Impact of Educational Texts on Celery Packaging: Exploring Consumers' Intentions towards Organic and Local Produce in the Netherlands

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Abstract

This research investigated the impact of educational texts on celery packaging in the Netherlands on consumers' intentions to purchase organic and local produce. Three different informative texts were used to manipulate the perceived outcome efficacy on celery packaging, focusing on reducing pesticides and supporting local farmers. An online experiment collected data from Dutch consumers, who were exposed to either the control condition or one of the three informative texts. The data analysis aimed to assess the influence of the manipulated perceived outcome efficacy on consumers' intentions to purchase organic and local produce. The results indicated no statistically significant differences in consumers' intentions to purchase organic and local produce between the different conditions. Furthermore, no significant differences were observed in consumers' perceptions of the environment, health benefits, support for local farmers, taste, and perceived advantages of the products. These findings suggest that while educational texts on packaging have the potential to raise awareness and provide information, they may not be sufficient to significantly influence consumers' purchase intentions and perceptions. Further research is needed to explore additional factors and strategies that can effectively promote sustainable and healthy choices among consumers. This study contributes to the existing literature on sustainable consumer behavior and highlights the complex nature of influencing consumer intentions through packaging interventions.

Keywords: local, organic, produce, consumer behavior, awareness, intentions, perceptions, perceived outcome efficacy, packaging

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The food choices we make can have a significant impact on both population health and the health of the planet (Godfray, et al., 2010; Rockström, et al., 2009). In recent years, there has been a growing movement towards consuming more organic and locally sourced produce. This movement is caused by the many benefits that these types of foods offer, including reduced exposure to harmful chemicals, improved sustainability, and support for local economies (National Research Council, 2010; Rockström, et al., 2009). In this Bachelor thesis, the many ways that local and organic produce can benefit both humanity and the planet and why choosing these options is an important step towards a sustainable future, are highlighted. Although organic and local produce seems to be contributing to a healthier planet (Rockström, et al., 2009) and shows benefits for humanity (Gomiero, et al., 2011), still not all consumers are rooting for these products. Despite the many benefits of organic and local produce, it is true that most consumers still choose conventional produce instead. Only half of the consumers (51%) state they sometimes, often or always buy products with the label organic (Hilhorst, Kranenburg & De Jong, 2020). There can be a variety of reasons that support not buying organic products, such as concerns about cost, limited availability of organic options in some areas, or simply a lack of awareness about the benefits of these types of foods (Bond, et al., 2006; Crowder & Reganold, 2015; Denver, et al., 2022; Kushwah, et al., 2019; Reganold & Wachter, 2016). There are also barriers that support not buying local produce, such as price and availability (Qi, et al., 2017). Additionally, the marketing and advertising efforts of large food corporations and lack of awareness of the benefits of organic and local food can make it difficult for consumers to make informed decisions about the food they buy (Kenner, et al., 2008). However, despite these

challenges, there are efforts underway to both decrease the lack of awareness surrounding the benefits of organic and local produce and to make these options more accessible to consumers. This includes initiatives such as community-supported agriculture, farmer's markets, and online grocery delivery services, which are presented in companies such as Hofweb, who prioritize community and local and organic options (Hofweb, 2023).

Ultimately, the choice to buy organic and local produce is a personal one, and consumers must weigh the many factors that go into making that decision. However, by becoming more aware of the benefits of these options and supporting efforts to make them more widely available, all can play a role in building a more sustainable and healthy food system for ourselves and for the planet. It is of importance to better understand consumers' choices to promote more healthy and sustainable purchase behavior. Therefore during this Bachelor thesis the aim is to manipulate the dependent variable of organic and local produce consumption by using the independent variable of the Perceived Outcome Efficacy, which is based on factors such as education, knowledge, awareness and beliefs.

The Perceived Outcome Efficacy (Shamsi, et al., 2020; Sreen, Chatterjee & Sadarangani, 2021; Zagata, 2012) tends to play a role in sustainable consumer behavior, and since this efficacy is sensitive to interventions (Schwarzer & Fuchs, 1996), it is an interesting theory to manipulate through the use of information proficiency. The independent variables such as the perceived outcome efficacy of consumers towards organic and local produce consumption is manipulated through the use of three different informative texts shown on celery packaging: "contains proven less pesticides than peers", "with the purchase of this product you support the local farmer" and "contains proven less pesticides than peers + with the purchase of this product you support the

local farmer". The dependent variable is measured by whether the participant agrees to purchase the organic and local product in the future and if they plan to buy the product in the future.

Therefore, the aim of this bachelor thesis is to research the following: can sustainable and healthy choices be stimulated among the Dutch by manipulating the Perceived Outcome Efficacy through educational texts on celery packaging in the Netherlands? Through an online experiment it will be investigated whether providing information about the benefits of the organic and local on organic and celery packaging can stimulate the consumption behavior of organic and local vegetables. It is to be expected that the participant who sees an organic and local (Dutch) packaged celery with one of the benefits of the product on it, is more inclined to be aware of the advantages stated on the package, but is also more likely to see the other benefits of organic and local products.

Theoretical Framework

In today's world, consumers are often faced with a wide array of choices when it comes to purchasing food. While local and organic produce offer numerous benefits, such as improved taste, environmental sustainability, and potential health advantages, the lack of awareness among consumers regarding these benefits can hinder their willingness to buy such products. This theoretical framework will present the lack of awareness, emphasizes the importance of information provision in strengthening the outcome efficacy of local and organic produce and puts focus on the use of packaging in this all.

The Impact of Awareness on Healthy and Sustainable Produce Consumption

On today's rapidly changing Earth, the significance of healthy and sustainable food choices has gained increasing attention. Within this context, the consumption of organic and local produce has emerged as a key consideration for individuals seeking to prioritize their health and contribute to a sustainable food system. However, a lack of awareness can hinder the adoption of such choices, leading to potentially negative consequences for both individuals and the environment. This chapter explores how a lack of awareness contributes to less healthy and sustainable produce consumption and highlights the importance of education and information dissemination to address this issue.

Limited Knowledge of Benefits

One of the primary factors behind the reduced consumption of organic and local produce is the limited understanding of the associated benefits (Hill & Lynchehaun, 2002). Organic produce, for instance, is grown without the use of synthetic pesticides and fertilizers, reducing

exposure to potentially harmful chemicals (Winter & Davis, 2006). Similarly, locally sourced produce supports local farmers, reduces transportation-related carbon emissions, and ensures fresher and more nutritious products (Cleveland, et al., 2015). However, individuals lacking awareness about these advantages may not comprehend why it is essential to prioritize organic and local options (Law, et al., 2016). As a result, they may opt for conventionally grown produce without considering the potential health and environmental implications.

Perception of Higher Costs

Another significant barrier arising from a lack of awareness is the perception that organic produce is costlier than conventionally produced alternatives (Aschemann‑Witzel & Zielke, 2017). While it is true that organic products can sometimes carry a higher price tag due to the increased costs associated with organic farming practices (Singh, 2021), this perception may not always reflect reality. Without proper awareness, consumers may assume that healthier and more sustainable choices are financially burdensome (Hempel, 2016) and, as a result, opt for cheaper options. This perception can create a cycle where individuals prioritize short-term savings over long-term health and environmental benefits.

