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A VISITOR-FOCUSED ASSESSMENT OF NEW PRODUCT LAUNCH: THE CASE OF QUILT GARDENS TOUR^{SM} IN NORTHERN INDIANA'S AMISH COUNTRY

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ABSTRACT. Understanding the needs and wants of consumers in the process of new product development has been recognized as an essential aspect of preparing effective marketing strategies for the success of business. The new product development strategy has now moved into Consumer-Driven Innovation (CDI), which not only asks consumers about their needs and wants but actually involves them in the product design, promotion, and even assessment processes. Informed by the new concept of CDI, this study aims at identifying to what extent visitors as tourism product consumers and co-producers can be involved in a new product development process and reinvent the products by providing ideas and suggestions with their own creative insights. More specifically, using data collected from a trip diary and an online survey with 273 respondents, this article examines visitor assessment on a newly launched product, Quilt Gardens Tour^{SM}, in Northern Indiana's Amish Country. The data were analyzed using geo-visualization of tourist spatiotemporal mobility, descriptive statistics, and qualitative analysis of visitors' descriptions. The results show that the visitors are central role players in a new product development process, adding their creativity to the tour itinerary and design elements. Several lessons and significance for future development of the tour are provided.

KEYWORDS. Consumer-Driven Innovation (CDI), new product development, visitor-focused assessment

INTRODUCTION

In the recent highly competitive marketplace, new product development has been proven to be one of the vital factors to bring the growth and prosperity to most product and service providers (Danneels, 2002; Zirger & Maidique, 1990). It is also emphasized that the new product development should be both timely and responsive to consumer needs and wants (Gruner & Homburg, 2000; Olson, Walker, & Ruekert, 1995) because it is consumers who judge the ultimate success of the new products and services (Cooper & Kleinschmidt, 1987; Brown & Eisenhardt, 1995).

Both academics and practitioners in marketing have put a greater importance in understanding consumers' needs to provide effective

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and appropriate marketing strategies. Howard (1983) argued that successful firms are more likely to be consumer-oriented than unsuccessful firms, thus marketing should serve as the basis for strategy decisions. Furthermore, Gruner and Homburg (2000) pointed out that information on consumer needs and user experiences are viewed as resources companies depend upon to successfully develop new products. Consumers also have often been found to be the initial developers of what later became commercially important products and services (Schreier & Prügl, 2008). Thus, it is stressed that companies should gain deeper understanding of the "voices of the consumers" in order to make their new product development successful. Consequently, consumer research can be a useful tool to obtain consumers' voices and very helpful to raise the odds of success in the market (van Kleef, van Trijp, & Luning, 2005).

In fact, it has been believed that consumer research could be conducted during any of the four stages of the new product development process: (a) opportunity identification, (b) development, (c) testing, and (d) launch (Suh, 1990; Urban and Hauser, 1993). However, there are the often-heard arguments that asking consumers what they want and getting the "right answer" from them in the early stage of the new product development is hard because their solutions are often vague and they do not know what they really want without any experience of something that does not really exist (Ulwick, 2002; von Hippel, 1986, 2005). Therefore, consumers' voices are now most widely and intensely adopted in the stages of development, testing, and launch (van Kleef et al., 2005).

In spite of increasing business literature on consumer research to gain their innovative insights in the new product development process, research about consumers' impact on tourism products and services is still scant. Thus, the goal of this study is to examine the extent to which visitors as tourism product consumers and co-producers can provide their creative insights in the new product development process, especially in the launch stage. This study shows what can be understood from the observation of the spatiotemporal movement patterns of visitors, how visitors evaluated the new tourism product, and the kind of improvement aspects visitors can indicate.

THEORETICAL BACKGROUND

Consumer-Driven Innovation

Given recent industry dynamics, the importance of new product development has been magnificently emphasized for its ability to gain competitiveness, growth, and survival of organizations (Buxton, 2005; Byrd & Brown, 2002; Cooper & Kleinschmidt, 1987; Leonard-Barton & Sinha, 1993). However, since new product development is proven to be a complex and difficult task, thus easily plagued by high risks of failure (Carlile, 2002; Cooper & Kleinschmidt), many researchers have tried to identify the factors resulting in success or failure of the new product development process. After realizing that the old, sequential approach to developing new products is not sufficient for the success of business; consumers, of all the factors reported, have gathered an extensive attention as one of the important role players in the new product development process (Cooper, 1979; Harari, 1994; Matthing, Sanden, & Edvardsson, 2004; Takeuchi & Nonaka, 1986). Market managers are adopting market-driven strategies guided by the logic that all business strategy decisions should start with a clear understanding of consumers (Cravens, 2005). The underlying premise of market-driven strategy is that the consumers that form the market should be the starting point in business strategy formulation.

