

AN EVALUATION OF INTERPRETIVE MEDIA AT THE DILLON NATURE CENTER

by

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ABSTRACT

Dillon Nature Center has a wide variety of exhibits that teach the public about the natural resources of Kansas. The purpose of my study was to conduct an exploratory study about the effectiveness of two key exhibits in the nature center (Underground Theater and Tornado), as well as evaluate the use of Quick Response Code or QR codes along one of the trails. A visitor survey was used to collect these data over 30 3- hour sampling periods. One hundred and ninety-five visitors were surveyed during the extent of my study. Fifty-four of those who were surveyed went into the Underground Theater exhibit and 47 went into the Tornado exhibit. I concluded that the Underground Theater exhibit was successful in providing useful information to the visitor, whereas the Tornado exhibit provided little useful information to the visitor. Visitors slightly preferred the use of QR codes along the trail even though the actual use was low. This study indicated that the type of exhibit greatly impacts what the visitor takes away from the exhibit. I also showed that it is likely people prefer newer technology to be available at the nature center. These findings provided the management and staff of Dillon Nature Center with information to guide their interpretive-planning efforts.

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Chapter 1-Introduction

Objectives

The purpose of this study was to evaluate the effectiveness of two key interpretive exhibits at Dillon Nature Center, the Underground Theater and the Tornado exhibit. I evaluated those exhibits using the “Zones of Tolerance” to determine if the exhibits were having the desired impact on the visitors. I also evaluated visitor use of QR codes along the Woodard Interpretive Trail. I wanted to see if visitors of the Nature Center used them, wanted more of them around the center, and if they learned anything from accessing information from the existing QR codes. I also wanted to provide visitor demographic data to the Dillon Nature Staff to help them understand who visits the center. The goal of all of these analyses was to guide future interpretive planning at the Dillon Nature Center.

History of Dillon Nature Center

The Nature Center land was part of the great prairies that covered much of central North America. While there are no records of any artifacts of Native Americans being found on this site, many have been found nearby. This land was initially deeded to a railroad company and then was owned by a series of private individuals until 1940.

From 1940-1970, Dillon Stores, Inc., owned the land. At the time, this grocery store company was locally-owned and had its headquarters in Hutchinson, KS. The original site contained 27 acres that Dillon developed as a private recreation area for its employees, their families, and friends. Ground water that was causing problems for the adjacent railroad line was collected in gravity-flow lines and two ponds were built to hold the water. One pond was used for swimming and had diving boards, slides, and a raft. The other pond was stocked for

fishing. Picnic shelters, croquet courts, a giant bag swing from a platform, and other recreational facilities were developed. The site was popular and heavily used. The entire site was mowed and maintained like a municipal park.

In 1971 Dillon Stores donated the land to the City of Hutchinson, KS for the Hutchinson Recreation Commission (HRC) to use as a public recreation site. For about two years, HRC managed it in much the same way as Dillon Stores had done, except they opened it to the public and instituted an entrance fee. People paid to swim, fish, picnic, and enjoy the natural surroundings. The Hutchinson Recreation Commission operated a Summer Adventure Camp and offered nature-related programs that were successful and showed promise for the future of the Nature Center having camps and activities.

In 1973, HRC considered changing the focus of the site to nature study. Experts from the Natural Science for Youth Foundation, Soil Conservation Service, and other organizations were brought in to give their professional suggestions. In 1974, the change was made from heavy-use recreation to more passive nature-based activities. Initially, the site was called Dillon Park Outdoor Recreation and Education Center. Later, the name was shortened to Dillon Outdoor Education Center and eventually to Dillon Nature Center. Table 1 presents major milestones in the history of Dillon Nature Center. Figures 1 and 2 illustrate two of these recent milestones.

Site Description

When you first pull into the Dillon Nature Center, you are greeted by a walkway of flowers that leads you to the entrance of the Visitor Center (Figure 3). The Visitor Center is a 10,000 square foot building that includes a large meeting room, natural science classroom,

library, gift shop, and a gallery with many interpretive exhibits. We evaluated if the following two exhibits fell within the zones of tolerance.