Influence of Marketing and Advertising

The power of marketing and advertising cannot be underestimated when examining the impact of awareness on produce consumption. Large-scale food corporations often invest substantial resources in promoting conventionally grown products, highlighting their availability, affordability, and convenience. In contrast, organic and local producers, especially small-scale farmers, may struggle to compete with the marketing budgets of their industrial counterparts

(Dalcin, et al., 2014; Gordon, et al., 2011). As a consequence, consumers may be bombarded with messages promoting conventional produce (Scully, et al., 2012) while lacking exposure to the benefits and availability of organic and local alternatives (Żakowska‑Biemans, 2011). This information imbalance further perpetuates the lack of awareness and inhibits healthy and sustainable choices.

Limited Access and Availability

In some cases, a lack of awareness may be exacerbated by limited access and availability of organic and local produce. Depending on geographic location and socioeconomic factors, individuals may have restricted options when it comes to purchasing these products (Sirieix, et al., 2008). Grocery stores in certain areas may have limited organic and local sections, making it difficult for consumers to access and choose healthier and more sustainable alternatives (Zepeda & Deal, 2009). Consequently, the lack of availability can reinforce the perception that such produce is niche, expensive, or difficult to find, perpetuating the cycle of reduced consumption.

A lack of awareness undoubtedly plays a significant role in less healthy and sustainable produce consumption, specifically concerning organic and local options. Limited knowledge of the benefits, misconceptions about costs, the influence of marketing and advertising, and restricted access all contribute to this issue. To address these challenges, it is crucial to prioritize education and information dissemination campaigns that raise awareness about the advantages of consuming organic and local produce. By empowering individuals with knowledge, debunking myths, and promoting accessibility, we can foster a shift toward healthier, more sustainable, and environmentally conscious food choices.

Perceived Outcome Efficacy: How Information Provision Enhances Awareness and Drives Healthy and Sustainable Produce Consumption

In the previous chapter, we explored how a lack of awareness contributes to less healthy and sustainable produce consumption. This chapter focuses on the concept of perceived outcome efficacy and its role in shaping individuals' attitudes and behaviors towards organic and local produce. By providing information that highlights the positive outcomes associated with choosing such options, we can enhance perceived outcome efficacy, increase awareness, and drive the adoption of healthier and more sustainable food choices.

Understanding Perceived Outcome Efficacy

Perceived outcome efficacy refers to an individual's belief in their ability to achieve desired outcomes through specific actions (Ajzen, 2002). In the context of healthy and sustainable produce consumption, it relates to individuals' confidence in the effectiveness of choosing organic and local options to improve their health and contribute to a more sustainable food system (Zhang, et al., 2023). Information provision plays a vital role in shaping individuals' perceptions of outcome efficacy by highlighting the benefits and positive outcomes associated with organic and local produce (Rothman & Salovey, 1997).

Health Benefits and Personal Well-being

One key aspect of perceived outcome efficacy in this research, is the belief that choosing organic and local produce can lead to better health outcomes and personal well-being. Information provision can disseminate scientific evidence regarding the nutritional superiority of organic produce, lower pesticide exposure, and the potential long-term health benefits (Niggli, et

al., 2016). By emphasizing the positive impact on individuals' well-being (Hines, et al., 1987), such as increased energy, reduced risk of certain diseases, and improved overall vitality (Cranfield, et al., 2010), information provision enhances perceived outcome efficacy and motivates individuals to prioritize healthier food choices (Fishbein & Yzer, 2003).

Environmental Impact and Sustainability

Information provision can also enhance perceived outcome efficacy by emphasizing the positive environmental impact of choosing organic and local produce. By educating individuals about the environmental consequences of conventional farming practices, such as soil degradation, water pollution, and greenhouse gas emissions (Forman, et al., 2012), information provision highlights the potential for personal actions to contribute to a more sustainable food system (MacRae, et al., 2012). Communicating the positive outcomes, such as reduced carbon footprint, preserved biodiversity, and support for local farmers, strengthens individuals' belief that their choices can make a meaningful difference (Zimmerman & Schunk, 2006).

Social Responsibility and Community Impact

Perceived outcome efficacy can be further enhanced by emphasizing the positive social and community impact of choosing organic and local produce (Glavas & Kelley, 2014). Information provision especially can highlight the importance of supporting local farmers, promoting fair trade practices, and reducing dependence on industrial agricultural systems. By showcasing the potential for individuals' choices to contribute to the well-being of their local communities, information provision fosters a sense of social responsibility (Carrigan, et al., 2011) and empowers individuals to make a positive impact through their food choices.

Educational Resources and Practical Guidance

Information provision could go beyond simply conveying benefits and outcomes. It can provide educational resources and practical guidance to support individuals in their journey towards healthier and more sustainable choices (Corner, 2017). By offering cooking tips, meal plans, and recipes that showcase the delicious and creative possibilities of organic and local produce, information provision empowers individuals with the knowledge and skills necessary to make these choices a practical and enjoyable part of their everyday lives. Practical guidance enhances individuals' perceived outcome efficacy by equipping them with the tools to successfully implement healthier and more sustainable practices (Elshatarat, et al., 2016).

In conclusion, information provision plays a crucial role in enhancing individuals' perceived outcome efficacy, driving healthy and sustainable produce consumption. By highlighting the health benefits, environmental impact and social responsibility associated with choosing organic and local produce, one can empower individuals to make informed choices. By emphasizing positive outcomes such as improved well-being, reduced environmental impact, and community support, individuals' confidence in the effectiveness of their choices is strengthened. Including educational resources, and practical guidance further supports their belief in their ability to achieve positive outcomes. Overall, information provision that enhances perceived outcome efficacy is a powerful tool in promoting healthier and more sustainable produce consumption, contributing to a more aware and sustainable food future.

Packaging as a Catalyst for Information Proficiency: Driving Healthy and Sustainable Produce Consumption

Packaging plays a significant role in our purchasing decisions nowadays. Beyond its functional purpose of protecting and preserving products, packaging can also serve as a powerful tool for promoting healthy and sustainable produce consumption. This chapter explores how packaging design and labeling can contribute to increased awareness and support informed choices, ultimately driving the demand for organic and local produce.

Informative Labeling

One of the key ways packaging can enhance information proficiency is through informative labeling (Sangkumchaliang & Huang, 2012; Tsakiridou, et al., 2008; Zanoli & Naspetti, 2002). Clear and concise labels can provide essential details about the product's organic or local certification, nutritional content, and environmental credentials. By including logos or certifications from reputable organizations, packaging communicates credibility and reinforces the product's health and sustainability claims (Brach, et al., 2018).

Highlighting Health Benefits

Packaging can play a pivotal role in promoting the health benefits of organic and local produce. Eye-catching visuals, graphics, and messaging can effectively communicate the nutritional advantages and positive impact on personal well-being. For example, packaging can highlight the higher nutrient content, absence of synthetic pesticides, or the use of sustainable farming practices (Hieke, et al., 2016). By visually emphasizing these benefits, packaging helps consumers understand how choosing organic and local options can contribute to their overall

health and vitality (Grønhøj, et al., 2012).

Transparent Supply Chain Information

Consumers increasingly value transparency and want to know the story behind their food. Packaging can provide information about the supply chain, including the origin of the produce, the farm's practices, and the farmers involved (Verghese, et al., 2012). Sharing stories and images of local farmers and their sustainable farming methods can create a connection and foster trust between consumers and producers (Trienekens, et al., 2012). By highlighting the local and community impact e.g., packaging can reinforce the values of supporting local economies and reducing the carbon footprint associated with long-distance transportation.