In the era of mass production, the main role player in new product development was product and service providers (i.e., manufactures, companies, and organizations). They were obsessed with making a brand new thing, and the creation from the obsession of making something totally unique is called *invention*. According to Kotler (1989) and Kotha (1996), however, current market segmentation have progressed into the era of mass customization as the substitute for dead mass production as consumers are emerging to be the new main role player in the new product development process. When invention is fully customized and gets accepted by a market, it can

be reproduced into an *innovation.* It characterizes the contemporary era of mass customization, and has been considered a newly focused tool that effectively drives organizational success. Innovation is also heavily emphasized for its capability of providing competitive advantage for organizations. For example, Byrd and Brown (2002) describe innovation as an avenue that helps organizations grow and assert that the lack of innovation can stifle companies. Buxton (2005) also advises that organizations might better strive for innovation with a thorough understanding of consumer needs and their creative insights rather than focusing on the invention of the "brand new."

Rothwell et al. (1974) emphasize the importance of concentration on consumer needs for the success of innovation. They state that user needs must be precisely determined and met, and it is important that these needs are monitored throughout the course of the innovation since they very rarely remain completely static. Many successful firms achieve this deep and imaginative understanding of user needs through the interaction with a representative sample of potential consumers throughout the development. Cooper and Kleinschmidt (1987) also indicate detailed market research as one of the success factors for new product development: consumer studies to pin down the exact consumer needs, requirements, and benefits by using techniques such as focus groups and consumer surveys. Urban and von Hippel (1988) suggest an accurate market research to understand the exact consumer needs and emphasize that such understanding is clearly an essential input to the new product development process.

Indeed, consumers have been shown to be the actual developers of most of the successful innovations and they also can contribute insights regarding solutions responsive to their needs (Urban & von Hippel, 1988). This explains why companies need to change themselves into market-oriented system in order to survive today's fiercely competitive world. Therefore, from merely asking consumers what they want and need, innovation strategy has moved into involving them in the process as the actual role players, suggesting that innovation should be driven by consumers' insights (De Marez & Verleye, 2004; van Kleef et al., 2005). According to Toffler (1981), with his popular concept of "prosumerism" (i.e., a mix of both producers and consumers), consumers are increasingly participating in the process of conception, design, launch, and promotion of new products and services. This process is often called Consumer-Driven Innovation (CDI, henceforth; Harris, 1998; Otsuka, 2006) and has been focused as the essential aspect for the success of business. CDI can be more effective and efficient for communication with consumers because organization strategy focuses on "by consumers" rather than "for consumers." CDI mainly emphasizes on consumer involvement in the product development process while the corporate posture prior to CDI was just "to go out to consumers" (Overby, 2006). In the modern organization, CDI typically includes consumer interaction at the early stage of new product development and gains consumers' feedback soon after the product launch (Gruner & Homburg, 2000). The ability of organizations to collect and then effectively exploit consumer information about demand and preferences is becoming a key aspect of competitive advantage (Cox & Mowatt, 2004). Competitive advantage is also driven by constant innovation satisfying the quickly changing consumer fashions, trends, tastes, and patterns of demand (Mowatt, 2006). For example, the intensity of consumer interaction is found to be a positive impact on the innovative product development process for keeping them on top of market competition (Gruner & Homburg). Therefore, the roles that consumers play in the new product development process have been highly emphasized, especially in the recent market circumstances which emphasize the innovative ideas and products for the success of businesses (Dahlsten, 2003; Matthing et al., 2004).

Consumer-Driven Innovation in Tourism

Despite being a popular topic in business literature, there is very little discussion on CDI in tourism development. However, CDI deserves more attention in the tourism setting than in others because the market is getting extremely competitive across the world and tourist demand

is rapidly changing due to the tremendous availability of information. For a destination to meet the tourists' quickly changing needs and wants and, therefore, to achieve the competitive advantage among others, the role of CDI through market-driven strategy in the tourism settings must be more explored than it has been. Within the field of tourism, being market-driven can be translated as focusing on visitors' needs and wants and obtaining visitors feedback to continuously provide valuable tourism experience. Particularly, as destinations are becoming more and more creative with the product offerings, it is of a paramount importance to understand the creative consumption of these new offerings and to gain visitors' insights for a continuous co-creation of better products.

As destination marketers face new challenges from the rapid process of change in the field of tourism, developing new, innovative offerings can be an effective solution to create new markets and reinvent the old ones. In tourism literature, new product development is often discussed within the theme of creativity. From their analysis on recent development in culture and tourism, Richards and Wilson (2006) use the terms "creative production," referring to the innovative strategies of generating creative spaces within the destination; and "creative consumption," referring to the new, different ways of experiencing tourism destinations. Tourists are increasingly more creative and informed; they base their travel styles on values such as personal authenticity, altruism, whole process learning, and self-actualization (Ray & Anderson, 2000). These new tourists are creative individuals who are willing not just to accumulate tourism experiences but also to change them. The blurred boundary between tourism production and consumption often cause creative tourists to be co-producers of their own experiences, making them a part of the innovative process of creating new tourism products. Thus, CDI is also considered as an emerging chance to obtain and sustain a destination's competitive advantage whereby destination marketing organizations (DMOs) try to develop a valuable and engaging relationship with the tourists by giving them a central role in the innovation process.

