme of the business the same across all platforms and not deviate. The navigation is also visible right away at the top making it easy to find secondary features of the site. With the concepts of performance, accessibility, and design considered, the project will have a great chance of not only bringing new visitors to the site but also turn the users into paying customers bringing much needed value to the company.

3 HOW THE QUALITY OF A WEBSITES AFFECTS ENGAGEMENT

3.1 Engagement effects

Customer engagement is the concept of "delivering connected experiences to your customers instead of single, one-off, or fleeting transactions" (Afshar). Engagement is what users do on the website, as in do they just look at the main page, do they scroll around, do they click on any new pages, do they change the language; it is the interaction between the user and the site. Afshar who works at Salesforce stresses the importance of using customer engagement data to provide a tailored user experience. The length of time and the end result are two key data points to determine how engaged the user is. If the user actively spends a long time on the site, it means they are interested in what the site has to offer and are potentially contemplating a purchase.

The end result will determine if the engagement was successful in the sense that if the user purchased a product in the end then the website did its job successfully. If in the end the user clicked away from the site, the end result was not ideal; regardless if the user spent a considerable amount of time on the site, they are now knowledgeable of the product and may become an in-store customer. Keeping the user engaged is very important because it leads the user down the customer journey and increases the probability of the final target being reached which is having the user purchase the product off of the website.

3.2 Search Engine Optimization

First, the user needs to engage with the website, meaning getting to the site by clicking on a link somewhere on the internet, usually via a search engine. The quality of a site along with SEO is important to get the user to engage. SEO is the process of improving a site to increase its ranking and visibility in search engines that people use to find websites across the internet. According to Giannakoulopoulos (2019) "website quality is a factor that can give us a predictive or causal relationship with SEO performance". The extensive research done along

with the aforementioned paper showed that there was a high correlation between website quality ranking and SEO performance ranking. This shows the mutual relationship between website quality and SEO as they both benefit each other. In the research conducted by Giannakoulopoulos website quality was defined by the structure of the website, accessibility and performance rankings. The ranking of the website structure was determined by the validity of the HTML, validity of the CSS, Google's mobile friendliness test, and the Google lighthouse best practices audit. Website accessibility was evaluated by looking at the WCAG 2.0 compatibility problems shown by both aChecker and WAVE. Website performance was evaluated by WebPagetest's performance metrics and Google's PageSpeed Insights for mobile and desktop. The benefits from higher quality and SEO play an important part in the website exposure to users who have not yet visited the site. Having good exposure is important to get the first set of customers onto the site; these initial customers will also play an essential part in getting the word out about the business and what they have to offer.

To increase the search engine visibility of a website there are certain aspects of the site that can be focused on. Mainly content and structure of the website must be optimized. Optimization includes adding text relevant to the business in the main pages of the site including any headers and the URL of the website. Another, major technique is to build backlinks to the website from other sites. Backlinks are important as they show the relevancy and authority the website holds to the search engine. This way the website will get linked with high value websites in the same industry which gives the original website a better reputation. All of these techniques help get the website show higher on search engine results, increasing the chances of people stumbling upon the website.

While the quality of a website does not directly impact SEO performance, it is important to have high standards for both to maximize the possible traffic the site will receive. For ecommerce businesses this is crucial as it allows more people to see the product that is being offered and allows them to immediately purchase the product. For smaller businesses in general it is crucial to have good SEO so that their website can actually be found, and the first set of customers visit the site. Without SEO the website is likely to not have many users in the beginning.

3.3 Landing Page Impressions

Once users have reached the site, their attention must be grabbed so that they engage with the site itself and its features. First impressions matter and that is why the landing page must appeal to the interests of the user to ensure that they stay on the site and do not click away immediately. This can be achieved through images, statements, or offers. It is good practice to include images of the main product being offered as users are most likely looking for said product. This good practice was determined by a study which concluded that "87 percent of respondents considered a clear product image as the key element of the online shopping experience" (Ergonode 2021). Clear product image was then followed by product reviews and product descriptions as the next most important. Another option is to use images and text that the company is known to be associated with; this will give the users a familiar experience as they might be accustomed to certain aspects of the company. The goal is to meet any expectations that the user had when they clicked on the site.

