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Examining Cooking Hobbyists' Information-Seeking Behavior in Different Situations and in Different Stages from a Serious Leisure Perspective

Abstract: The current study investigates cooking hobbyists' information behavior with emphasis on the sources used and information activities performed in different situations and in different stages. Drawing upon Stebbins' serious leisure theory, Hektor's framework of information activities, and Hartel's cooking stages, a web survey was designed including a serious leisure scale, sets of questions asking various information sources consulted, and frequencies of information activities performed when "trying new recipes" and "making dishes once made before" in the "exploring stage" and "planning stage." Four hundred eighty-seven cooking hobbyists participated in the survey. Results show that while most cooking hobbyists tend to obtain cooking information through online sources, but some cooking hobbyists with higher scores on the serious leisure scale also value print resources. They also engage in various information activities more frequently. Comparing to "dishes made before," cooking hobbyists are more likely to seek information when "trying new recipes." Nevertheless, the home recipe was the only source consulted more frequently when making dishes people once made before. Cooking hobbyists tend to browse and exchange information more frequently in the exploring stage when gathering cooking ideas rather than in the planning stage. Suggestions for food ingredients online shopping websites, recipe-recommendation systems, culinary bookstores, and special libraries were also provided and discussed based on the findings.

Keywords: information behavior, information activities, cooking, hobbyists, serious leisure

1 Introduction

Cooking for food consumption can be one of the physical survival needs as described in Maslow's Hierarchy of Basic Needs. Eating home-cooked meals more frequently can help develop a better dietary quality (Mills, Brown, Wrieden, White, and Adams, 2017). During the COVID-19 pandemic, home cooking has been encouraged by several international organizations (WHO, 2020). In addition to fulfilling a basic need for food, cooking can also be a hobby that helps fulfill personal goals and live a healthy life.

According to Stebbins' (2006, 2009) theoretic framework of serious leisure perspective, serious leisure, casual leisure, and project-based leisure are three major forms of leisure; among which, serious leisure is the systematic pursuit of highly substantial and fulfilling activities involving a combination of skills, knowledge, and experience. In the vein of serious leisure, according to Stebbins, amateurs, hobbyists, or volunteers acquire and express special skills, knowledge, and experience; specifically, while hobbyists have a lasting pursuit, they may not like amateurs who peruse a professional goal to become an expert. For cooking hobbyists, gathering or exchanging recipes and other information can be important to their leisure purposes either for skill development or experience sharing. Investigating cooking hobbyists' information behavior can not only help them better developed their skills and fulfill their goals but also

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indirectly help further promote cooking itself, especially when highly engaged cooking hobbyists who love to share cooking information with others.

However, despite a series of research done by Hartel (2006, 2010, 2011), not much about cooking hobbyists' information behavior was studied.

Hartel (2006) proposed a nine-step process of a gourmet cooking episode, including exploring, planning, provisioning, prepping, assembling, cooking, serving, eating, and evaluating. Based on Hartel's findings, all stages, except for eating, may involve some information activities. Nevertheless, most stages manifest information use and reuse (e.g., prepping, assembling, cooking) rather than information seeking (e.g., planning). While Hartel also stated that exploring is "a quest for inspiration, not information," the examples regarding what individuals do in the exploring stage included browsing cookbooks, websites, magazines, or personal recipe files, and consulting menus or other people imply that individual need to acquire information that helps inspire them. And acquiring information may involve information seeking. Therefore, the current study considered exploring stage and planning stage, the two stages that typically involve information-seeking activities. The former usually needs information to help generate cooking ideas; the latter usually needs to gather and identify recipes to help make the dishes.

Hartel, Cox, and Griffin (2016) used Hektor's framework to mainly examine three different types of serious leisure activities, including the liberal arts hobby, amateur musicianship, and the hobby of running. Although the article did not discuss the hobby of cooking, they agree that Hektor's information activities framework can be used to discuss other types of serious leisure activities. Hektor's (2001) framework of information activities proposed eight information activities in four categories—information seeking, gathering, communicating, and giving. It depicts many aspects of individuals' information behavior by examining search and retrieve, browse, monitor, unfold, exchange, dress, instruct, and publish. Among which, the search and retrieve, browse, monitor, unfold, and exchange are typically included in the discussions of individuals' information behavior.