Shaw, Agarwal, and Bull (2000) state that understanding tourism consumption and tourist experience is important to obtain their creative consumption ideas, but these topics are somewhat neglected in tourism research because capturing the consumption and experience of tourists is viewed as not an easy task. As such, tourism consumption and tourist experience have been operationally defined in many different ways. In an attempt to examine tourist consumption and experience, some studies try to observe the actual movement patterns of tourists. Haldrup (2004) asserts that research about tourists' spatiotemporal movement is scant, in part, because tourist movement is so fundamentally obvious that its form and practice are taken for granted and often overlooked. However, Lew and McKercher (2005) emphasize understanding tourists' movements within a destination as the basic nature of their experience has important practical applications for destination management, product development, and attraction marketing.

Based on what is observed in their movements, researchers try to model tourists' movement and consumption patterns and draw their implications for product development (Xia & Arrowsmith, 2005). Of the scant research dealing with tourists' movements, some studies report tourists' spatial implications of variations in attraction site visits (Debbage, 1991; Fennell, 1996; Tideswell & Faulkner, 1999). For example, Debbage found that some tourists chose to follow the advised travel courses for much of their stay even though they stayed at the destinations for several days, while a substantial group of tourists seemed to be very adventurous and more likely to make their own travel routes. From the results, she concluded that tourists' travel behavior or pattern were heterogeneous. Other studies attempted to capture tourism consumption by interpreting tourist movement patterns (Cooper, 1981; Tussyadiah & Fesenmaier, 2007; Xia, Ciesielski, & Arrowsmith, 2005). From the spatiotemporal observation used in his study, Cooper concludes that the tourists are prone to reduce uncertainty in their exploration of an area by visiting sites that are perceived to give the greatest reward for their effort.

He also points out that the number and the timing of tourist visits to each site are dependent upon the level of facility provision at that site and, thus, upon the position of that site on the hierarchy. This confirms that, early in the travel, tourists tend to visit sites which are perceived to give high recreational place utility. The tourists' strategies continually minimize the risk of disappointment at the expense of effort.

Based on the previous studies, it is argued that capturing tourists' movements and description of their experiences, including their comments and suggestions, can be considered as an effective approach to gain tourists' feedback to assess a tour or other tourism programs, especially in the process of new product development. Therefore, this study attempts to provide a discussion on the importance of CDI in tourism settings through a case study. It examines how visitors experience a newly launched tourism product and, particularly, to what extent they add their creativity as co-producers of their own tourism experience through the analysis of their spatiotemporal movements and creative suggestions. This study also conceptualizes the insights provided by visitors for redesigning various aspects of the tour program to draw managerial implications for future development of the product.

RESEARCH CONTEXT

This article focuses on Quilt Gardens Tour^{SM}, which is a new, innovative tourism product offered in Northern Indiana's Amish Country. It launched in 2008 and engaged consumers (i.e., visitors in Quilt Gardens Tour^{SM}) in the process of product development by asking them to participate in the surveys to collect their opinions while experiencing the product right after the product launch. The tour features 12 quilt-themed gardens and 11 hand-painted outdoor murals, some of which are located at the same visit points, making a total of 20 visit points. The unique gardens and murals are created based on patterns of traditional Amish and contemporary quilts, offering both visitors and residents to experience a colorful and creative connection to the history and heritage of Amish Country. The tour resulted from a partnership between Elkhart County Convention & Visitors Bureau (ECCVB) and local businesses and was designed to reinforce an existing product called Heritage Trail^{SM}, a 90-mile trail connecting historic and scenic parts of Amish Country. The Quilt Gardens blossom from late May 2008 until first frost of 2008, making this the time period for the tour.