The Underground Theater Exhibit allows visitors to experience life underground in the prairies of Kansas (Figure 4). Upon entering the exhibit, an audio recording of a voice is triggered. This voice presents details about how different organisms live in and below the soil and how they use the ground beneath the prairie. For example, visitors hear about the growth cycles of a cicada and about the extensive roots of the bluestem grasses found in our prairie ecosystems (Figure 5.). The exhibit also displays the use of prairie dog tunnels as home for burrowing owls and badgers.

The Tornado Exhibit is an interactive exhibit which allows visitors to push a button to create a water tornado (Figure 6). The water tornado forms and then dissipates after 30 seconds. This exhibit also has panels on the wall describing how tornadoes form and the destruction that they can cause (Figure 7). This exhibit presents information about tornado classifications and Kansas towns that have been hit repeatedly by tornadoes. Also, this exhibit includes a weather station that shows the current temperature, humidity, and wind speed.

The Dillon Nature Center has four different trails located around the facility. One trail is the Prairie Hills Westar Energy trail that leads visitors through a wide variety of native grasses and flowers. A second trail is the Outer Loop Recreation Trail that takes people around the perimeter of the nature center. A third trail is the Upper Pond Trail, a hard-surface trail that goes around the upper pond. A fourth trail is the Woodard Interpretive Trail. It is a 0.75 mile loop that takes visitors through woodlands, a small prairie, a marsh and a small pond. This is the trail that uses QR codes that allow visitor to access interpretive information.

Chapter 2-Literature Review

QR Codes

What is a QR code? A QR code (Quick Response code) is a type of matrix bar code or two-dimensional code. Visitors who own a smartphone can download an application that scans this code with the phone's camera. The phone converts the code and allows the visitor to connect to a wireless network or open a webpage in the telephone's browser and download over the Internet detailed information related to the item or object they are scanning, for instance, text, pictures, or contact information. They were originally designed for industrial uses and they are common in consumer advertising.

In a world where technology is growing rapidly, we constantly find ourselves inundated with new technology. Nature centers and museums are trying to keep up with the most innovative and newest technology. They are consistently trying to keep their exhibits & trail guides fresh and interesting. The Dillon Nature Center staff decided that they would put QR codes onto one of their trails to see if visitors would prefer using them as an alternative to the traditional paper trail guide. They thought that by avoiding the use of paper and associated litter, it would be a more environmentally responsible approach to trail interpretation. The QR codes at Dillon Nature Center were located on wooden posts along the Woodard Interpretive Trail loop. They were positioned in front of an object such as a tree or a flower and the QR code directed the visitor to a website that interpreted the object (Figures 8 and 9).

The use of QR codes varies across cities and nations. Because perception can vary from place to place and person to person, cultural and geographic differences have been found to affect different consumers' perceptions about QR codes (Sago, 2011). The most noticeable

difference is found between consumers in the United States and Japan. Consumers in Japan have widely adopted QR codes and they have become integrated into their daily lives (Sago, 2011). This is less true in the United States. Research also shows that QR codes associated with high-involvement products have a greater probability of being used (Narang, 2012). High-involvement products are those that require considerable effort when purchasing, such as a car or truck. By contrast, a low-involvement product can be an everyday purchase such as candy or a drink. The use of QR codes in interpretive settings, where people are at their leisure, has not been studied.

Zones of Tolerance

Theme-based interpretation is now a well-established best practice. All interpretive efforts, regardless of media or approach, used should be centered on communicating a specific powerful theme rather than miscellaneous facts or general information (Beck and Cable, 2011). The theme is the main take-home message that interpreters want their audiences to receive. It is more than merely the *topic* of the exhibit or program, but rather the provocative message or idea that is purposefully meant to be communicated by the interpretive staff. For example, a topic of an exhibit might be soil, but the theme (usually presented as a complete sentence) would be “We are losing our precious soil, but you can help save it.” In defining the theme of the interpretive effort, interpreters often ask themselves, *“Upon seeing this exhibit, or attending this program, what is the one thing we want the visitor to learn and remember. If they forget everything else, what do we hope they learn and remember?”*