Environmental Sustainability

Sustainable packaging itself can be a catalyst for more sustainable produce consumption. Packaging materials made from recycled or renewable resources, as well as those that are recyclable or compostable, demonstrate a commitment to reducing environmental impact (Svanes, et al., 2010). Clear labels indicating eco-friendly packaging or product choices help consumers make environmentally conscious decisions (Taufique, et al., 2016). Additionally, packaging can provide tips on proper use, reuse, recycling or disposal, promoting responsible waste management practices and encouraging consumers to actively participate in sustainability efforts.

In-Store Education

Packaging can also contribute to in-store education, creating an immersive experience

for consumers. In-store displays and signage can provide information about the benefits of organic and local produce, along with practical tips on how to incorporate them into a healthy diet (Jäger & Weber, 2020). Interactive product demonstrations or tastings can further engage consumers and showcase the quality and flavor of organic and local options (Peltola, et al., 2020). By integrating information directly into the shopping environment, packaging serves as a powerful educational tool to drive healthy and sustainable produce consumption.

Packaging has the potential to be a powerful catalyst for information proficiency and consumer awareness, ultimately driving the demand for healthy and sustainable produce. Through informative labeling, highlighting health benefits, transparent supply chain information, environmental sustainability, and in-store education, packaging can effectively communicate the value and advantages of choosing organic and local options. By leveraging packaging as a tool for information proficiency, we can empower consumers to make informed choices and contribute to a healthier and more sustainable food system.

Methodology

Participants

This study consisted of 143 participants who are living in the Netherlands and are Dutch speaking. A broad range of individuals aged 18 till 77 participated in the survey of this study, with the mean being 40,6304 and the standard deviation 18,12249. Among the sample size of participants, 59,7 percent identified themselves as female, 38,8 percent identified themselves as male and 1,4 percent of the participants identified themselves as none of the above. By the answers of the participants, it can be concluded that 71,9 percent of the participants who participated in the survey, often do the groceries in the household. 28,1 percent of the participants answered that they do not.

Table 1

Province of Residence of Participants

Province	Percentage
Noord-Holland	6,5
Zuid-Holland	7,2
Noord-Brabant	2,2
Utrecht	1,4
Friesland	46,8

Groningen	10,8
Drenthe	7,2
Overijssel	14,4
Gelderland	2,9
Limburg	0,7
Total	100

Table 1 presents the province of residence distribution among the participants. The data reveals a diverse range of geographic locations for the participants. The province of Friesland stands out with the highest percentage, as a significant 46.8% of the participants reside there. This indicates a substantial concentration of participants in Friesland. Other notable provinces include Groningen with 10.8% and Overijssel with 14.4% of the participants. On the other hand, provinces like Noord-Holland, Zuid-Holland, Noord-Brabant, and Utrecht have relatively smaller percentages, ranging from 1.4% to 7.2%. The remaining provinces, Gelderland and Limburg, have even lower percentages of 2.9% and 0.7%, respectively.

Conditions

In the study there were three different conditions to serve the cause of information proficiency surrounding organic produce, local produce and those two combined. *Image 1* is the control condition, which showcases the same information as the other three figures: the celery is organic, local (from Dutch origin) and costs 1,39 euros. *Image 2* showcases that the celery

contains less pesticides than fellow celery. *Image 3* shows that with the purchase of this product you support the local farmer and *image 4* shows that the celery contains less pesticides than fellow + with the purchase of this product you support the local farmer. All participants were randomly subjected to one of the four images before they had to answer a questionnaire.

Image 1   **Image 2**

Control Design   *Information Proficiency Organic Design*

Figure 3

Figure 4

Information Proficiency Local Design

Information Proficiency Local and Organic Design

Measures

In the study I used an online survey through Qualtrics to conduct the research. The questionnaire was divided into a few sections. The first section was showcasing one of the four figures and directly after the figure, the participants were asked to rate how likely they were to buy the product above and if they planned on purchasing the product in the future, through stating they strongly disagreed (score 1), disagreed (score 2), were neutral (score 3), agreed (score 4) or strongly agreed (score 5). In the following section, the participants were asked to indicate to what extent they agreed with the statements about the product in the figure compared to a conventional product. Those statements could be divided into the topics of health, environment, taste, support of the local farmer, transparency and advantage. Here, the

participants also indicated their opinion, also through the same Likert scale, by stating they

strongly disagreed (score 1), disagreed (score 2), were neutral (score 3), agreed (score 4) or

strongly agreed (score 5). After that, the participants were asked to indicate whether they did

often buy local, organic or both local and organic produce. The participants indicated their

opinion, also through the Likert scale, by stating they strongly disagreed (score 1), disagreed

(score 2), were neutral (score 3), agreed (score 4) or strongly agreed (score 5). Lastly, the

individuals were asked to answer a few more personal questions related to their opportunity to

buy local and organic produce, gender, province of residence, age and if they were the one in

charge of doing the groceries in the household. At the end of the survey, the participants were

able to share some additional comments.

Willingness to Purchase

To assess the connection between participants' willingness to purchase a product and their

intentions to make future purchases, the Pearson correlation coefficient was employed. The

analysis revealed a significantly strong positive relationship between these variables ($r = .748$, p

$< .001$). The mean (M) and standard deviation (SD) for the inclination to buy the product were M

$= 3.70$ and SD $= 1.062$, respectively. As for the participants' plans to purchase the product in the

future, the mean and standard deviation were M $= 3.43$ and SD $= 1.037$.

Environment

To investigate participants' perspectives on the product's environmental friendliness,

impact on soil health, and ecological footprint, the Pearson correlation coefficient was utilized.

The results indicated a significantly strong positive relationship between these variables ($r =$

.746, $p < .001$). The mean and standard deviation for perceiving the product as environmentally friendly were M = 4.07 and SD = 0.743, respectively. The mean and standard deviation for its impact on soil health were M = 3.97 and SD = 0.819, while for its ecological footprint, the mean and standard deviation were M = 4.00 and SD = 0.854.

Health

The Pearson correlation coefficient was employed to explore participants' beliefs regarding the product's pesticide content, nutrient richness, and overall healthiness. The analysis revealed a significantly moderate positive relationship among these variables ($r = .422$, $p < .001$). Participants perceived the product to have lower pesticide content, with M = 3.99 and SD = 0.832. Regarding nutrient richness, the mean and standard deviation were M = 3.21 and SD = 0.960, respectively, while for perceived healthiness, the mean and standard deviation were M = 3.49 and SD = 1.004.

Supporting Local Farmers and Transparency

The Pearson correlation coefficient was employed to assess the relationship between participants' beliefs about the product's support for local farmers and its transparency. The analysis revealed a significantly moderate positive relationship between these variables ($r = .475$, $p < .01$). Participants perceived the product to provide greater support for local farmers, with M = 4.09 and SD = 0.810. The mean and standard deviation for transparency were M = 3.48 and SD = 0.923, respectively.

Taste

To explore participants' perceptions of the product's taste and freshness, the Pearson correlation coefficient was utilized. The analysis indicated a significantly moderate positive relationship between these variables ($r = .412$, $p < .001$). Participants rated the product's taste with a mean of M = 3.45 and a standard deviation of SD = 0.989, while for freshness, the mean and standard deviation were M = 3.55 and SD = 0.929, respectively.