Although relevant information behavior research did not formally examine cooking situations, information behavior research tends to agree that novice and experts may demonstrate different information needs and its consequent information-seeking behavior (Case & Given, 2016). It would be interesting to examine how cooking hobbyists try new recipes for the first time and make dishes that they already had experiences with. The current study consolidated the above literature and designed a survey to investigate cooking hobbyists' information behavior focusing on their source use and information activities in two different situations and in two different stages.

2 Methods

2.1 Data Collection

The current study used a web survey to investigate cooking hobbyists' serious leisure characteristics and their information behavior. Cooking hobbyists' serious leisure characteristics were measured by a serious leisure scale adopted from Gould, Moore, McGuire, and Stebbins. (2008) developed based on Stebbins' theory. Since Stebbins (2006) emphasized the six qualities in serious leisure—perseverance, career, effort, durable benefits, unique ethos, and identity—the current study adopted 18 items (three items in each of the six dimensions) from the short form of Gould et al.'s serious leisure inventory. The current study investigates information sources used by cooking hobbyists when they try new recipes and when they made dishes they once made before, and further investigates how frequently cooking hobbyists engage in four information activities (i.e., searching/retrieving, browsing, unfolding, and exchanging information) in exploring and planning stages of cooking. The information activities were derived from Hektor (2001), and the cooking stages were derived from Hartel (2006). The above instrument design of the current study only focused on information activities that are more relevant to cooking practices (e.g., search and retrieve, browse, unfold, exchange) and the cooking stages that may involve information behavior (i.e., exploring and planning stages). All items on an ordinal scale in the questionnaire used a 7-point Likert scale.

After two rounds of pilot testing, the current study distributed a web survey through various cooking clubs on Facebook, online forums, and other social media platforms. In addition to online platforms, the web survey was also distributed through researchers' personal networks. Only those who have not been trained in a culinary arts vocational school or university and have not been a professional cook were recruited. Among the 506 participants, 487 valid responses were collected.

2.2 Participants

Among the 487 survey participants, most were female (76.39%). Slightly over half were young adults between 18 and 24 years old (53.8%), and only 15.19% were over 35 years old. Almost all participants were with a bachelor's or a higher degree (94.87%), but only 39.84% had taken cooking classes for personal learning purposes. Given that the web survey was mainly distributed through cooking-relevant online platforms, and thus the participants were mostly students or young adults. This could possibly explain that even if participants all consider themselves as cooking hobbyists and slightly over one-fourth (26.9%) considered themselves cooking hobbyists for more than 5 years, only 11.91% cook every day and 60.57% cooked 2–3 days per week or once per week.

2.3 Data Analysis

After cleaning the data, Cronbach's a was used to test the reliability of the serious leisure scale. The overall serious leisure scale reliability of the 18 items used in the current study is 0.922. K-means cluster analysis was then used to identify groups of cooking hobbyists based on their serious leisure characteristics. Two groups (high-score and low-score) were identified in the sample. Among which, 55% of the participants were in the high-score group (n = 269) and 45% in the low-score group (n = 218). The high-score group scored an average of 5.97 on the 7-point Likert scale with less variation (SD = 0.46), whereas the low-score group scored 4.69 with slightly larger variation (SD = 0.55). The high-score group scored highest on effort (M = 6.13, SD = 0.61) and the low-score group scored highest on perseverance (M = 5.06, SD = 0.87); the high-score group had a much higher score across all serious leisure qualities than the low-score group. The quality that received the lowest score from both groups was identity. However, the high-score group (M = 5.84, SD = 0.73) still rated much higher than the low-score group (M = 4.15, SD = 0.90).