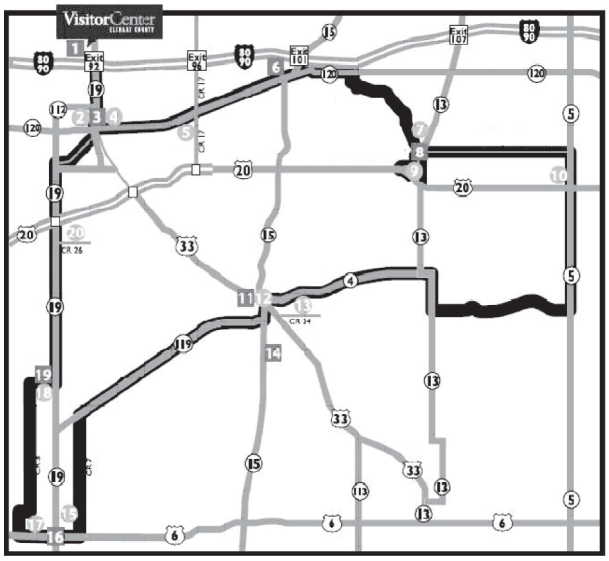
The tour comes with a marketer-suggested itinerary following the Heritage Trail^{SM}. As an attempt to make the visitors follow the tour, ECCVB provides an official tour map of the gardens and murals based on their order along the trail (see Figure 1). Self-guiding Quilt Gardens Tour^{SM} CDs and cassette tapes are also provided to accompany visitors throughout the tour. The maps, CDs, and cassette tapes can be obtained from the Elkhart Country Visitor Center Mural (visit point No. 1) or other 19 stops along the trail.

STUDY METHOD

This article focuses on consumers' feedback for a new product at the introduction stage of product life cycle, using two different approaches of data collection: diaries and online survey. In order to fully understand how visitors experience the Quilt Gardens Tour^{SM}, visitors were invited to participate in the study by filling out "Quilt Gardens Tour^{SM} Diary" as the first survey instrument during their trip. It was designed to accomplish two important goals: tracking visitors' spatiotemporal movements and soliciting problem-solving design suggestions. The measures and scales for the diary were developed based on previous studies focusing on visitor movements and experiences (see Tussyadiah & Fesenmaier, 2007; Tussyadiah, Fesenmaier, & Yoo, 2008). To capture the detailed information on various aspects of the visitor experience including the sequence of movement, the diary was designed to include three sections.

Part 1 asks visitors to identify and evaluate at least 10 gardens/murals according to the sequence of their visitations, consisting of

FIGURE 1. Quilt Gardens Tour[SM] Map.



10 pages for each location. It starts with the name of gardens/murals and the time of their arrival, followed by the reason(s) of visiting the gardens and/or murals, their sensory experiences (i.e., color, sight, sound, smell, texture, and taste) and emotional experiences (e.g., happy, sad, afraid, and calm) with the gardens and/or murals (in a 7-point Likert scale ranging from 1 for *strongly disagree* to 7 for *strongly agree*), and ended with duration of stay at each specific location. This information was used to describe visitors' spatiotemporal movements within the tour and to evaluate each individual garden/mural.

In Part 2, visitors were asked to list the three most and least interesting gardens/murals and the reasons for these selections. Part 2 also includes the future intention to participate in various activities related to the tour experience, consisting of seven measures with a 7-point Likert scale ranging from 1 for *strongly disagree* to 7 for *strongly agree*. This information was used to evaluate the entire concept of the tour, to improve the quality of the individual venues within the tour, and to inquire of visitors' involvement intention. The information from Part 3 was used to understand the market of this tour.

The second approach of data collection was an online survey. It was targeted for tourists who already finished their trips and was designed to capture more general data on evaluations and suggestions on the overall tour (i.e., the visited gardens/murals, the three most and least interesting gardens/murals, the gardens/murals to visit or revisit in the future, and possible future engagement with the tour).

Both diaries and online survey were conducted from June to October 2008. Participants were solicited by ECCVB through their website and by direct solicitation at the Visitor Center and point of interests throughout the area. The diary survey resulted in 230 completed diaries with a total of 1584 garden/mural visitations while the online survey resulted in 43 completed responses representing 519 garden/mural visitations. All participants entered into a drawing to win a $250 gift card, a $100 gift card, or one of six $25 gift cards. In addition, participants who visited at least 10 gardens/murals and returned the completed diary received a free gift at the designated drop-off locations. The analysis was conducted using geo-visualization of tourist spatiotemporal mobility, descriptive statistics, and qualitative analysis of visitors' descriptions.

RESULTS

Spatial Sequences

Visitors' movements throughout the tour were first mapped by the noted connections between the respective gardens. The results show various "subtours" created by the visitors. Only 22.7% of the visitors chose Visitor Center Mural (visit point No. 1) as the first point to start the tour; other visitors started at the first gardens they found upon entering the area. Visitors who started the tour with Visitor Center Mural stated that it was because of these reasons: "It was the first mural found upon entering the area" (58.3%), "it was the closest to the accommodation" (19.4%), "it was recommended by others" (5.6%), and other reasons (16.7%), including "wanted to start the tour with getting the information from the Visitor Center," and "the starting point of the Heritage Trail[SM]."