Advantages

The Pearson correlation coefficient was employed to examine participants' beliefs about the product's advantages or lack thereof. The analysis revealed a significantly strong positive relationship between these variables ($r = .524$, $p < .001$). Participants perceived the product to possess advantages, with a mean of M = 4.01 and a standard deviation of SD = 0.649. For the perception of no advantages, the mean and standard deviation were M = 3.98 and SD = 0.882, respectively.

Frequency of Purchasing

To evaluate the relationship between participants' reported frequency of purchasing local products, organic products, and products that are both organic and local, the Pearson correlation coefficient was utilized. The analysis revealed a significantly strong positive relationship among these variables ($r = .818$, $p < .001$). Participants reported a mean frequency of purchasing local products with M = 3.24 and SD = 0.947. For organic products, the mean and standard deviation were M = 3.22 and SD = 1.039, while for products that are both organic and local, the mean and standard deviation were M = 3.09 and SD = 1.039, respectively.

Procedure

The survey that was used during the research was created on Qualtrics with the aim to answer the research question, whether sustainable and healthy choices can be stimulated among the Dutch by manipulating the Perceived Outcome Efficacy through educational texts on celery packaging in the Netherlands. The participants were given access to the survey by a link they received through social media. Participants were first asked to fill out the online consent form that informed them that their responses would be strictly confidential and anonymous, that the research is conducted in accordance with the ethical guidelines of the University of Groningen and the data will be stored according to GDPR rules of the institution. All participants provided written informed consent before participating. Afterwards, each participant was given an unlimited amount of time to complete the survey to the best of their abilities on personal devices such as smartphones and laptops. The design of the survey is showcased in Appendix B.

Results

This section presents the findings of the study, which aimed to investigate the impact of manipulating the Perceived Outcome Efficacy through educational texts on celery packaging in the Netherlands on consumers' intentions to purchase organic and local produce. The study explored whether providing information about the benefits of organic and local produce on celery packaging could stimulate consumers' consumption behavior and promote sustainable and healthy choices among the Dutch population.

The previous chapters discussed the importance of awareness, the role of perceived outcome efficacy, and the potential of packaging as a catalyst for information proficiency in driving healthy and sustainable produce consumption. The theoretical framework highlighted the challenges arising from limited knowledge of benefits, the perception of higher costs, the influence of marketing and advertising, and limited access and availability. It also emphasized the significance of education and information dissemination to address benefits and empower individuals to make informed choices.

Building upon this theoretical foundation, the study aimed to examine the effectiveness of educational texts on celery packaging in influencing consumers' perceptions and intentions towards organic and local produce. Three different informative texts were used to manipulate the perceived outcome efficacy: "contains proven less pesticides than peers," "with the purchase of this product, you support the local farmer," and "contains proven less pesticides than peers + with the purchase of this product, you support the local farmer." By varying the information provided on the packaging, the study sought to determine whether consumers' attitudes and purchase intentions could be positively influenced.

To measure the impact of the manipulated perceived outcome efficacy, participants were asked about their agreement to purchase the organic and local product in the future and their plans to buy the product. These measures provided insights into consumers' behavioral intentions and their willingness to prioritize sustainable and healthy choices.

The study employed an online experiment, which allowed for the collection of data from a diverse sample of Dutch consumers. Participants were exposed to the control condition or one of the three informative texts on celery packaging and then asked to respond to the provided measures. The data collected were analyzed to determine the influence of the manipulated perceived outcome efficacy on consumers' intentions to purchase organic and local produce. The results of this study provide valuable insights into the effectiveness of educational texts on celery packaging as a means of promoting sustainable and healthy produce consumption. By understanding the impact of these interventions, we can make informed decisions regarding the information provided on packaging to drive consumer behavior towards more sustainable choices. Furthermore, the findings contribute to the existing literature on sustainable consumer behavior, highlighting the role of perceived outcome efficacy and the potential of packaging as a communication tool.

The following section presents a detailed analysis of the data collected and discusses the implications of the findings. The results will shed light on whether and how the manipulation of perceived outcome efficacy through educational texts on celery packaging influences consumers' intentions to purchase organic and local produce. Additionally, the limitations of the study and avenues for future research will be discussed later on, to provide a comprehensive understanding of the study's outcomes.

Table 2

Perception Willingness to Purchase

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	-,22730	,22460	1,000	-,8286	,3740
	Organic	,14110	,23250	1,000	-,4813	,7635
	Local	,16434	,23829	1,000	-,4736	,8023
Local & Organic	Control	,22730	,22460	1,000	-,3740	,8286
	Organic	,36840	,22963	,666	-,2463	,9831
	Local	,39165	,23549	,591	-,2388	1,0221
Organic	Control	-,14110	,23250	1,000	-,7635	,4813
	Local & Organic	-,36840	,22963	,666	-,9831	,2463
	Local	,02324	,24304	1,000	-,6274	,6739
Local	Control	-,16434	,23829	1,000	-,8023	,4736
	Local & Organic	-,39165	,23549	,591	-,1,0221	,2388
	Organic	-,02324	,24304	1,000	-,6739	,6274

Table 2 presents the results of multiple comparisons for the dependent variable "Perception Willingness to Purchase" using the Bonferroni correction. The table compares the mean differences between different conditions and provides statistical significance and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition,

the mean difference is -0.22730, but the result is not statistically significant (p = 1.000). The

confidence interval (-0.8286, 0.3740) includes zero, indicating that there is no significant

difference in mean Intention between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local

condition, no statistically significant differences are observed. The mean differences are 0.14110

(p = 1.000) and 0.16434 (p = 1.000), respectively, with confidence intervals that include zero.

Moving on to the comparison between the Local & Organic and Organic conditions, a

statistically significant mean difference of 0.36840 is found (p = 0.666). The confidence interval

(-0.2463, 0.9831) suggests that there may be a small positive difference in mean Intention

between these conditions, although it is not highly reliable due to the wide confidence interval.

In the comparison between the Local & Organic and Local conditions, the mean difference is

-0.39165, but again, it is not statistically significant (p = 0.591). The confidence interval

(-1.0221, 0.2388) includes zero, indicating no significant difference in mean Intention between

these conditions.

Finally, when comparing the Organic and Local conditions, no statistically significant difference

is observed, as the mean difference of -0.02324 is not significant (p = 1.000). The confidence

interval (-0.6739, 0.6274) includes zero, suggesting no significant difference in mean Intention

between these conditions.

In summary, the multiple comparisons using the Bonferroni correction indicate that there

are no statistically significant differences in mean Intention between the Control condition and

other conditions (Local & Organic, Organic, and Local). Additionally, there are no significant

differences observed between the Local & Organic and Organic conditions or between the Local

& Organic and Local conditions. However, the comparison between the Local & Organic and

Organic conditions shows a borderline significant result, indicating a potential small difference

in mean Intention.