Descriptive statistics were used to depict an overview of cooking hobbyists' serious leisure characteristics and information sources consulted as well as frequencies of information activities performed. Chi-square tests were used to examine what sources were used in different situations (see Section 3.1); paired t-tests were used to investigate the differences in the frequencies of information activities performed between cooking hobbyists with high and low scores on serious leisure (see Section 3.2); and two-way ANOVA tests were used to examine the differences of the frequencies each

information activity was performed in different situations (i.e., when trying new recipes and making dishes they once made before) and in different stages (i.e., exploring and planning stages) (see Section 3.3).

3 Results

3.1 Sources and Media Consulted in Different Situations

An overview of what sources cooking hobbyists consulted and the chi-square results regarding sources consulted in different situations are presented in Table 1. It is not surprising that cooking hobbyists consulted more sources when trying new recipes. Most cooking hobbyists consulted online sources, especially when trying new recipes. While most cooking hobbyists consulted recipe books for new recipes, less than half consulted recipe books when making dishes they once made before. When trying new recipes, slightly over half acquired information from TV programs (52.16%), about one-fourth consulted menu from restaurants and magazines/journals (26.90% and 23.20%, respectively); few consulted newspapers (13.14%) or other references (14.99%). According to the chi-square results (see Table 1), online sources, recipe books, menu from restaurants, magazines/journals, newspapers, and other references were more likely to be used when trying new recipes than making dishes once made before. While almost all the sources significantly tended to be used when cooking hobbyists try new recipes, home recipes were more likely to be used when making dishes they once made before.

When discussing cooking hobbyists' information-seeking behavior based on media consulted, a similar phenomenon can be revealed. No matter social media, print materials, or traditional media, most cooking hobbyists tended to use them in a situation where they would like to try new recipes rather than making dishes they once made before (Table 2). Specifically, almost all participants in the current study consulted social media (93.01%), most consulted print materials (83.37%), and slightly more than half consulted traditional media (52.16%) when trying new recipes. On the contrary, only more than half consulted social media (65.50%) and print materials (58.52%), and slightly over a quarter consulted traditional media (26.49%) when making dishes once made before.

While most cooking hobbyists used social media and print materials in both situations, social media (χ^2 (1, N = 487) = 36.63, p < 0.001, φ = 0.26), print materials (χ^2 (1, N

Table 1

Sources Consulted in Different Situations by Cooking Hobbyists (N = 487)

Sources	Try New Recipes	Dishes Made Before
	Frequency (%)	Frequency (%)
Online sources***	**453 (93.02)**	314 (64.48)
Recipe books***	**354 (72.69)**	192 (39.43)
TV programs	**254 (52.16)**	129 (26.49)
Home recipes***	97 (19.92)	**136 (27.93)**
Menu from restaurants***	**131 (26.90)**	50 (10.27)
Magazines/journals***	**113 (23.20)**	41 (8.42)
Newspapers***	**64 (13.14)**	23 (4.72)
Other references***	**73 (14.99)**	35 (7.19)

***$p < 0.001$.

Table 2

Media Consulted in Different Situations by Cooking Hobbyists (N = 487)

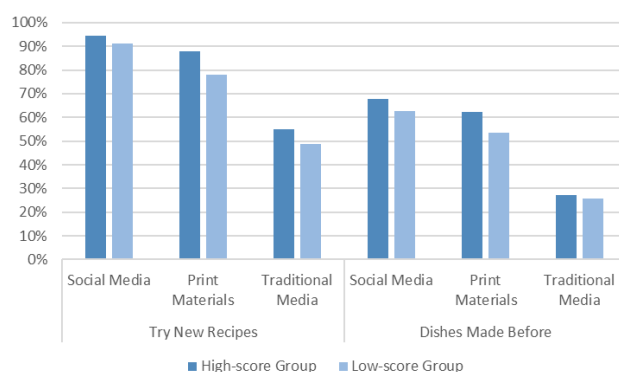| Media	Try New Recipes	Dishes Made Before
	Frequency (%)	Frequency (%)
Social media***	**453 (93.01)**	319 (65.50)
Print materials***	**406 (83.37)**	285 (58.52)
Traditional media (e.g., TV)***	**254 (52.16)**	129 (26.49)

***$p < 0.001$.

Figure 1. Media consulted by cooking hobbyists with different serious leisure scores in different situations.