As with theory, research and practice of thematic interpretation has evolved. It is now apparent that visitors often find their own personal meanings in our interpretive

communications. This is understandable and often desirable. In other words, the take away message from interpretive efforts varies among those receiving the message. In light of this variation in meanings among audience members, Ham (2013) developed the notion of 'Zones of Tolerance' (a subjective area within which an interpreter judges the thoughts provoked by an interpretive product to be acceptable) as a way of evaluating and categorizing these different meanings. Thoughts that fall within a communicator's zone of tolerance are considered to be supportive or consistent in some way with the theme the communicator was trying to develop (Ham, 2013). Simply put, if the interpreter or manager is pleased with what the visitor "gets" out of the exhibit, even if it is not precisely the specified theme, then that would be considered within the zone of tolerance and considered a success. Conversely, if the visitor leaves an exhibit with the wrong idea or spurious or trivial thoughts about the subject, that result would be outside the zone of tolerance. Ham (2013) proposes the concept of zones of tolerance as a new approach to verify if an interpretive product is provoking the thoughts intended by the designers. As Ham explains, the zone of tolerance is the thematic "comfort zone." It is where the visitor's perception or personal themes created from the interpretation they are experiencing should fall. Depending on the objectives of the interpretation, this zone of tolerance will fall into one of three possibilities: the unrestricted zone, the wide zone, or the narrow zone. In the unrestricted zone, the limits and acceptability of themes the audience take away are unlimited and very broad, as it happens during storytelling and theater performances. In this zone, the interpreter wants to promote a diversity of opinions and discussion. In the wide zone there is still some room for personal meaning-making and interpretation, but there are some limits to what the interpreter expects the audience to take away: it must be

“philosophically and factually consistent with [the] intended theme” (Ham, 2013, p.157). Last, the narrow zone does not allow much variation among the themes the audiences take away. This is commonly used in nature centers, where the interpreters narrowly define learning outcomes (in this case, facts about species, natural history, and natural phenomena related to the nature center) for visitors.

The following is an example of zones of tolerance. An interpreter’s objective is to convince park visitors that they should be extra careful in how they store food while camping in black bear country. The theme that guided the program development was, “Campers can be unwitting signatories on the death sentence for the bears that live in the park.” Themes extracted by people in the audience included, “When you think about it, once the bears are gone, we’ll be a lot safer.” This message fell outside of the zone of tolerance. However, when another visitor reported thinking, “Maybe we should lock up our food” that fell within the Zone of Tolerance.

Interpretation

What is Interpretation? Freeman Tilden, known as the “Father of Interpretation,” defined interpretation as: “An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information” (Tilden, 1977). A more contemporary definition is the National Association of Interpretation’s definition which states: “Interpretation is a mission-based communication process that forges emotional and intellectual connections between the resource and the inherent meanings in the resource.”

Interpretation is an integral part of the Dillon Nature Center. The staff use the principles of interpretation to educate the public about the importance of the environment and the world around them. The interpretive programs and displays allow visitors to have experiences that they may not be able to get anywhere else. It opens visitors up to new experiences and helps them connect to those experiences on a personal level.

Beck and Cable (2011) have developed the following 15 widely-used and accepted principles of Interpretation.

1. To spark an interest, interpreters must relate the subject to the lives of the people in their audience.
2. The purpose of interpretation goes beyond providing information to reveal deeper meaning and truth.
3. The interpretive presentation—as a work of art—should be designed as a story that informs, entertains, and enlightens.
4. The purpose of the interpretive story is to inspire and to provoke people to broaden their horizons.
5. Interpretation should present a complete theme or thesis and address the whole person.
6. Interpretation for children, teenagers, and seniors—when these comprise uniform groups—should follow fundamentally different approaches.
7. Every place has a history. Interpreters can bring the past alive to make the present more enjoyable and the future more meaningful.
8. Technology can reveal the world in exciting new ways. However, incorporating this technology into the interpretive program must be done with foresight and thoughtful care.
9. Interpreters must concern themselves with the quantity and quality (selection and accuracy) of information presented. Focused, well-researched interpretation will be more powerful than a longer discourse.
10. Before applying the arts in interpretation, the interpreter must be familiar with basic communication techniques. Quality interpretation depends on the interpreter's knowledge and skills, which must be continually developed over time.
11. Interpretive writing should address what readers would like to know, with the authority of wisdom and its accompanying humility and care.
12. The overall interpretive program must be capable of attracting support—financial, volunteer, political, and administrative—whatever support is needed for the program to flourish.
13. Interpretation should instill in people the ability, and the desire, to sense the beauty in their surroundings—to provide spiritual uplift and to encourage resource preservation.
14. Interpreters can promote optimal experiences through intentional and thoughtful program and facility design.