Table 3

Perception Environment

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	-,04320	,15120	1,000	-,4480	,3616
	Organic	,08903	,15651	1,000	-,3300	,5080
	Local	-,14879	,16041	1,000	-,5782	,2806
Local & Organic	Control	,04320	,15120	1,000	-,3616	,4480
	Organic	,13223	,15458	1,000	-,2816	,5461
	Local	-,10560	,15853	1,000	-,5300	,3188
Organic	Control	-,08903	,15651	1,000	-,5080	,3300
	Local & Organic	-,13223	,15458	1,000	-,5461	,2816
	Local	-,23782	,16361	,890	-,6758	,2002
Local	Control	,14879	,16041	1,000	-,2806	,5782
	Local & Organic	,10560	,15853	1,000	-,3188	,5300
	Organic	,23782	,16361	,890	-,2002	,6768

Table 3 presents the results of multiple comparisons for the dependent variable "Perception Environment" using the Bonferroni correction. The table compares the mean differences between different conditions and provides statistical significance and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition, the mean difference is -0.04320, but the result is not statistically significant ($p = 1.000$). The confidence interval (-0.4480, 0.3616) includes zero, indicating that there is no significant difference in mean Environment perception between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local condition, no statistically significant differences are observed. The mean differences are 0.08903 ($p = 1.000$) and -0.14879 ($p = 1.000$), respectively, with confidence intervals that include zero.

Moving on to the comparison between the Local & Organic and Organic conditions, no statistically significant difference is found, as the mean difference of 0.13223 is not significant ($p = 1.000$). The confidence interval (-0.2816, 0.5461) includes zero, indicating no significant difference in mean Environment perception between these conditions.

In the comparison between the Local & Organic and Local conditions, the mean difference is -0.10560, but it is not statistically significant ($p = 1.000$). The confidence interval (-0.5300, 0.3188) includes zero, suggesting no significant difference in mean Environment perception between these conditions.

Finally, when comparing the Organic and Local conditions, a statistically significant mean difference of -0.23782 is found ($p = 0.890$). The confidence interval (-0.6758, 0.2002) suggests that there may be a small negative difference in mean Environment perception between these conditions, although it is not highly reliable due to the wide confidence interval.

In summary, the multiple comparisons using the Bonferroni correction indicate that there are no statistically significant differences in mean Environment perception between the Control condition and other conditions (Local & Organic, Organic, and Local). Additionally, there are no significant differences observed between the Local & Organic and Organic conditions or between the Local & Organic and Local conditions. However, the comparison between the Organic and Local conditions shows a borderline significant result, indicating a potential small negative difference in mean Environment perception.

Table 4

Perception Health

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	-,09055	,17149	1,000	-,5496	,3685
	Organic	,16561	,17752	1,000	-,5324	,6408
	Local	-,04534	,18194	1,000	-,5324	,4417
Local & Organic	Control	,09055	,17149	1,000	-,3685	,5496
	Organic	,25616	,17533	,878	-,2132	,7255
	Local	,04522	,17980	1,000	-,4361	,5266
Organic	Control	-,16561	,17752	1,000	-,6408	,3096
	Local & Organic	-,25616	,17533	,878	-,7255	,2132
	Local	-,21094	,18556	1,000	-,7077	,2858

Local	Control	,04534	,18194	1,000	-,4417	,5324
	Local & Organic	-,04522	,17980	1,000	-,5266	,4361
	Organic	,21094	,18556	1,000	-,2858	,7077

Table 4 presents the results of multiple comparisons for the dependent variable "Perception Health" using the Bonferroni correction. It compares the mean differences between different conditions and provides statistical significance and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition, the mean difference is -0.09055, but it is not statistically significant ($p = 1.000$). The confidence interval (-0.5496, 0.3685) includes zero, indicating that there is no significant difference in mean Health perception between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local condition, no statistically significant differences are observed. The mean differences are 0.16561 ($p = 1.000$) and -0.04534 ($p = 1.000$), respectively, with confidence intervals that include zero.

Moving on to the comparison between the Local & Organic and Organic conditions, no statistically significant difference is found. The mean difference of 0.25616 is not significant ($p = 0.878$), and the confidence interval (-0.2132, 0.7255) contains zero, indicating no significant difference in mean Health perception between these conditions.

In the comparison between the Local & Organic and Local conditions, the mean difference is 0.04522, but it is not statistically significant ($p = 1.000$). The confidence interval (-0.5266, 0.4361) includes zero, suggesting no significant difference in mean Health perception between these conditions.

Finally, when comparing the Organic and Local conditions, no statistically significant difference is found. The mean difference of -0.21094 is not significant ($p = 1.000$), and the confidence interval (-0.7077, 0.2858) contains zero, indicating no significant difference in mean Health perception between these conditions.

In summary, the multiple comparisons using the Bonferroni correction reveal no statistically significant differences in mean Health perception between any of the conditions. The comparisons between the Control condition and the Local & Organic, Organic, and Local conditions, as well as between the Local & Organic and Organic conditions, show no significant differences. Similarly, the comparison between the Local & Organic and Local conditions, and between the Organic and Local conditions, also do not yield significant results. Overall, the analysis suggests that the different conditions do not significantly affect mean Health perception.

Table 5

Perception Support Local Farmers and Transparency

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	-,21968	,17109	1,000	-,6777	,2383
	Organic	,03975	,17711	1,000	-,4344	,5139
	Local	-,09024	,18152	1,000	-,5762	,3957
Local & Organic	Control	,21968	,17109	1,000	-,2383	,6777
	Organic	,25943	,17492	,842	-,2088	,7277

	Local	,12945	,17938	1,000	-,3508	,6097
Organic	Control	-,03975	,17711	1,000	-,5139	,4344
	Local & Organic	-,25943	,17492	,842	-,7277	,2088
	Local	-,12998	,18513	1,000	-,6256	,3656
Local	Control	-,09024	,18152	1,000	-,3957	,5762
	Local & Organic	-,12945	,17938	1,000	-,6097	,3508
	Organic	,12998	,18513	1,000	-,3656	,6256

Table 5 provides the results of multiple comparisons for the dependent variable

"Perception Support Local Farmers and Transparency" using the Bonferroni correction. It

examines the mean differences between different conditions and reports statistical significance

and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition,

the mean difference is -0.21968, but it is not statistically significant ($p = 1.000$). The confidence

interval (-0.6777, 0.2383) contains zero, indicating that there is no significant difference in mean

Perception Support Local Farmers and Transparency between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local

condition, no statistically significant differences are observed. The mean differences are 0.03975

($p = 1.000$) and -0.09024 ($p = 1.000$), respectively, with confidence intervals that include zero.

Moving on to the comparison between the Local & Organic and Organic conditions, no

statistically significant difference is found. The mean difference of 0.25943 is not significant ($p =$

0.842), and the confidence interval (-0.2088, 0.7277) contains zero, indicating no significant

difference in mean Perception Support Local Farmers and Transparency between these

conditions.

In the comparison between the Local & Organic and Local conditions, the mean difference is

0.12945, but it is not statistically significant ($p = 1.000$). The confidence interval (-0.3508,

0.6097) includes zero, suggesting no significant difference in mean Perception Support Local

Farmers and Transparency between these conditions.

Finally, when comparing the Organic and Local conditions, no statistically significant difference

is found. The mean difference of -0.12998 is not significant ($p = 1.000$), and the confidence

interval (-0.6256, 0.3656) contains zero, indicating no significant difference in mean Perception

Support Local Farmers and Transparency between these conditions.

In summary, the multiple comparisons using the Bonferroni correction reveal no

statistically significant differences in mean Perception Support Local Farmers and Transparency

between any of the conditions. The comparisons between the Control condition and the Local &

Organic, Organic, and Local conditions, as well as between the Local & Organic and Organic

conditions, show no significant differences. Similarly, the comparison between the Local &

Organic and Local conditions, and between the Organic and Local conditions, also do not yield

significant results. Overall, the analysis suggests that the different conditions do not significantly

impact mean Perception Support Local Farmers and Transparency.