$= 487) = 52.74$, $p < 0.001$, $\varphi = 0.33$), and traditional media χ^2 $(1, N = 487) = 63.35$, $p < 0.001$, $\varphi = 0.36$) were all tested significant by chi-square tests in different situations. That means significantly more cooking hobbyists used all the above media when trying new recipes than making dishes they once made before.

If we further examine cooking hobbyists by their serious leisure characteristics, we can see that cooking hobbyists with higher scores on the serious leisure scale typically engaged in using more diverse media (Figure 1). This becomes more obvious when it comes to print materials ($\chi^2(1, N = 487) = 8.26$, $p < 0.01$, $\varphi = 0.13$).

3.2 Information Activities Preformed

Cooking hobbyists tended to perform several information activities quite frequently. Search and retrieve ($M = 5.63$, $SD = 1.32$), unfold ($M = 5.51$, $SD = 1.22$), and browse ($M = 5.49$, $SD = 1.28$) all ranged very high. This shows that cooking hobbyists not only actively look for information through searching and retrieving, but also consume information through browsing and reading or other ways to unfold the information. It seems that cooking hobbyists may not necessarily exchange information ($M = 3.96$, $SD = 1.52$) as frequently as the above information activities.

In general, cooking hobbyists with a higher serious leisure score tended to exhibit various information activities and be more engaged with information than those with a lower score (Figure 2). Comparing to the low-score counterparts, high-score cooking hobbyists tended to search and retrieve information more frequently ($t(485) = -4.59$, $p = 0.000$), browse information more frequently ($t(485) = -5.49$, $p = 0.000$), monitor information more frequently ($t(485) = -3.99$, $p = 0.000$), unfold information more frequently ($t(485) = -4.48$, $p = .000$), and exchange information with others more frequently ($t(485) = -5.71$, $p = 0.000$).

3.3 Information Activities Performed in Different Situations and Stages

The situations and stages were explained in the questionnaire so that participants can accurately reflect on the information activities performed in different situations and stages. The scope of stages was adopted from Hartel (2006). The exploring stage is when cooking hobbyists haven't decided what dishes they would like to make and needed to look for inspiration; the planning stage is after decided what to make and need to plan for how to make the dishes. In both exploring and planning stages, cooking hobbyists perform all information activities more frequently when trying new recipes (Figure 3).
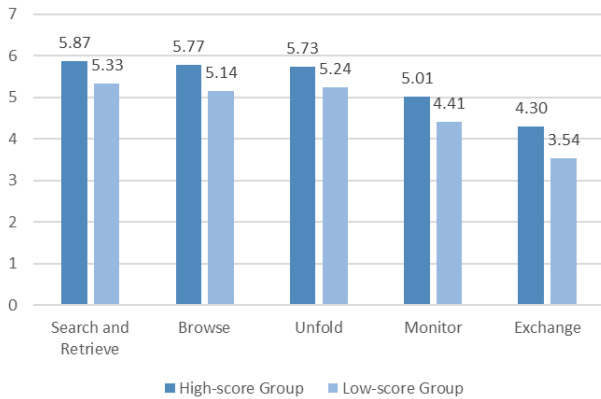
Figure 2. Information activities of cooking hobbyists with different serious leisure scores.
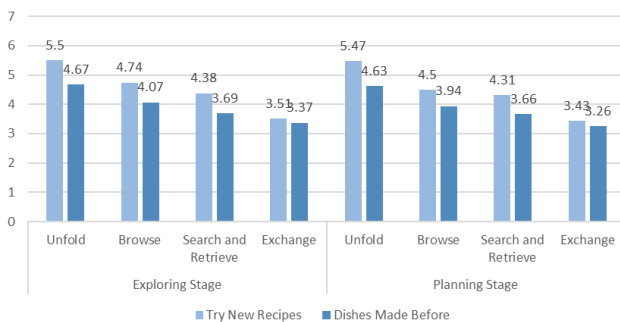

Figure 3. Cooking hobbyists' information activities in different stages across situations.