15. Passion is the essential ingredient for powerful and effective interpretation—passion for the resource and for those people who come to be inspired by it.

The staff at the Dillon Nature Center attempts to apply these 15 principles in their interpretive programs, activities, along their trails and in their exhibits.

Exhibits

The purpose of this exploratory study was to analyze the effectiveness of two interpretive exhibits found in the visitor center using the concept of zones of tolerance.

Interpretive exhibits require time and careful planning. They often require expensive materials to develop them. Knudson, Cable & Beck (2003) indicate several criteria that make an exhibit effective, including a good theme, careful research, contents and design that make that help convey the theme clearly, and a visitor experience that makes the theme memorable.

Knudson, Cable & Beck (2003) indicate that planning for exhibits requires many talents.

The planner must think about

- The interpretive messages, facts, and their sequence.
- The media for presenting the messages- print, audio, artifacts, interactive methods
- Writing style and organization that focuses on the artifacts.
- The visitors, their behavior, their interests, their comfort, their interactions.
- Visitor vision and line of sight
- Lighting and audio design
- The use of touch, sound, odors, kinetics, maybe even taste, to communicate
- Visitor traffic flow accounting for variable rates of movement
- The esthetics of interior design and color
- The harmony of exhibits working as a group- sizes, colors, typography, content.

Interpretation based on themes —statements that intend to provoke reflection in the audience, is a well-established theory and much desired best practice in our field (e.g., Beck & Cable, 2011; Ham, 2013; Knudson, Cable & Beck, 2003). Ham (2013) goes beyond merely being thematic to recommend that interpretive encounters and products meet four qualities of interpretation (thematic, organized, relevant, and enjoyable). These four qualities, often described by the acronym TORE, define the recommended interpretive approach to communication, which simply says that successful interpretation has a theme (T); is organized for easy processing (O); is relevant to the audience (R); and is enjoyable to process (E).

Chapter 3-Methods

Exploratory studies are conducted when a researcher examines a new interest, and data regarding this interest are difficult to obtain (Babbie, 2014). In this case, it is unknown how many people visit the Dillon Nature Center, and how effectively they use the exhibits. An exploratory study will help uncover some of this information, and even though not a true representation of the visitor and media use, it may guide future studies (Babbie, 2014).

Visitors to the Dillon Nature Center were asked up to 17 questions about their visit to the Nature Center. The first five questions of the survey were about the two key exhibits in the Visitor Center. The next three questions were about the use or nonuse of QR codes on the Woodard Interpretive Trail Loop. All visitors surveyed (whether or not they walked the trail) were asked if they owned a smartphone, if they have ever heard of a QR code before, and if they have ever used a QR code before. The survey used a Likert scale to measure the desire for QR codes and newer technology at the Dillon Nature Center. The last nine questions were about the visitor characteristics

A table was set up along the sidewalk leading from the parking lot to the main entrance to the visitor center. This was done to ensure I sampled almost all visitors passing in and out of the site. I sampled visitors during 30 sampling periods with each sampling period being three hours in length. The sampling dates were chosen at random, but stratified equally on both weekends and weekdays. Therefore, 15 weekdays and 15 weekend days were chosen for sampling. Each weekday was sampled three times to keep the effort equal across all days of the week (i.e., three Mondays, three Tuesdays, etc.). The survey was only conducted while the Dillon Nature Center Visitor Center was open. Start times of the sampling periods were rotated

to ensure representative sampling throughout the data collection process. Every other person/group of people were chosen to interview. When people arrived as groups only one person spoke on behalf of the group. Visitors were greeted as they came into the Nature Center. When the visitors exited the Nature Center area and were returning to the parking lot, they were asked if they would be willing to take a couple of minutes to participate in this survey. Two hundred and sixteen visitors were asked to participate in the survey. Only 21 visitors declined to take the survey, all citing time constraints. With the 195 participants the response rate was 90.2%.