The site must also appear trustworthy if a customer is even going to consider buying a product. A good practice to make a site appear trustworthy is to incorporate social media as people see this as the character of the company. This way people can see how others have done business with the company in the past. People are also able to see how others may have enjoyed the products and if they would have done anything differently. A user's trust in the site is crucial; since they are required to put their private information and along with their credit card number or bank details depending on the payment option, they want to know their information is safe before they proceed. From a technical point of view, the back end of the site should be built in a way to encrypt all the user's personal information to ensure it is secure. An SSL or TLS certificate should also be implemented on the site to use HTTPS; this is done to ensure safe exchange of data.

3.4 Feature Engagement

Once a user has found the site based on the SEO practices and the landing page was convincing enough to make them stay, the user's attention should be shifted to the main features that the site offers. There are certain practices and attributes all websites can follow to increase user engagement. While the functionality of these practices and attributes might differ between websites, they all have the same goal which is to engage the user.

According to a literary review by Garett (2016) "navigation, graphical representation, organization, content utility, purpose, simplicity, and readability" were the most frequently used design elements to try and increase feature engagement. It is important that these characteristics are considered for a well-built and good-looking website. While all these aspects were considered when developing the site only the four main ones will be discussed in the following sections.

3.4.1 Graphical Representation

The first practice is graphical representation. This means the placement of features the user will be engaging with. Graphical representation and organization work hand in hand ensuring the layout of the website is concise. The main features should be available from the landing page so that users do not have to navigate around the site looking for them. In the practical work the main features are the menu of items being sold and the order form because these are the features that make the business money. That is why the menu is located right below the attention-grabbing image and offer that is shown on the landing page. With this layout the user does not have to click on anything to access the menu, allowing them to find it with ease. The offer text also encourages the user to scroll downwards, exposing the menu as intended.

Finding secondary features should also be made clear for the user to find with the use of a simple navigation bar where all secondary features can be found in a group. Navigation bars should include clear sections and show where all secondary features can be found. It is also important to keep mobile users in mind when developing a navigation bar. A typical horizontal navigation bar will often

appear broken or be too small for mobile users to interact with. For this reason, it is recommended to create a responsive navigation bar that will adjust to screen size and current device. Generally making the mobile navigation bar appear from a button works best to not clutter the screen. Changing the layout direction to vertical also allows for more information to be shown.

3.4.2 Offers

Offers are an important attribute any ecommerce website should offer. Customers are more likely to be engaged to the website content when they believe they are getting a deal. In turn, different types of offers and offer texts that urge the user to act should be used to bring attention to these features. These offers can include things such as discounts, limited time offers, or free shipping – anything that the user would consider an increase in value if they were to pay for any products or services. The increase in value is the most important benefit offers can give the users.

Techniques such as offers generate curiosity within the user encouraging them to continue exploration throughout the different pages within the site. This exploration may lead to them finding a reason to pull the trigger on their purchase. The reason may be a certain product they found, company history along with the owner's story, or simply another offer. Offers are key factors in ensuring customer engagement and interest and should be incorporated in locations the user cannot miss. Offers outside of the website during an advertisement campaign is also a good method of creating for website traffic. People will want to check out what is really being offered and see it for themselves. Once people visit the site for the offer they will also be exposed to all other products and services that may or may not be part of the offer.

3.4.3 Language Options

Next, language options need to be offered especially for websites that expect an international audience to visit their site. Any language options should be clearly

shown with their respective flags or names in said language, allowing any users that wish to change the language to do so quickly. This language option allows customers to go back to interacting with any features offered on the site, but now with full understanding of the products being offered.

Language options are an important part of the site's accessibility so the options should be prioritized during development to maximize the number of engaged users. As mentioned in Section 2.2, accessibility is a very important part of a website's structure and crucial for a good user experience. Offering different languages allows the site to accommodate for as many people as possible from all around the world. This largens the potential customer pool by a significant amount which in turn increases user engagement and revenue.

3.4.4 End Goal Feature

Finally, there should be an end goal feature that the users would ideally end up at. The end goal feature will always be different depending on the website and industry but usually it is the feature that makes the company money. For ecommerce sites it will mainly be the catalog or list of products they have available. For the bagel site, the end goal feature is the order form as it is the main source of money the site has.