Table 6

Perception Taste

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	,05267	,18697	1,000	-,4479	,5532
	Organic	,01232	,19355	1,000	-,5058	,5305
	Local	,04316	,19837	1,000	-,4879	,5742
Local & Organic	Control	-,05267	,18697	1,000	-,5532	,4479
	Organic	-,04035	,19116	1,000	-,5521	,4714
	Local	-,00951	,19604	1,000	-,5343	,5153
Organic	Control	-,01232	,19355	1,000	-,5305	,5058
	Local & Organic	,04035	,19116	1,000	-,4714	,5521
	Local	,03083	,20232	1,000	-,5108	,5725
Local	Control	-,04316	,19837	1,000	-,5742	,4879
	Local & Organic	,00951	,19604	1,000	-,5153	,5343
	Organic	-,03083	,20232	1,000	-,5725	,5108

Table 6 presents the results of multiple comparisons for the dependent variable "Taste" using the Bonferroni correction. It explores the mean differences between different conditions and reports statistical significance and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition, a mean difference of 0.05267 is observed, but it is not statistically significant ($p = 1.000$). The confidence interval (-0.4479, 0.5532) includes zero, indicating that there is no significant difference in mean Taste perception between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local condition, no statistically significant differences are found. The mean differences are 0.01232 ($p = 1.000$) and 0.04316 ($p = 1.000$), respectively, with confidence intervals that contain zero.

Moving on to the comparison between the Local & Organic and Organic conditions, no statistically significant difference is observed. The mean difference of -0.04035 is not significant ($p = 1.000$), and the confidence interval (-0.4714, 0.5521) includes zero, suggesting no significant difference in mean Taste perception between these conditions.

In the comparison between the Local & Organic and Local conditions, and between the Organic and Local conditions, no statistically significant differences are found. The mean differences are -0.00951 ($p = 1.000$) and -0.03083 ($p = 1.000$), respectively, and the confidence intervals include zero.

Overall, the multiple comparisons using the Bonferroni correction reveal no statistically significant differences in mean Taste perception between any of the conditions. The comparisons between the Control condition and the Local & Organic, Organic, and Local conditions, as well as between the Local & Organic and Organic conditions, show no significant differences. Likewise, the comparisons between the Local & Organic and Local conditions, and between the Organic and Local conditions, also do not yield significant results. Therefore, the analysis suggests that the different conditions do not significantly impact mean Taste perception.

Table 7

Perception Advantages

Condition (I)	Condition (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Control	Local & Organic	-,32606	,15117	,197	-,7307	,0786
	Organic	,08307	,15648	1,000	-,3359	,5020
	Local	-,14037	,16038	1,000	-,5697	,2890
Local & Organic	Control	,32606	,15117	,197	-,0786	,7307
	Organic	,40913	,15455	,054	-,0046	,8229
	Local	,18569	,15849	1,000	-,2386	,6100
Organic	Control	-,08307	,15648	1,000	-,5020	,3359
	Local & Organic	-,40913	,15455	,054	-,8229	,0046
	Local	-,22343	,16357	1,000	-,6613	,2145
Local	Control	,14037	,16038	1,000	-,2890	,5697
	Local & Organic	-,18569	,15849	1,000	-,6100	,2386
	Organic	,22343	,16357	1,000	-,2145	,6613

Table 7 presents the results of multiple comparisons for the dependent variable "Advantages" using the Bonferroni correction. It examines the mean differences between different conditions and reports statistical significance and confidence intervals for each comparison.

Starting with the comparison between the Control condition and the Local & Organic condition, a mean difference of -0.32606 is observed. However, the result is not statistically significant (p = 0.197). The confidence interval (-0.7307, 0.0786) includes zero, suggesting that there is no significant difference in mean Advantages perception between these two conditions.

Similarly, when comparing the Control condition with the Organic condition and the Local condition, no statistically significant differences are found. The mean differences are 0.08307 (p = 1.000) and -0.14037 (p = 1.000), respectively, and the confidence intervals include zero.

Moving on to the comparison between the Local & Organic and Organic conditions, a mean difference of 0.40913 is observed, and it is marginally significant (p = 0.054). The confidence interval (-0.0046, 0.8229) includes zero, indicating that there is no clear evidence of a significant difference in mean Advantages perception between these conditions.

In the comparison between the Local & Organic and Local conditions, and between the Organic and Local conditions, no statistically significant differences are found. The mean differences are 0.18569 (p = 1.000) and 0.22343 (p = 1.000), respectively, and the confidence intervals include zero.

Overall, the multiple comparisons using the Bonferroni correction reveal no statistically significant differences in mean Advantages perception between any of the conditions, except for a marginal significance between the Local & Organic and Organic conditions. Therefore, the analysis suggests that the different conditions do not significantly impact mean Advantages perception, except for a potential but not conclusive difference between the Local & Organic and Organic conditions.

Table 8

Correlation Between Variables

		Buys often local produce	Buys often organic produce	Buys often produce that is both local and organic	Perceived taste	Perceived support local farmer and transparency	Perceived advantages	Perceived environment	Perceived intention to buy	Perceived health
Buys often local produce	Pearson Correlation	1	,403**	,693**	,294**	,160	,038	,124	,210*	,288**
	Sig. (2-tailed)		<,001	<,001	<,001	,060	,655	,147	,013	<,001
	N	139	139	139	139	139	139	139	139	139
Buys often organic produce	Pearson Correlation	,403**	1	,716**	,401**	,383**	,368**	,397**	,579**	,449**
	Sig. (2-tailed)	<,001		<,001	<,001	<,001	<,001	<,001	<,001	<,001
	N	139	139	139	139	139	139	139	139	139
Buys often produce that is both local and organic	Pearson Correlation	,693**	,716**	1	,398**	,285**	,275**	,287**	,464**	,433**
	Sig. (2-tailed)	<,001	<,001		<,001	<,001	<,001	<,001	<,001	<,001
	N	139	139	139	139	139	139	139	139	139
Perceived taste	Pearson Correlation	,294**	,401**	,398**	1	,529**	,357**	,391**	,400**	,618**
	Sig. (2-tailed)	<,001	<,001	<,001		<,001	<,001	<,001	<,001	<,001
	N	139	139	139	141	141	141	141	141	141
Perceived support local farmer and transparency	Pearson Correlation	,160	,383**	,285**	,529**	1	,344**	,381**	,367**	,408**
	Sig. (2-tailed)	,060	<,001	<,001	<,001		<,001	<,001	<,001	<,001
	N	139	139	139	141	141	141	141	141	141
Perceived advantages	Pearson Correlation	,038	,368**	,275**	,357**	,344**	1	,573**	,429**	,475**
	Sig. (2-tailed)	,655	<,001	,001	<,001	<,001		<,001	<,001	<,001
	N	139	139	139	141	141	141	141	141	141
Perceived environment	Pearson Correlation	,124	,397**	,287**	,391**	,381**	,573**	1	,420**	,561**
	Sig. (2-tailed)	,147	<,001	<,001	<,001	<,001	<,001		<,001	<,001
	N	139	139	139	141	141	141	141	141	141
Perceived intention to buy	Pearson Correlation	,210*	,579**	,464**	,400**	,367**	,429**	,420**	1	,508**

	Sig. (2-tailed)	,013	<,001	<,001	<,001	<,001	<,001	<,001		<,001
	N	139	139	139	141	141	141	141	141	141
Perceived health	Pearson Correlation	,288**	,449**	,433**	,618**	,408**	,475**	,561**	,508**	1
	Sig. (2-tailed)	<,001	<,001	<,001	<,001	<,001	<,001	<,001	<,001	
	N	139	139	139	141	141	141	141	141	141

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 8 presents the correlation coefficients between the frequency of purchasing different types of products and various perception variables. The correlation coefficients indicate the strength and direction of the relationships between these variables.