Chapter 4-Results

Exhibit Evaluation

Out of the 195 visitors only 82 of them utilized the Visitor Center. Of the 82 parties that went into the Visitor Center, 54 went into the Underground Theater. When these 54 people were asked what they got out of having visited the exhibit, 37 responses landed within the zones of tolerance as defined by the Dillon Nature Center staff. Those responses ranged from badgers live underground to cicadas live underground for most of their lives. Therefore the Underground Theater exhibit achieved the desired results with 68.5 percent of those who engaged with it.

Out of the 82 parties that went into the Visitor's Center 42 parties viewed the Tornado Exhibit. When asked what they got out of the Tornado Exhibit 12 of the 42 parties gave responses within the staff's zone of tolerance. Responses within the zone of tolerance would have ranged from how tornadoes are made to cities that have been affected by a tornado. The Tornado Exhibit was successful at communicating desired messages to 25.5% of the visitors that viewed the exhibit.

These results indicate that the Underground Theater did a much better job in relaying the messages that the Dillon Nature Center Staff intended to communicate to the visitors. The Tornado Exhibit did a relatively poor job in relaying the desired messages to the visitor.

QR Code Evaluation

Of the 192 parties that were surveyed 35 parties walked the Woodard Interpretive Trail Loop. Of these 35 parties, 8 used the QR codes along the trail and all 8 parties reported learning something from the information provided. The 27 parties that did not use the QR codes had the

following explanations for why they didn't take advantage of them. Slightly more than half (51.8%) said that they did not notice the QR code signs. A third (33.3%) of trail walkers said that they did not have a smartphone with them to use. The remaining four individuals (14.8%) gave other reasons for not using them. Of the 35 parties that walked the trail, 25 parties said that they favored the use of QR codes to provide them with information along the trail, so there was general acceptance of this interpretive medium.

Of the 195 visitors surveyed only about half (54.4%) reported that they owned a smartphone, leaving 45.6% who did not own a smartphone. The vast majority of visitors (170 of 195) knew about QR codes, whereas only 25 of those surveyed did not know about QR codes. Finally, visitors were asked if they have used a QR code before. Only 90 (46.1%) of the visitors had used a QR code, whereas 105 visitors had never used QR codes before (Figure 10).

On a Likert scale with 1 being definitely would not want and 5 being strongly desired visitors were asked if they would like to see more QR codes around the Nature Center. The average answer was 3.9 out of 5 which indicates that the visitors were slightly in favor of the Nature Center putting out more QR codes (Figure 11).

The second question asked if they would like to see the use of different phone apps to provide stories or information to them. The average answer was 3.7 out of 5 which indicates that the visitors were slightly in favor of adding different phone apps to the Nature Center (Figure 11).

Visitor Demographics

The majority of the visitors (68.2%) were from Hutchinson, KS. Surrounding communities in Kansas comprised as the second largest demographic with 18.8%. The smallest

demographic was out of state visitors, which comprised of 13.0% of the visitors. Visitor groups were placed into four different categories. More than half the groups were family groups (53.8%). Single visitors constituted 20% of the surveyed population. Groups of friends accounted for 14.3% of the visitors surveyed. Couples made up the least encountered group (11.7%). The average visitor group size was 2.8 people.

The average age of the visitors that came to the nature center was 47.3 years of age. Slightly more than half were male (51.3%) and 48.7% were female.

The vast majority (88.0%) of visitors had been to the center several times previously. Half of the visitors reported having visited more than 20 times in the past. The remaining 12.0% of the people surveyed were visiting for the first time.

We had hoped to conduct statistical analyses to link demographic characteristics to the other data gathered by the survey instrument about the visitor visit, exhibit evaluation and QR code use. However, the sample sizes within the various demographic characteristics and use patterns were too small to conduct meaningful statistical tests about association or predictive usefulness.

Figure 12 presents the primary reason why visitors came to the Nature Center. Almost a third (29.2%) came to fish, 17.5% came to use the Playscape, 12.8% came “just to get outside,” 10.3% came to walk, 9.7% came to take pictures, and 7.2% came to enjoy the Visitor Center. The remaining 13.3% came for a wide variety of other reasons.