It is important that the user remains engaged and does not leave the site until they decide to interact with the end goal feature. The goal of all other features and design choices is to eventually have the user turn to the end goal feature and interact with it. The purpose for many secondary features is to keep the user engaged and point them toward the end goal feature. These features "offer incentives to potential customers who have already visited your website or engaged with your business" (Peterson 2022). Peterson also stresses to include services such as return and refund policies as they build trust between the company and the customer. The secondary features are used to keep the user interested and to offer other services that help the business stand out. These services provide a pleasant customer journey for the user, keeping them satisfied with the website.

3.5 Quality aspects in practical work

3.5.1 SEO

First SEO was focused on to ensure that there was traffic going to the site in the first place. Some simple SEO tricks were used. Keywords and their location were focused on. Since the site sells bagels it was ensured that the word "bagel" appeared in key places such as the page's title tag, URL, and in the actual content of the site. Next, all pages were made with a clear purpose and content. This way there are no pages that do not bring traffic, which increases the ranking of the site on search engines.

As mentioned in Section 3.2, performance was focused on heavily during the development phase of the site because performance also impacts SEO ranking. At the start of 2018 Google announced that "page speed will be a ranking factor for mobile searches" (Google 2018). Because of this change mobile performance and accessibility was prioritized to increase the site's SEO ranking. Also, since a lot of the users are expected to visit the site from their mobile devices, the site was made as mobile friendly as possible to make the website user friendly regardless of their device and to also increase ranking by Google. It is important to note that ranking based on speed was already in effect for desktops but as of 2018 also in use for mobile devices.

Other studies conducted by Google show that high performance sites had additional benefits such as increased visitor retention, increased visitor happiness, and reduced operating costs (Google 2018). These three huge benefits are crucial for positive user engagement which is the goal of most website features. This is the case especially for small businesses as they might be operating on a strict budget and reducing those costs could be a main priority. By writing efficient code and avoiding bloated libraries, the website requires less hardware to run the website properly. This reduces the amount of processing power needed which reduces operating costs. These are all benefiting factors towards any business but

especially a small bagel business that needs to maximize the effectiveness of their online presence and websites while keeping expenses to a minimum.

3.5.2 Ease of Use

For ease of use, more visual and technical aspects were focused on such as the functionality of the site. Users want a simple online shopping experience they can follow. Making all the features and sections of the site easy to find and understand will increase engagement. If users are not able to understand the purpose of certain aspects of the site, they are not likely to interact with said aspect. A design choice to make the site easy to use was declaring a clear navigation bar at the top with a variety of options to choose from. In the navigation bar they are also able to login or sign up for an account through the modal shown in Picture 4, which pushes for more user engagement with its clean looking design.
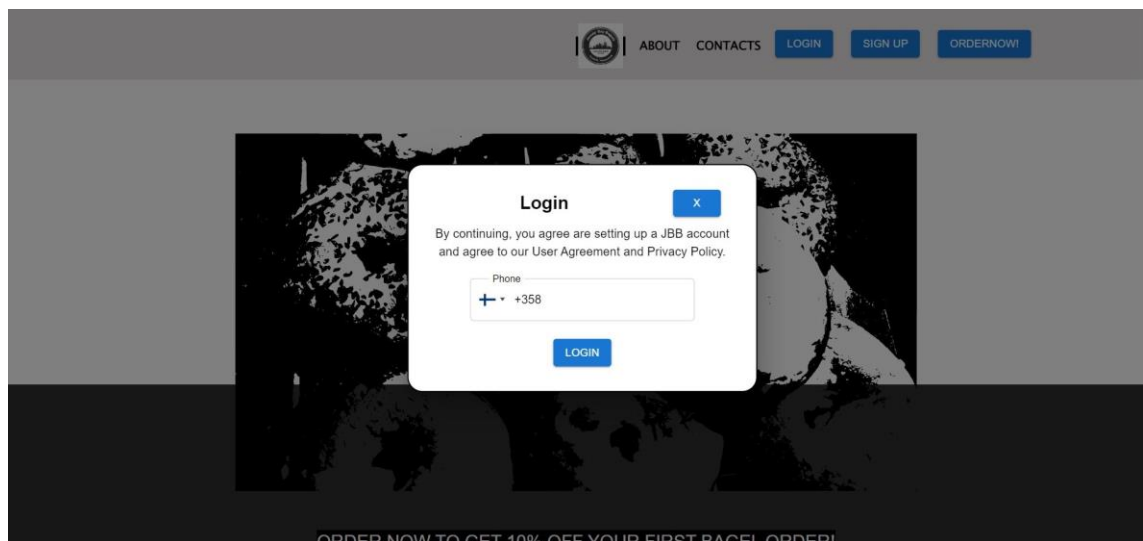
PICTURE 4. Login Modal used by users to sign into the website.