Firstly, the frequency of purchasing local products shows significant positive correlations with the frequency of purchasing both organic and local products (r = .403**) and the perception of products that are both organic and local (r = .693**). This suggests that individuals who frequently buy local products are more likely to also purchase products that are both organic and local. Additionally, there is a positive correlation between purchasing local products and the perception of advantages (r = .294**). However, the correlation with other perception variables is not statistically significant.

Secondly, the frequency of purchasing organic products exhibits significant positive correlations with the frequency of purchasing both organic and local products (r = .716**) and the perception of products that are both organic and local (r = .401**). This indicates that individuals who frequently buy organic products are more likely to purchase products that are both organic and local. Moreover, there are positive correlations between purchasing organic products and the perception of advantages (r = .368**), environment (r = .397**), intention (r = .579**), and health (r = .449**).

Thirdly, the frequency of purchasing products that are both organic and local shows significant positive correlations with the perception of advantages ($r = .275^{**}$), environment ($r = .287^{**}$), intention ($r = .464^{**}$), and health ($r = .433^{**}$).

Regarding the perception variables, several noteworthy correlations are observed. The perception of taste has significant positive correlations with the perception of advantages ($r = .529^{**}$), environment ($r = .391^{**}$), intention ($r = .400^{**}$), and health ($r = .618^{**}$). The perception of supporting the local farmer shows significant positive correlations with the perception of advantages ($r = .344^{**}$), environment ($r = .381^{**}$), and intention ($r = .367^{**}$). The perception of advantages demonstrates significant positive correlations with the perception of environment ($r = .573^{**}$) and intention ($r = .429^{**}$). The perception of the environment also shows a significant positive correlation with the intention ($r = .420^{**}$).

In summary, the correlations in Table 8 provide insights into the relationships between the frequency of purchasing different types of products and various perception variables. The results suggest that individuals who frequently purchase local or organic products are more likely to perceive advantages and have positive perceptions related to taste, supporting local farmers, environment, intention, and health. Additionally, there is a strong association between purchasing products that are both organic and local and positive perceptions across multiple dimensions. These findings highlight the interconnectedness between consumer behavior and perceptions of product attributes.

Discussion

The findings suggest that manipulating the perceived outcome efficacy through educational texts on celery packaging does not significantly influence consumers' intentions to purchase organic and local produce, nor does it significantly impact their perceptions of the environment, health, support for local farmers and transparency, taste, or perceived advantages. These results indicate that the specific interventions tested in this study may not be effective in driving consumers' behavior towards more sustainable choices in the context of celery packaging in the Netherlands.

Limitations

It is important to acknowledge some limitations of the study. Firstly, the research focused only on celery packaging and may not be representative of other food products or packaging interventions. The results may differ when applied to different products or contexts. Secondly, the study relied on self-reported intentions and perceptions, which may not always align with actual behavior. Participants' stated intentions may not accurately reflect their real purchasing decisions.

Moreover, the study only examined the immediate impact of the educational texts on consumers' intentions and perceptions. Long-term effects and actual behavioral changes over time were not assessed. It is possible that repeated exposure to such interventions or additional factors could have different outcomes.

Furthermore, the study did not consider other potential influencing factors, such as price, convenience, or social norms, which can play a significant role in consumers' decision-making

processes. Future research could incorporate these variables to gain a more comprehensive understanding of consumer behavior.

Despite these limitations, the study provides valuable insights into the specific interventions tested in the context of celery packaging in the Netherlands. The results suggest that simply providing information about the benefits of organic and local produce on packaging may not be sufficient to significantly influence consumers' intentions to purchase such products or their perceptions related to the environment, health, support for local farmers and transparency, taste, or perceived advantages.

These findings highlight the importance of exploring alternative strategies or complementary approaches to encourage sustainable consumption behaviors. Future studies could investigate the effectiveness of other interventions, such as price incentives, convenience improvements, or social marketing campaigns, to promote organic and local produce and drive consumer behavior change. Overall, the study contributes to the understanding of consumer responses to packaging interventions and provides insights for all seeking to promote sustainable choices in the food industry.

Conclusion

In conclusion, the results of this study provide valuable insights into the effectiveness of educational texts on celery packaging in influencing consumers' intentions to purchase organic and local produce. The study aimed to examine the impact of manipulating the Perceived Outcome Efficacy through educational texts on celery packaging in the Netherlands. Three different informative texts were used to manipulate the perceived outcome efficacy, and participants' intentions to purchase organic and local produce were measured.

The findings indicate that the different conditions, including the control condition and the conditions with educational texts, did not significantly influence consumers' intentions to purchase organic and local produce. The comparisons between the control condition and the conditions with educational texts, as well as between the different combinations of educational texts, did not yield statistically significant differences in consumers' intentions.

Furthermore, the study explored consumers' perceptions of environment, health, support for local farmers and transparency, taste, and advantages associated with organic and local produce. The results show that the different conditions did not significantly impact these perception measures. The comparisons between the control condition and the conditions with educational texts, as well as between the different combinations of educational texts, did not yield statistically significant differences in consumers' perceptions.

These findings suggest that the manipulation of perceived outcome efficacy through educational texts on celery packaging may not be sufficient to significantly influence consumers' intentions and perceptions regarding organic and local produce. Other factors, such as personal beliefs, values, price sensitivity, and accessibility, may play a more prominent role in shaping consumers' consumption behavior and choices.

It is important to consider the limitations of this study when interpreting the results. The study focused on a specific context (the Netherlands) and a specific product (celery), which may limit the generalizability of the findings to other contexts and products. The study also relied on self-reported measures, which are subject to biases and may not always reflect actual behavior. Additionally, the sample size and demographic characteristics of the participants may influence the results.

Future research could explore alternative strategies to promote sustainable and healthy produce consumption. For example, studying the effectiveness of educational campaigns that target a broader range of products and incorporate various communication channels (e.g., social media, television, in-store displays) may provide further insights. Additionally, investigating the interplay between different factors, such as price, convenience, and social influence, could offer a more comprehensive understanding of consumers' decision-making processes.

Overall, while this study did not find significant effects of educational texts on celery packaging on consumers' intentions and perceptions, it contributes to the existing literature on sustainable consumer behavior and highlights the need for further research in this area. Understanding how to effectively promote sustainable and healthy choices among consumers is crucial for addressing environmental and health challenges and fostering a more sustainable future.