Interestingly, only a few of the visitors followed the trail as advertised/promoted in the brochures (29%). Most visitors (71%) created their own itineraries. As presented in Figure 2, Barbara, who started her travel at the Visitor Center Mural as suggested, was following the Heritage Trail[SM] until the fourth garden. However, she chose visit point No. 20 as her next stop, toured the suggested route *backward*, and finally finished her tour at visit point No. 7. The routes she used when traveling to visit points No. 20 and No. 7, which are illustrated with dotted arrows in Figure 2, were not even on the Heritage Trail[SM]. The reason she stated for taking the different paths was "closeness to route taken". In another case, Darla started the tour at visit point No. 12 and moved along different routes, which are also illustrated with dotted arrows, until she reached a part of the trail on the fifth stop. She finished her tour moving along the advised routes *backward*. Other specific reasons mentioned by the visitors who created their own routes instead of the suggested one are "[we] saw it as we drove by," "[it's] close to lodging," and "[it's convenience for] lunch time and shopping."

It appears that visitors' movements from one garden/mural to another were driven mainly by "convenience, close proximity to the previous gardens/murals" (67.4%). Other reasons (25.5%) included "following the trail/tour map," "following the cassette tape/CD," "close to other attractions to visit," and "saw it while driving by." Only a few visitors stated that the reasons to visit a particular garden/mural after the previous ones are because "it was recommended at the previous garden/mural" (3.5%), "it has similar plants as the previous garden" (2.4%), "it has similar design patterns as the previous garden/mural" (1.2%). These reasons indicate that while the movements of a few visitors were driven by the marketer's instructional material (e.g., map, trail, CD), most of the visitors moved along the area according to their perceived convenience and the proximity between a garden/mural and the others (see Figure 3). They, in the results, also suggest that market-advised routes are still perceived inconvenient or less convenient by the visitors to the destination.

Temporal Sequences

Figure 4 represents the temporal sequences of visitations. Most respondents started the tour in the morning before 12:00 p.m. (74% of the first stops and 58% of the second stops). However, from the 3rd to the 10th stops, most of the visits occurred after 12:00 p.m. (about 66%). Also, most of the overall gardens/murals visitations (55%) happened in the afternoon between 12:00 p.m. and 5:00 p.m., from short before noon until short before dusk. Only a few recorded visits actually happened after 5:00 p.m. (10%). This is due to the nature of the attractions; the colorful gardens and murals are best viewed with a sufficient amount of light.

Most visitors toured the quilt gardens/murals for 1 day (74%) or 2 days (18%). The shortest visit for a 1-day tour was for 1.5 hours spent in 10 gardens/murals; the visitor was only driving by to see the quilt murals and spent 5 to 10 minutes at the quilt gardens. The longest 1-day tour was for 10.5 hours, spent in 10 gardens/murals; the visitor spent from 5 to 15 minutes at the quilt murals and 10 to 30 minutes at the quilt gardens. Visitors stayed at each garden/mural from 1 (i.e., just driving through) to 210 minutes

FIGURE 2. Marketer Suggested Tour and Examples of Generic Visitors' Tours.

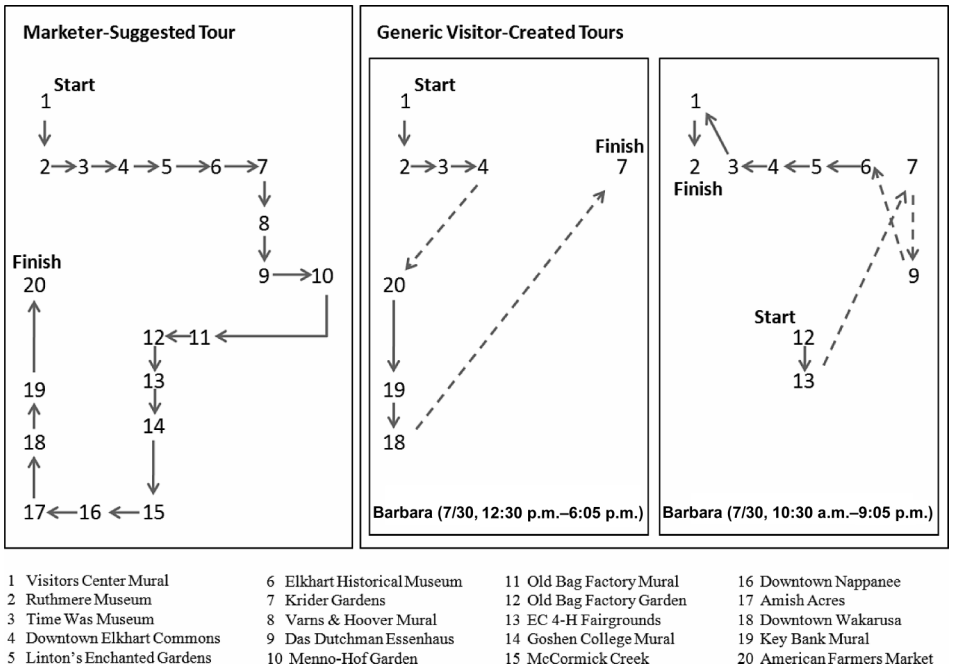
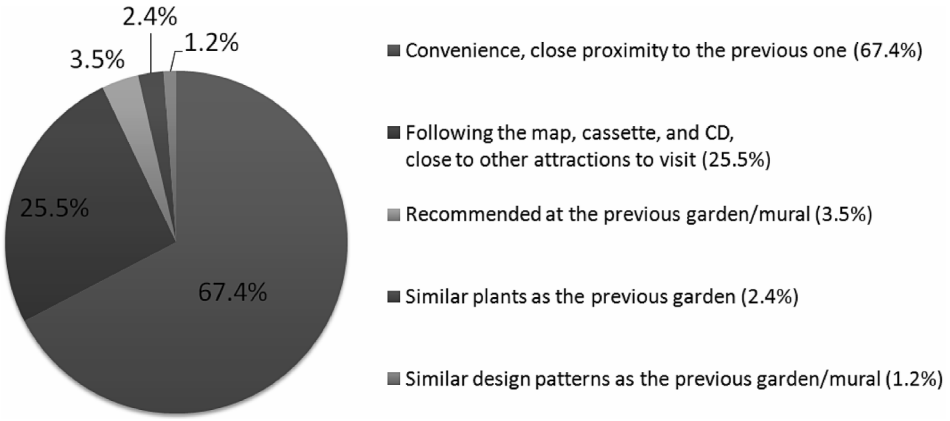