The navigation bar also has a mobile mode which places all the tabs inside a hamburger menu at the top left of the page as shown in Picture 5. This only appears on screens of a certain width to accommodate for mobile users and desktop users with smaller screens. The aim of having both navigation options is to make the site as accessible as possible for as many users as possible.
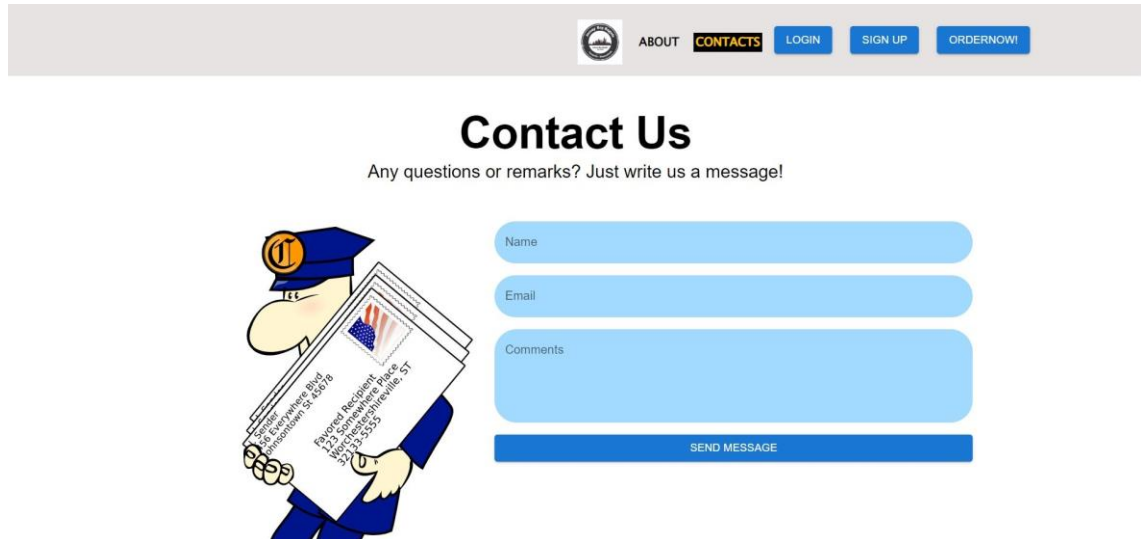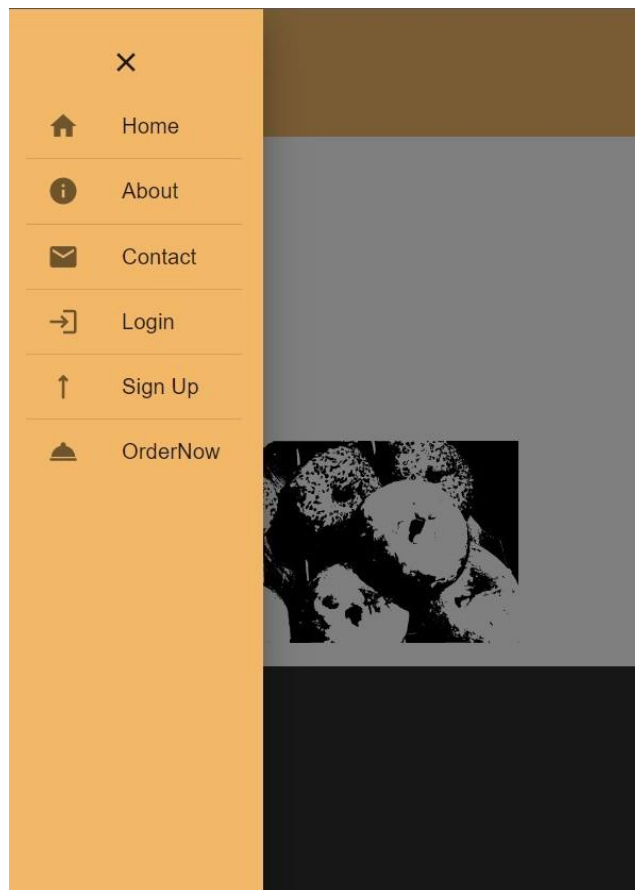
PICTURE 5. Mobile Navigation Bar.