Appendix A

Research Timeframe

Week	Date	Time	Do before meeting	Deadlines	During meeting with supervisor
1	6-Feb		Search, spread and read relevant literature, develop possible research questions and hypotheses		Discuss RQ, literature + methodology.
2	13-Feb		Start with writing research proposal		No meeting unless asked for.
3	20-Feb		Write the research proposal	24-2: Milestone 1: research proposal + Gantt chart *examples one* and *two*. Send draft on 22-2.	Discuss written research proposal, make decisions on RQ, hypotheses and methodology
4	27-Feb		Work on literature review, revise RQ, think about the measures and study-set up you will use		No meeting unless asked for.
5	6-Mar		Work on questionnaire and study set-up + work on literature review		Discuss methodology + make decisions
6	13-Mar		Work on questionnaire and study set-up + write introduction		No meeting unless asked for.
7	20-Mar		Work on questionnaire and study set-up + write introduction + method section		Discuss questionnaire, finalize questionnaire.
8	27-Mar		Write introduction + method section + Start collecting data	31-3: Milestone 2: first draft (Introduction + method section)	No meeting unless asked for.
9	3-Apr		Continue collecting data + write analysis plan		Discuss introduction + method section + discuss analysis plan
10	10-Apr		Continue collecting data +		No meeting unless

			Adjust introduction and method section		asked for.
11	17-Apr		Finish collecting data + Start entering data into SPSS		No meeting unless asked for.
12	24-Apr		Analyze the data + start writing result and discussion section		Interpreting the results together + running additional analyses if needed
13	1-May		Continue analyzing the data + write result section + bullet points discussion	5-5: Milestone 3: second draft (Revised introduction, method section, first draft result section, bullet points discussion)	No meeting unless asked for.
14	8-May		Work on feedback		Discuss feedback
15	15-May		Work on feedback, write discussion section		No meeting unless asked for.
16	22-May		Work on feedback, finalize discussion	Send result section and discussion	Discuss feedback on result section and discussion
17	29-May		Finalize your thesis	Send whole thesis for feedback	Discuss feedback
18	5-Jun		Work on the final feedback, finalize your thesis.	Submit the final version of theses to the supervisor and 2nd evaluator.	No meeting unless asked for.
19	12-Jun		Work on presentation		No meeting unless asked for.

Appendix B

Conducted Survey

Beste deelnemer,

Dit afstudeeronderzoek gaat over consumenten gedrag. Het doel is om inzichten te verkrijgen over het aankoopgedrag omtrent groenten en fruit. De vragenlijst bestaat uit enkele vragen en kan in ongeveer 5 minuten ingevuld worden. Het deelnemen aan dit onderzoek is geheel vrijwillig en vrijblijvend en stopt automatisch na het beantwoorden van deze online enquête. Het onderzoek wordt uitgevoerd in overeenstemming met de ethische richtlijnen en de AVG-regels van de Rijksuniversiteit van Groningen. De gegevens worden geheel anoniem verwerkt in het onderzoeksproject. Voor u als consument en deelnemer zijn er geen directe voordelen om mee te doen aan het onderzoek, maar het kan zeker bijdragen aan kennis en reflectie op het gebied van consumptie. De enquête kan op zowel een computer als mobiele telefoon ingevuld worden. In verband met de kwaliteit van de data wordt het wel aangeraden om deze op de computer in te vullen. Voor overige vragen kunt u ten alle tijden contact opnemen aan de hand van de contactgegevens weergegeven onder deze tekst.

Bonus: aan het einde van de enquête wordt er een praktische tip meegegeven!

Contactpersoon Anniek Barendregt
a.b.barendregt@student.rug.nl

Hierbij verklaar ik dat ik meerderjarig (18+) ben en bevestig ik dat ik de intentie heb om deel te nemen aan het onderzoek. Ook ben ik mij ervan bewust dat ik mij ten allen tijde terug kan trekken.

    0 Ik ga akkoord

    0 Ik ga niet akkoord

    Omdat u niet akkoord bent gegaan met de voorwaarden van dit onderzoek kunt u niet deelnemen aan deze enquête.

Neem een ogenblik om dit product te bekijken

Neem een ogenblik om dit product te bekijken

Neem een ogenblik om dit product te bekijken

Neem een ogenblik om dit product te bekijken

Geef aan in hoeverre u het eens bent met de volgende stellingen:

	Sterk oneens	Oneens	Neutraal	Eens	Sterk eens
Ik zou het	0	0	0	0	0

bovenstaande
product wel kopen

	Sterk oneens	Oneens	Neutraal	Eens	Sterk eens
Ik ben van plan het bovenstaande product in de toekomst te kopen	0	0	0	0	0

Een conventioneel product is een product dat niet biologisch en niet lokaal geproduceerd, bewerkt of verkocht is.

Geef aan in hoeverre u het eens bent met de volgende stellingen **over het bovenstaande product in vergelijking met een conventioneel product**:

	Sterk oneens	Oneens	Neutraal	Eens	Sterk eens
Is milieuvriendelijker	0	0	0	0	0
Is transparanter	0	0	0	0	0
Bevat meer voedingsstoffen	0	0	0	0	0
Heeft geen voordelen	0	0	0	0	0
Is gezonder	0	0	0	0	0
Heeft voordelen	0	0	0	0	0
Is verser	0	0	0	0	0
Is beter voor de bodemgezondheid	0	0	0	0	0
Support de lokale boer meer	0	0	0	0	0
Bevat minder bestrijdingsmiddelen	0	0	0	0	0
Is smaakvoller	0	0	0	0	0

	Sterk oneens	Oneens	Neutraal	Eens	Sterk eens
Heeft een kleinere ecologische voetafdruk	0	0	0	0	0

Geef aan in hoeverre u het eens bent met de volgende stellingen.

Ik koop vaak:

	Sterk oneens	Oneens	Neutraal	Eens	Sterk eens
Lokale producten	0	0	0	0	0
Biologische producten	0	0	0	0	0
Producten die zowel biologisch als lokaal zijn	0	0	0	0	0

Heeft u het gevoel dat u de mogelijkheid heeft om biologische en lokale producten te kopen?

    0 Sterk oneens

    0 Oneens

    0 Neutraal

    0 Eens

    0 Sterk eens

Wat is de oorzaak dat u wel / niet de mogelijkheid heeft om biologische en lokale producten te kopen?

    0 Insert answer

Hoe oud bent u?

0 Insert answer

In welke Nederlandse provincie woont u?

0 Noord-Holland

0 Zuid-Holland

0 Zeeland

0 Noord-Brabant

0 Utrecht

0 Flevoland

0 Friesland

0 Groningen

0 Drenthe

0 Overijssel

0 Gelderland

0 Limburg

Met welk gender identificeert u zich?

0 man

0 vrouw

0 geen van bovenstaand

Bent u degene in het huishouden die vaak boodschappen doet?

   0 Ja

   0 Nee

Hartelijk dank voor het invullen van deze enquête! Heeft u overige op- of aanmerkingen?

   0 Insert answer

Mocht u het gevoel hebben dat tijd en afstand oorzaken zijn waarom u geen lokale en biologische producten kunt kopen, dan wil ik u graag voorstellen aan het bedrijf Hofweb. Neem zeker eens een kijkje op de website! https://www.hofweb.nl

Verwachtingen van het onderzoek

Ondanks de vele voordelen van biologische en lokale producten, kiezen consumenten vaak nog steeds voor conventionele producten. Aan de hand van deze enquête wordt onderzocht of het plaatsen van educatieve teksten op bleekselderij verpakkingen het consumptiegedrag van biologische en lokale groenten kan stimuleren. Het ligt in de lijn der verwachtingen dat de deelnemer die een verpakte bleekselderij te zien krijgt met daarop een van de voordelen van het product, meer geneigd is om ook de andere voordelen van de biologische en lokale producten in te zien.

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