FIGURE 3. Reasons of Visit From One Garden/Mural to Another.



(3.5 hours); with an average length of stay of 20.4 minutes.

Visitor Evaluations and Involvement

The participants were asked to evaluate each of the gardens and murals and the tour in general. Table 1 shows the evaluation scores for respective gardens and murals collected from the visitors. The scores range from 1 for *strongly disagree* to 7 for *strongly agree*. From the results, one can see that most of the visit points have similar scores on each evaluation category except three visit points: (a) Varns & Hoover Mural (visit point No. 8) has lowest scores on "crowded," "noisy," and "nice atmosphere"; (b) Goshen College Mural (visit point No. 14) has lowest scores on "easy to find," "attractive," "visually pleasing," and "worth to time spent"; and (c) Das Dutchman Essenhaus (visit

FIGURE 4. Aggregate Temporal Sequences of Visitations (in Number of Visits).

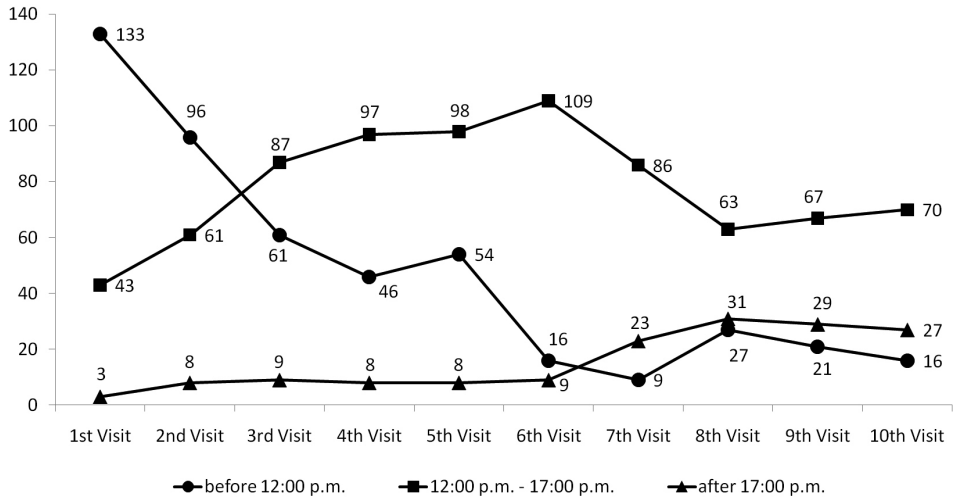


TABLE 1. Evaluation Scores for Each Garden and Mural (With 1 for *Strongly Disagree* and 7 for *Strongly Agree*)