The site also has a clear call to action at the bottom of the main page to remind the user to act with the menu they see below. Having the call to action text at the bottom shifts the user's attention towards the bottom of the site. This in turn generates curiosity on what products the customers are able to get the deal on and so it is towards the bottom of the website where the bagel menu is displayed. The order form also has clear add and remove from cart buttons for all menu items. These small functionalities all combine to give the user a simple and error free shopping experience.

3.5.3 Trustworthiness

Appearing trustworthy was also heavily focused on to ensure that users were comfortable spending their money at the site. It was important that the design of the website in its entirety looked clean, modern, and reputable. If the users were not comfortable, they would end up leaving and decreasing engagement. People would not spend money in a website that looked sketchy to them. A good way of

increasing a user's trust in the site is adding contact information to the site in case the customer has any questions or concerns. Customers should always be able to reach someone in the company for customer support using some type of form where they are able to voice their concerns and leave an email address where they can be reached as shown in Picture 6.

PICTURE 6. Contact form used to send a message to customer service.

There are multiple ways of contacting the business in case of any issues or questions. Some of these ways are the contacts section in the navigation bar and social media links found across the site. This gives users comfort knowing there is someone they can talk to about any concerns they might have. Social media presence is also important as it gives people a chance to see how others have interacted with the company, both on a positive and negative note. Users can feel a sense of realism as they are able to see what previous customers have paid for and how they enjoyed their product, which in this case is bagels. More importantly, social media will often lead to more engagement through people sharing their experiences.

Another big benefit of business contact on the website is reducing employee workload. Allowing the user to submit a question or concern online allows the business to reply on their own time. Instead of being confronted in-store and disrupting the experience of other customers, the business is able to review and solve the issues separately, all while giving the person a sense of trust in the company and making business processes more efficient.

3.5.4 Calls to Action

Calls to action were placed around the site to try to get the users to click on certain elements. On the navigation bar the order form button is both larger than the other buttons and has a different color scheme to better stand out. This is because once the user has chosen the bagels, and they want to order, it should be clear for them on how to proceed. The button catches the customer's eye and entices them to press it. These call-to-action buttons also provide great analytics for the business. The number of clicks on certain buttons provide data about what the users are most interested in and also what they are not interested in. This data can help influence marketing and sales decisions the business will inevitably have to make.

The order form button is a call-to-action button but as discussed in Chapter 2, design elements alone are not enough to convince the user to pull the trigger on the purchase; that is why there is also a call-to-action text below the initial image of bagels on the main page. This call-to-action offers first time customers a discount increasing the value of the customers potential order and gives them a reason to spend their money on bagels. The value is further increased by the use of enticing phrases such as "bestseller" for certain bagels which has been proven to significantly increase click through rate (Bardsen 2022). The call-to-action also ensures that if users did not initially recognize the purpose of these texts, they now understand the next step in the customer journey.

The use of enticing phrases was proven by Bardsen in her second hypothesis where she stated that familiar naming conventions (bestseller and celebrity names) positively affect the willingness of customers to follow the intended customer journey (Bardsen 2022). The intended customer journey can vary depending on the industry and some companies even make their own versions. In the case of small businesses trying to increase their online sales the intended customer journey includes five steps (Peterson 2022).

1. Awareness which means getting the customer to be aware of the product's existence

2. Comparison is where the customer compares the product to other similar products that serve a similar function and determine which one is best for them

3. Purchase which is where the customer has finally decided to purchase the product being offered

4. Retention because even after the customer has purchased the product, for a company to continually grow and stay in business they need to retain the customers. It is important to provide a satisfactory customer journey to ensure the customer comes back and keeps purchasing products.

5. Advocacy is where people who enjoyed the product let others know what they thought through word of mouth. This also include product reviews and social media posts.