The two-way ANOVA results showed that the only significant interaction results happened in browsing (F $(1,486) = 7.845$, $p < 0.01$). When in different situations, different stages have an effect on cooking hobbyists' frequency of browsing information; when in different stages, different situations can also have an effect on their browsing.

Although other items did not reach significant results in the interaction between situations and stages, there were many significant main effect results when it comes to different situations. Cooking hobbyists tended to performing the information activities, including search and retrieve (F $(1,486) = 256.570$, $p < 0.001$), unfold (F $(1,486) = 268.247$, $p < 0.001$), and exchange (F $(1,486) = 17.829, p < 0.001$), more frequently when trying new recipes.

However, there were not that many significant differences in the two stages. It seemed that cooking hobbyists typically performed similar information activities in both stages. The only significant results were in browse (F $(1,486) = 22.408$, $p < 0.001$) and exchange (F $(1,486) = 5.931$, $p < 0.05$). That is, cooking hobbyists tended

to browse and exchange information more frequently in the exploring stage than in the planning stage. Since browsing and exchanging information are more likely to help to get new ideas, and it requires more inspirations when deciding what dishes to make, it is quite reasonable that cooking hobbyists tend to browse and exchange information more frequently in the exploring stage than in the planning stage.

When further analyzing cooking hobbyists' serious leisure characteristics with the information activities performed in different situations and stages, we found that cooking hobbyists with higher scores performed all information activities more frequently in both situations and in both stages (Figure 4). This reflects the nature of serious leisure. Those who scored higher on the serious leisure scale are more frequently engaged in all types of information activities regardless of the situation or stage.

4 Conclusion

The current study investigates cooking hobbyists' information behavior with emphases on the sources used and information activities performed in different situations and in different stages. While cooking hobbyists tend to obtain cooking information through online sources, cooking hobbyists with higher scores on the serious leisure scale value print resources more than those with lower scores. They also engage in various information activities more frequently. Compared to "dishes made before," cooking hobbyists are more likely to seek information when "trying new recipes." They tend to browse and exchange information more frequently in the exploring stage when gathering cooking ideas rather than in the planning stage.