Point number	Name of garden/mural	Easy to find	Attractive	Visually pleasing	Crowded	Noisy	Worth the time spent	Nice atmosphere
1	Visitors Center Mural	5.8	6.2	6.1	1.5	1.8	5.7	5.7
2	Ruthmere Museum	5.8	5.9	5.8	1.3	2.6	5.5	5.6
3	Time Was Museum	5.8	5.7	5.6	1.6	2.8	5.2	4.4
4	Mowntown Elkhart Commons	5.5	6.0	6.0	1.2	2.1	5.8	6.2
5	Linton's Enchanted Gardens	4.9	5.8	5.8	1.4	1.5	5.6	6.0
6	Elkhart Historical Museum	5.9	5.7	5.9	1.5	1.8	5.1	5.2
7	Krider Gardens	5.2	5.7	5.6	2.1	1.7	5.8	6.4
8	Varns & Hoover Mural	5.8	5.5	5.9	2.6	3.5	4.7	4.0
9	Das Dutchman Essenhaus	5.8	6.8	6.7	2.3	2.0	6.3	6.5
10	Menno-Hof Garden	6.0	6.3	6.2	1.9	1.9	5.9	6.2
11	Old Bag Factory Mural	6.2	6.0	5.9	1.8	1.9	5.1	5.0
12	Old Bag Factory Garden	5.7	6.7	6.7	1.9	1.6	6.4	6.3
13	EC 4-H Fairgrounds	4.9	6.3	6.3	1.7	2.4	5.7	5.6
14	Goshen College Mural	4.4	5.0	4.7	1.9	1.9	4.4	4.4
15	McCormick Creek	5.0	6.3	6.2	2.1	2.0	5.6	5.6
16	Downtown Nappanee	4.5	5.6	5.6	2.3	2.8	5.0	4.4
17	Amish Acres	5.9	5.6	5.5	1.7	1.6	5.7	5.7
18	Downtown Wakarusa	5.4	6.3	6.5	1.7	1.8	6.1	6.0
19	Key Bank Mural	5.3	6.3	6.1	1.9	2.2	5.9	5.5
20	American Farmers Market	6.7	6.6	6.4	2.2	1.8	6.1	6.1
	Overall value	5.5	6.0	6.0	1.8	2.1	5.6	5.5

point No. 9) has highest scores on "attractive," "visually pleasing," and "nice atmosphere." It indicates that even though most of visit points are estimated equally by visitors, some of them have extremely high and low scores on particular evaluation categories as compared to the others. Also, the results show that their overall values on each evaluation category are moderately well-estimated (above 5.5 on positive aspects and below 2.5 on negative aspects).

As a part of the evaluation process, visitors were asked to provide descriptions and comments

about their experience with the tour. The comments collected from visitors provide thoughtful insights about their experiences, the gaps between their expectation and the provided tour, and recommendations for solutions to their perceived problems. Visitors were also asked to vote for their most and least interesting gardens/murals and state the reasons for their votes.

Based on the comments and votes, important aspects of the gardens and murals perceived by visitors as drivers of positive experience were identified; they are: design patterns, choice of plants and flowers, location (i.e., flat vs. elevated), visibility, and maintenance. Some of the gardens/murals voted as the least interesting garden were identified as having bland or boring design, too repetitive in design, sparse flowers, having muted color, not well maintained, etc. Interestingly, it appears many visitors enjoyed the gardens more than the murals.

Overall, most visitors enjoyed the tour and considered the new product as a wonderful idea and that ECCVB should do it again next year. Nearly all visitors stated that they have gardens/murals they would like to visit/revisit this season or in a more distant future. Indeed, most visitors indicated that they agree to visit more gardens/murals in the future (average rate of 5.06, with 1 for *strongly disagree* and 7 for *strongly agree*) and also stated that they would like to recommend the tour to their friends and relatives (average rate of 5.98). Most importantly, there are a number of visitors who stated that they agreed to participate in planting the future quilt gardens, attend seminars in quilting and gardening, and participate in a quilt gardens and murals photo contest organized by ECCVB. These results show that visitors are more than willing to engage in the process of the tour development by active participation in various activities related to this tour.

Visitors' Ideas for Product Design

Besides the positive aspects of the tour, this study also found some problems faced by tourists as they experienced the attractions. The problems identified by tourists are categorized into two groups: (a) attraction-related problems for each gardens and murals and (b) general problems for the overall tour product. Respondents suggested the development solutions for each of the venues and for the overall tour setting. The problems and solutions for gardens and murals include:

1. *Visibility problem*. Visitors identified some difficulties enjoying the entire design pattern of a few gardens and capturing them in pictures, especially when the gardens are planted in relatively flat areas. Visitors suggested the following solutions for this problem:
   - *creating elevated platforms at each garden to allow visitors to view the full pattern and take pictures of the garden*;
   - *creating a pole with a large mirror to enable visitors to view the garden from a designated spot, as if from above*;
   - *planting gardens on the hill*;
   - *preparing only low growing plants for better viewing*.
2. *Information and interpretation*. Some visitors wanted more background information and interpretation of all garden and mural designs to better understand the significance of the tour. They suggested the following solutions:
   - *providing signs and descriptions accompanied by aerial pictures of every garden*;
   - *setting storytelling or interpretation boards for each quilt garden/mural design for easy understanding and more meaningful experience*.
3. *Design problems*. A few issues surrounding the design of quilt gardens and murals were identified and several solutions were suggested as follows:
   - *choosing plant colors that are not too distracting*;
   - *selecting color combinations of flowers that can distinguish the quilt pattern better*;
   - *preparing a variety of flowers or plants that display the same color*.