The purpose of the calls to action is to get the user to perform certain actions. The offer attempts to convince the customer to engage the menu and see what bagels are offered. The order form button attempts to convince the user to finalize their decision about the purchase and actually order the bagels.

4   HOW ENGAGEMENT AFFECTS CUSTOMER ORDER VALUE

4.1 Engagement to Purchase Transition

This section aims to explain the effects on customer order value after the user has engaged with the site. Once the customer has engaged with the website, the goal should be to have the customer purchase a product from the site. This is the pass or fail part in the customer journey as "once potential customers are satisfied with researching and comparing their options, they will eventually decide." (Peterson 2022). It is up to website and its persuasions if the customer ends up purchasing a product. The goal of any ecommerce site is to bring financial value to the company. Financial value can be achieved by following data points such as click through rate and ensuring the user is satisfied with their shopping experience. The target set by small business ecommerce sites is to drive up business and increase revenue; the following sections explain how this is achieved using the engagement elements described throughout Chapter 3.

User engagement on ecommerce websites can have a positive impact on purchase intentions by encouraging customers to spend more time browsing the site, viewing products, and learning about the company and its offerings. This increased engagement can lead to greater familiarity with the brand, which can in turn increase the likelihood that a customer will make a purchase. Engagement can be measured through a variety of metrics such as time spent on the site, number of pages viewed, and number of items added to the shopping cart. Additionally, user engagement can be increased through the use of personalized recommendations, user reviews, and social media interactions, all of which can help build trust and credibility with potential customers.

4.2 Customer Satisfaction

This section will discuss the importance of customer satisfaction to ensure customer retention and consistent customer orders. Customer satisfaction is a goal that needs to be met because it leads to an increase in site revenue by keeping

the user on the site. It is important to keep the customer content and minimize the amounts of actions that could frustrate them. Customer satisfaction is especially important because according to a research paper about the correlation of website quality and customer satisfaction along with purchase intentions by Bai (2008), "website quality has a direct and positive impact on customer satisfaction, and that customer satisfaction has a direct and positive impact on purchase intentions". This shows that while website quality might not directly affect product sales, it does have a knock-on effect by keeping the customers satisfied which in turn leads to an increase of purchase intentions. Keeping customers satisfied also leads to them being on the site for longer allowing for more chances of them finding a product they might enjoy and considering purchasing it.

When customers are satisfied with their previous interactions and experiences with a company, they are more likely to return to the website and make future purchases. This leads to a more consistent flow of sales giving the company constant revenue. Satisfied customers are also more likely to recommend the company to others, which can lead to increased brand awareness and new potential customers. For small businesses recommendations are everything; by getting a good reputation early on, people will be more inclined to give the company a chance and try out their products.

Customer satisfaction can be achieved through simple and self-explanatory features. It is important to ensure everything the user might encounter has a clear and straightforward purpose. Therefore, ease of use is highly stressed during the development phase of ecommerce sites; the user's intentions and common mannerisms should be kept in mind to make sure the user is not left confused by sections of the site. It is also important to focus on the perceived quality of the website and the products customers may be interested in. The focus on perceived quality was determined by a research paper by Lee (2016) where "results show that perceived quality had the greatest influence on the customer satisfaction for satisfied and dissatisfied customers".

Also, the complete process starting from selecting the product to checking out and paying should be easy to follow and have the fewest possible steps. This is because once the customer has made up their mind that they want to buy the

product, it would be detrimental to have any blockades or hiccups that would pre-vent the customer from getting said product.

4.3 Click Through Rate

This section explains how some indicators can be used to determine what users are looking for and what is stopping them from completing the customer journey. Click through rate refers to the proportion of visitors who follow a link from one site to another. Click through rate is a good indicator of how users are engaging with certain features, buttons, and links on the site. The use of call-to-action buttons should be incorporated as they have been proven to increase traffic. They help the customers pull the trigger on the purchase by usually offering some type of first-time discount or a call to the customer to perform a certain action.

In the work published by Bardsen in 2022 during her first hypothesis which was later proven she states that "design elements e.g. location, color, text weight, don't necessarily have any impact on conversion if users do not see the value of the call-to-action" (Bardsen 2022). This implies that making the call-to-action button stand out will not significantly improve click through rate alone. While she did not claim that these design elements are bad to have, she made it clear that more is needed to have an impact on click through rate.