The findings can help provide suggestions for various stakeholders that targeting cooking hobbyists as their audiences, such as food ingredients online shopping websites, recipe-recommendation systems, culinary bookstores, and special libraries. For food ingredients online shopping websites and recipe-recommendation system, since the current study found that browsing and exchanging information can be helpful when gathering cooking ideas, it is important for the website to proactively recommend recipes and relevant information to the users, and it could also be important to provide customized functions or interactive forums for users to exchange recipes or cooking ideas. For culinary bookstores and special libraries, continue providing high-quality print resources is essential, especially to those highly engaged
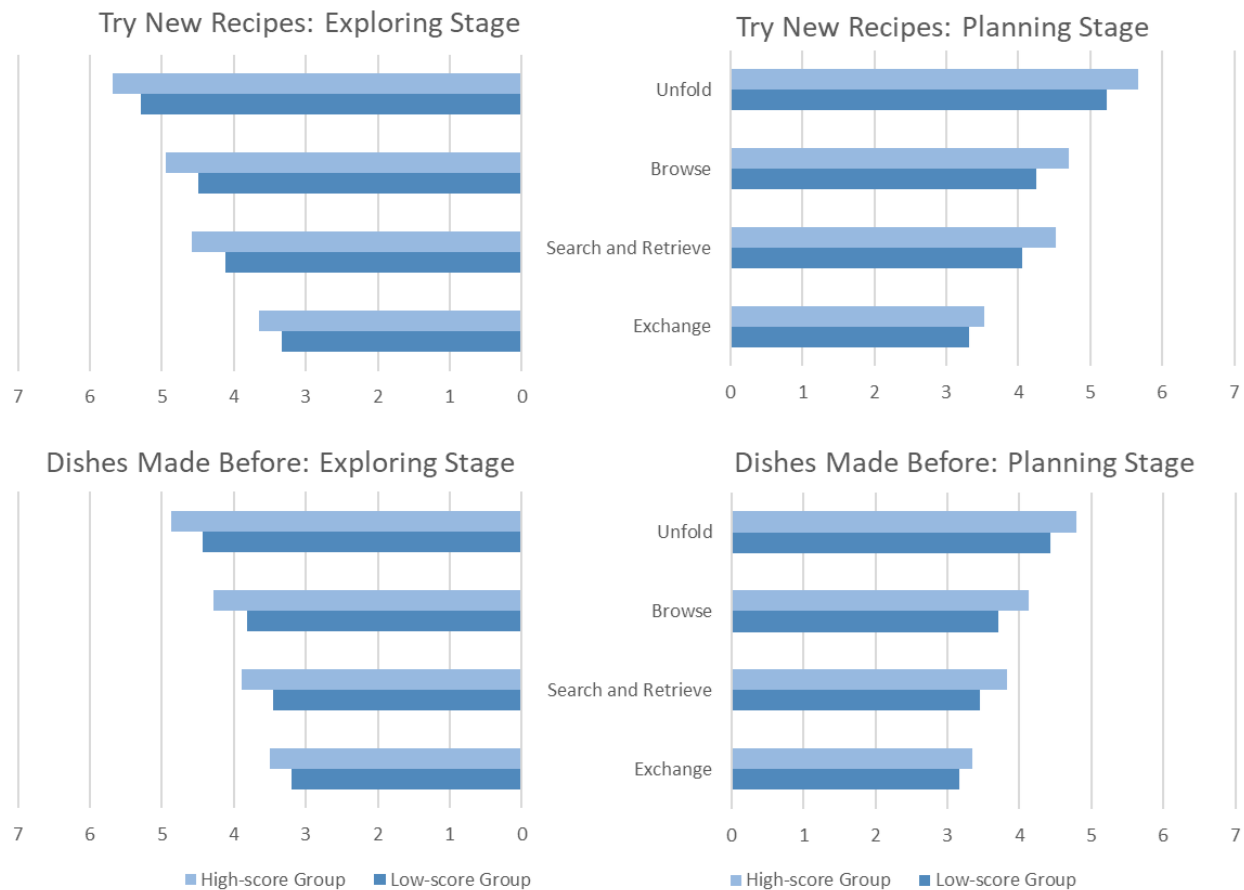
Try New Recipes: Exploring Stage

Try New Recipes: Planning Stage

Dishes Made Before: Exploring Stage

Dishes Made Before: Planning Stage

■ High-score Group ■ Low-score Group

Figure 4. Information activities of cooking hobbyists with different serious leisure scores in different stages across situations.

cooking hobbyists. Given that information services can be even more helpful when people would like to try new recipes, culinary bookstores and relevant special libraries can also try to design different types of cooking-theme exhibits so that it may help generate new cooking ideas and thus help promote relevant resources and information services.

The current study found that home recipes could be an interesting source that was the only source consulted more frequently when making dishes people once made before. Future research can further explore information behavior regarding how cooking hobbyists create and use home recipes and take personal cooking notes. This would also help investigate cooking hobbyists' other information activities beyond the scope of the current research design (i.e., Hektor's [2001] other three information activities not discussed in the current work—dress, instruct, and publish).

Additionally, the current study found that the interaction between situations and stages only had a significant result in browsing, but it is somewhat difficult

to provide in-depth explanations. Mixed-method research designs using a survey with in-depth interviews or focus-group interviews may also help explain cooking hobbyists' information behavior. It would be easier if cooking hobbyists' personal accounts were also collected.

Finally, the ultimate goal of the current research stream aims to help cooking hobbyists promote cooking to help more people live a healthy life. With this in mind, future research can expand the scope to compare and contrast cooking hobbyist versus noncooking hobbyists' information behavior, and further examine the information needs of people with different individual differences. This way, it could help the aforementioned stakeholders more directly design and provide various forms of relevant information services, and broaden the scope of culinary information services.

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