
Edible Earth: Dining on Seasonal and Local Ingredients

Ross Bohner

Virtual Reality Applications
Center
1620 Howe Hall
Iowa State University
Ames, IA 50011 USA
rgbohner@iastate.edu

Nikki D'Adamo

108 Curtiss Hall
Iowa State University
Ames, IA 50011 USA
sndadamo@iastate.edu

Adam Faeth

Virtual Reality Applications Center
1620 Howe Hall
Iowa State University
Ames, IA 50011 USA
adfaeth@iastate.edu

Sara R. Kaplan

403 East Hall
Iowa State University
Ames, IA 50011 USA
sarak@iastate.edu

William E. Marsh

Virtual Reality Applications Center
1620 Howe Hall
Iowa State University
Ames, IA 50011 USA
marsh@iastate.edu

Abstract

College students are primarily concerned with the price and convenience of the food they choose to eat. Environmental impact is not a consideration in their food decisions. We present a web-based solution that simplifies meal choices and addresses the perception that home-prepared meals are inconvenient and expensive. The solution provides a web service that suggests convenient recipes that use local and seasonal ingredients tailored to the user's location. This promotes sustainable food purchasing habits. The solution uses a location-aware mobile device as an example platform. The study presents the participatory design process that informed the development of this solution.

Keywords

Sustainable food, location-aware, food preparation, college students, food decision heuristics

ACM Classification Keywords

H.5.2 User Interfaces (D.2.2, H1.2, I.3.6) Subjects: Prototyping; User-centered design.

Background: College food consumers

Every day, people make choices about what to eat. Often the decision is based on short-term factors like

Copyright is held by the author/owner(s).
CHI 2009, April 4 - 9, 2009, Boston, MA, USA
ACM 978-1-60558-247-4/09/04.

“Even when people have a positive attitude or intention to make sustainable food choices, the perceived lack of availability and inconvenience can prevent them from actually making sustainable food purchases” [14].

convenience or price, with limited consideration of the broader impact of that choice. Making sustainable choices means considering factors outside of these short-term effects. It means seeking out food produced in your area, and learning which ingredients are in-season in your area.

This process can be intimidating for college students, a population that is learning how to support itself. As these young adults leave their parents' kitchens and meal plans, they learn their own cooking and food purchasing habits. These young adults are very comfortable using new technology. They search the Internet to answer questions and connect with friends using social web services. We chose to focus on this user population because they are forming purchasing habits they will continue to follow in the future and are comfortable using technology and web services in their daily lives.

The choice of one food over another can impact the health of a person, the health of the community, and the health of the planet [5]. Common approaches to reducing this impact include eating less meat and eating organic, unprocessed local foods. Studies have found that locally produced foods can be beneficial to the environment, since the environmental impacts of shipping and handling are often reduced [7]. Other studies have had differing results [10]. The purchase of locally produced foods can strengthen local economies by circulating money within the community. Locally produced foods also promote food security and accountability [11]. These are important measures for sustainability, in light of recent E. Coli and Salmonella scares. There are also health benefits to eating locally produced foods. In contrast, college-age students often

eat take-out and fast food. The consumption of these low cost and convenience foods is associated with obesity and diabetes [2, 3]. College students cite a lack of time, cost, and lack of food preparatory skills as their primary reasons for "eating out" [4, 9].

Food purchasing decisions are often based on cultural, psychological, lifestyle, and food trend factors [1]. However, even when people have a positive attitude or intention to make sustainable food choices, the perceived lack of availability and inconvenience can prevent them from actually making sustainable food purchases [8, 14]. In a study conducted with 50 college students and recent college graduates, researchers found that food choices could be accurately predicted using a simple hierarchical model [9]. Across all participants, the most important factors in food choice were price, sensory appeal, and convenience, with natural content and ethical concerns ranking sixth and ninth out of nine defined values, respectively. College students were not weighing all the factors to make their decision; they were going down through a hierarchy and made a decision based on the first advantageous factor. With so many factors impacting food choice, the research suggests that consumers will not consciously make sustainable food choices if it requires complex, time-consuming decision-making. People do not use a heuristic process to independently weigh the environmental impacts of food choices when a clear advantage exists in cost, convenience, taste, or nutrition.

Consumers can make choices about where to buy their food without requiring a complex decision for each individual food purchase. This can simplify the process and incorporate broad environmental and ethical goals.