In Bardsen's second hypothesis she debated how the text of the call-to-action including familiar naming styles and brand names would impact click through rate. Bardsen concluded that it "resulted in a significant increase in clicks to that page, confirming the hypothesis that users initially did not recognize the meaning of the button, and that that new understanding positively affects their willingness to fol-low the intended customer journey" (Bardsen 2022). This means that while cer-tain design elements might be able to get the visual attention of the user, to get the user to click on the purchase button the call-to-action must show value to them. Value can be created by mentioning the name of the creator, mentioning keywords such as "bestsellers" or "brand leader", or simply offering deals that would be hard for the user to pass on.

While call-to-action buttons are important to have, it is even more crucial to have convincing texts that go along with them. The call-to-action button being a different color than the theme of the site is still good practice, as the button will pop out to the eyes of the user grabbing their attention and giving them a reason to read the call-to-action offer.

A high click through rate is a good indication that user engagement and interest in the products and services being offered is high. It can also be seen as a positive sign that users are finding it easy to navigate the site and find what they are looking for. As a result, high click through rates on a website can be expected to drive purchase intentions up as users may have a better understanding of the products and services on offer. However, it is important to note that click through rate is just a step of the entire conversion rate. Conversion rate means the percentage of the total number of visits to the website that result in a conversion action (Shopify 2022). In the case of the bagel site the conversion action is a customer purchasing a bagel. A high click through rate does not necessarily mean that the user will complete their purchase. Other factors such as the landing page, shopping cart experience, and payment process can have an impact on the conversion rate. For that reason, it is important to ensure all aspects of the site are simple and easy to use for all potential users.

4.4 Engagement aspects in practical work

The website has been developed with the philosophy of maximizing user engagement to increase customer order value. To achieve this goal, the ideas explained in sections 4.1 through 4.3 were followed, prioritizing user engagement when building features and designs. The following sections aim to explain how this was achieved in the practical work.

To further increase customer satisfaction, a strong emphasis was placed on optimizing the checkout process to make it as smooth and efficient as possible. These efforts aim to lead to a higher click-through rate and more satisfied customers. Customer satisfaction is key in this part of the website as it has been proven to be a factor in customer retention (Bai 2008).

4.4.1 Customer Satisfaction Features

In the practical work, customer satisfaction was a core concept taken into account when planning aspects of the site including ease of use and accessibility. For ease of use, features of the site were made to have a clear and simple purpose. Making one feature have multiple functions could confuse users. All pages on the site have only one purpose to serve the user.

The main page is used to offer the customer products made by the business. Also, the main page is used to introduce the customer to what the website is about and what is its purpose. The about page tells the story of how the store came to. It also explains the background of the founder and why the store is important. The backstory can be used to give the customer something to relate to, making them more comfortable on the site and earning their trust. The contact page serves as the main communication channel between the business and the customer. Having a contact page is important because if for any reason the customer is not satisfied there is a place for them to voice their concerns and the matter can be resolved. Without it, customers would get frustrated and leave the site without a second thought and have a very low chance of ever returning.

The sign-up modal allows the user to create an account using their phone number. This way they are able to start earning rewards points towards their free bagel. A rewards system is an important way to increase the customers purchase value and give them a reason to come back to the store. The sign-up modal goes hand in hand with the login modal. The login modal is where users enter their phone number before their purchase to actually save their rewards points.

Ensuring that mobile users had an equally simple and effective customer journey as computer users was also an important way of keeping users satisfied. Since user accounts are dealt with phone numbers and a majority of new customers are from younger generation it was reasonable to expect a large number of users to access the site from their mobile phones. That is why a separate navigation bar was implemented for mobile users; it ensured easy access for mobile users

between all features. All pages also had slightly different layout when accessed on mobile phones; this included changing the size of pictures and input fields. The pages were also changed to a vertical view to allow for all features to be easily visible.

4.4.2 Click Through Rate Features

The website includes two main click through rate features that work together to encourage customers to buy the products. There is an additional smaller feature as well. The first main feature is the order now button users are able to access to input how many and which bagels they would like to order. The click through rate of this feature can be easily viewed as the feature is a button and button clicks can be tracked. If a customer clicks on the order now button, a fair assumption can be made about their purchase intentions. While they might not purchase a bagel one hundred percent of the time it shows their intentions and that they might not be far mentally from being convinced.