Additionally, besides the comments about the gardens and murals itself, there were other important aspects of the tour highlighted by

visitors. Some directional signs were identified as causing confusion because they gave visitors a wrong direction. More problematically, while the overall evaluation of the tour guide CD/cassette were described as very informative, well-done, and interesting; there were also some negative comments about them, such as "confusing," "not necessarily helpful," or even "leading away from the tour." These problems are considered to be urgent matters for the development of the tour in the following year.

CONCLUSION

New product development has been emphasized as one of the vital factors for the success and prosperity of organizations. From the market-driven strategies that all business should start with a clear understanding of consumers (Cravens, 2005), involving the consumer as an important role player in new product development has been believed to be an efficient way to achieve a business success in the highly competitive market. Within the field of tourism, since being market-driven can be interpreted as focusing on visitors' needs and wants and obtaining their feedback to continuously provide valuable tourism experience, this study examined to what extent visitors can be successfully involved in the new product development process using a case study of Quilt Gardens Tour^{SM}. This study is based on the logic that CDI should include consumer interaction at the early stage of new product development and obtain consumers' feedback soon after the product launch (Gruner & Homburg, 2000). As Xia and Arrowsmith (2005) state, modeling tourists' movement and consumption patterns through this study is found to be useful to draw the implications for product development. The results also suggest that visitors, as the actual role players in innovation processes, have the potential to be co-producers of tourism products by providing their own creative insights for the products (De Marez & Verleye, 2004; van Kleef et al., 2005). As Richards and Wilson (2006) assert, this study illustrates how successful an invention (i.e., newly launched tourism product Quilt Gardens Tour^{SM}) can be elaborated and reproduced into an innovation (i.e., a "creative production") when it is fully customized with consumers' creative insights (i.e., the "creative consumption").

By observing their spatial and temporal sequences of visitors' movements as one aspect of their experience, it is shown that the movement pattern can better indicate the actual experience regardless of tourism planners' suggested itinerary or program. These movements are generic; yet, by doing so, tourists assemble various versions of products customized to their needs and preferences. This can also be seen as an attempt at reducing uncertainty in their movements of an area by visiting sites perceived to reward the greatest benefit for their effort (Cooper, 1981). These versions are valuable insights for planners to improve the tourism offerings in the future. As a key person who actually experiences and enjoys the destination, a tourist could go beyond "just being a tourist" and provide suggestions that product planners were not able to come up with prior to the product launch. In addition, these findings demonstrate that, because of the inseparable nature of consumption and production of tourism products, the process of soliciting consumer feedback is comparable to a real-time integration of demand and supply, and therefore is a very useful approach for product design within a tourism setting.

From the analyses, a series of suggestions for the improvement of the Quilt Gardens Tour^{SM} were provided. Some important design elements which should be considered in further development of this program are as the following. *First*, it is important to add more visibility to the quilt gardens so that visitors can enjoy the gardens more by capturing the entire quilt patterns. *Second*, the coverage of plants and flowers (i.e., not too sparse and not too crowded) is also an important factor that can aid to the attractiveness of the quilt gardens. *Third*, visitors tend to prefer a good-sized mural with unique design patterns. *Fourth*, quilt gardens/murals management should put a greater importance on the maintenance of the gardens/murals. Well-kept and cared gardens and murals are perceived to be more attractive by visitors. *Last*, the provision of directional and informational aides will provide visitors with a more valuable and meaningful experience with the tour.

The two different approaches of data collection were also effective for the purpose of this study. By using tour diaries, researchers could obtain visitors' opinions and ideas while they were on-site enjoying the tour. Through tracking visitors' movements, existing problems related with the itineraries and materials provided by product planners to guide visitors within the destination were identified. Also, the online survey was proven effective to gain visitors' overall evaluation after experiencing the tour, targeting those who did not have a chance to participate in the diary survey.

This study provides meaningful implications stemming from the identification of visitors as co-producers of the tourism experience. While Information Technology (e.g., online survey) has gathered attention from researchers as a genuine innovative communication tool with consumers for their interactive nature (Kaplan & Haenlein, 2006), the failure to collect a large number of online survey responses is one of the limitations of this study. Additionally, due to the attributes of the diaries, the visitors were asked to write them simultaneously while they were moving around; the movement patterns were not fully completed in some of the diaries. High-technical digital equipment to understand tourists' experience within the destination (e.g., by automatically tracking their movements, recording their narratives) has been used more commonly these days, especially when observing tourists' spatiotemporal experiences (O'Connor, Zerger, & Itami, 2005; Tussyadiah et al., 2008). Thus, the application of high-technical devices is expected to enhance the accuracy of the observation results for further future research. Furthermore, in order to compare how the product has been improved after the adoption of consumers' feedback, a further research to look at how consumers' suggestions affect the product positively in the redesigned tour is recommended to confirm the effectiveness of CDI.

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