This is where the second main click through rate comes in to play. A good way to make customers more likely to go through with their purchase intentions is by adding a textual call-to-action that adds value to their potential purchase. The text also includes similar verbiage as what is on the order now button, creating a mental bridge between the two components in the customer's mind. This bridge gets the user to go back and forth between the two components while they contemplate their decision. While the call to action text itself cannot be clicked it is crucial for the click through rate of the order now button because as Bardsen (2022) concluded in their research, it is the familiar naming styles and value the text brings to the user that impacts click through rate, not the button itself.

The additional smaller feature regarding click through rate is incorporated in all items in the bagel menu. Each item holds information about certain bagels, and they all have a small dropdown menu at the bottom. This dropdown menu is used to show all the ingredients included in said bagel. The click through rate on which

bagels were viewed is a good indicator on what bagels customers might be interested in.

Statistics such as user engagement on certain menu items can be compared to actual sales data of the same bagels. If an item has a lot of user engagement but is not actually being sold a lot this can be seen as the item not meeting customer expectations when they learn more about the bagel. This can include issues with the price point or unpopular ingredient and this issue should be addressed with change to said menu item.

5   DISCUSSION

The purpose of this thesis was to broaden the online presence of Jersey Boy Bagels and increase revenue through an online store by developing a website that followed certain principles to optimize engagement. By focusing on the characteristics outlined throughout Chapter 2, the website was developed prioritizing performance, accessibility, and having simple-to-follow design. While the business has a simple website set up by Webflow, it lacks fundamental elements that engage customers and help them go through with their customer journey. In addition, the new website offers brand new features such as customer sign up and online orders that are expected to generate both user engagement and revenue.

With room for improvement on the digital side of things, the practical work conducted for this thesis developed a website for Jersey Boy Bagels with the goal of being able to attract new users and generate additional revenue. The new website implemented many new features not present in the initial website to meet these goals. The website includes an interactive menu that can be easily changed according to business needs with the use of an admin page. SEO was used to make the website easy to find for new users throughout the internet. The website also allows the user to sign up and login using the phone number to keep track of their orders and receive rewards points. Most importantly the website allows the user to order right from the website.

The goals set for this thesis were achieved after the development of the site was complete. The thesis explained how certain features were used to attract new users and how to engage the ones who landed on the site. Also, the thesis outlined how some features were implemented to increase the potential order value of users in the aim to increase revenue. The website was then shown to the business owners for feedback and certain aspects of the site were changed according to requests such as the main theme colors of the site.

Once implemented and published to the internet, the website should introduce the business to a set of new users. Permission from the business is required to proceed. Then changes can be made after initial findings of the effectiveness of the website and customer feedback.

The following section aims to cover the limitations faced during the completion of the thesis and practical work. While the thesis was able to cover everything that was planned there were certain aspects that could have been taken further into consideration. The limitations were broken down between business limitations and practical work limitations.

5.1 Business Limitations

The first limitation on the thesis caused by the business is their budget for online activities. This prevented the site from being published on the internet and properly tested. Since the company had a free Weebly website it did not make business sense to increase expenses. With a larger budget the company would be able to generate more online attention for the business by offering a site with more tools and information for the customers to use.

Another limitation is the workload of orders that the current staff is able to handle. Since there usually is only two to three staff members working at the same time who focus on instore orders, it would require a reorganization on their current business practice to accommodate for online orders. While orders can be made from the website, online orders have to be paid and picked up by the customer on site. This puts an increased burden on the employees that they are not able to handle with their current workforce.

5.2 Practical Work Limitations

One limitation during the development of the practical work was choosing which libraries and services could be used because of the budget set by the business. While we had our own backend API there was still a need for outside services for certain functions. The Twilio service was chosen for the user phone number verification for its low cost but other services had to be forfeited. The Stripe payment processing service was considered for use but ultimately the business decided to only handle payments in store.

It is probable that in the future the site will be published on the internet, once all limitations have been resolved. Work is currently being done towards this goal as the backend side of the application is already running on a RasberryPi server that is accessible remotely. This provides a uniform database that can be accessed. While the front end still has to be run locally, development is ongoing to have the site published in the future.

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