Chapter 5-Discussion and Conclusions

The Dillon Nature Center site provides Hutchinson, KS residents with tremendous opportunities to get outside and learn about the natural world. It features interactive exhibits, trails, formal classes and programs, and a natural Playscape. The goal of this exploratory study was to help the Dillon Nature Center staff understand their visitors and evaluate whether two key exhibits were communicating the message that the staff wanted to communicate to the visitors. Likewise, a goal was to shed light on whether newer technology such as QR codes were something that the visitors used and wanted.

The results indicated the Underground Theater exhibit was generally effective in generating the appropriate responses by visitors. Most answers given by visitors about what they learned from the exhibit were within the zone of tolerance. The Underground Theater was characterized by the four qualities that define the TORE interpretive approach to communication. The exhibit had a theme (T); it was organized for easy processing (O); it was relevant to the audience (R); and it was enjoyable to process (E). The staff members now believe that this exhibit is an effective use of floor space.

Although the Tornado Exhibit was dynamic in that it created a funnel cloud in the water, and people seemed to enjoy making the tornado, the exhibit was not effective in conveying the intended message of the Nature Center. The top comment made by visitors about the Tornado Exhibit was that it was fun. The staff wanted the Tornado Exhibit to be more than fun. They wanted the visitors to learn about the tornado-making process and the destruction that they can cause with the right conditions. The exhibit seemed to lack two of the four TORE qualities of interpretation. The exhibit presented the audience with a theme (T) and made it an

enjoyable experience. However, the exhibit failed in its attempt to be organized for easy processing (O), and in making the subject matter relevant to the audience (R). This space would be better suited for a more effective exhibit to communicate these important messages.

The use of the QR codes was the biggest disappointment in this study. Although most visitors knew about QR codes, and the public was generally supportive of the Nature Center putting more QR codes around their facility, very few people actually used them. Relatively few people walked the Woodard Interpretive Trail and only a few of those visitors used the QR codes. Most stated that they did not notice the QR codes. The Nature Center staff might want to consider adding more QR codes throughout their space or making existing QR codes more conspicuous and inviting.

People seem open to the idea of going paperless along the interpretive trails. However, a surprising number of visitors did not own a smartphone. Almost half of the visitors reported not having such a device. This might be a result of the relatively older and more rural population sampled.

Over time more people will be switching to smartphones as they become more tech savvy. If the Dillon Nature Center staff continues their trend of putting more QR codes at the center they potentially can open new exciting, fun and interesting opportunities for people to use technology as a gateway to learning about nature.

One of the most obvious and important findings of this study was that many visitors to the Nature Center were “regulars”. This study had an unexpected benefit in regards to these repeat visitors. It was common for me to see the same group of people coming to the Center on several sampling days. Though they were never surveyed twice, I had multiple people comment

that they either paid more attention to the exhibits or used the QR codes that were on the trail after having completed the survey on a previous visit. Nature Center staff should feel good about their loyal following of repeat visitors. However, this also presents a challenge to keep exhibits and information fresh to continually engage these regular visitors. When changes are made it is important to communicate the changes at the center to these repeat visitors.

Future Research

It would be wonderful to have the opportunity to follow up this research. It would be interesting to ask more in-depth questions about what hooks their attention and motivates them to learning about certain subjects. It would be great to get into the minds of the visitors and learn why they gravitate to one exhibit over another. After this study was completed the Nature Center staff revamped some exhibits and added new exhibits to the center. It would be particularly interesting to evaluate the new exhibits and compare them to the older exhibits.

Based on the results of this study, the Nature Center staff moved the QR codes to more visible locations. It would be interesting to know if visitors have started using the QR codes more frequently as the staff have made a conscious effort to show the public that the QR codes are out there and are ready to be used. It would also be interesting to monitor changes in smartphone use among visitors as technology continues to advance and its use becomes more widespread.

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Figure 1. Entrance to the Jim Smith Family Playscape.



Figure 2. New colorful state of the art exhibits were installed in the nature center in 2014.



Figure 3. Entrance of the Visitor Center.



Figure 4. Entrance to the Underground Theater.

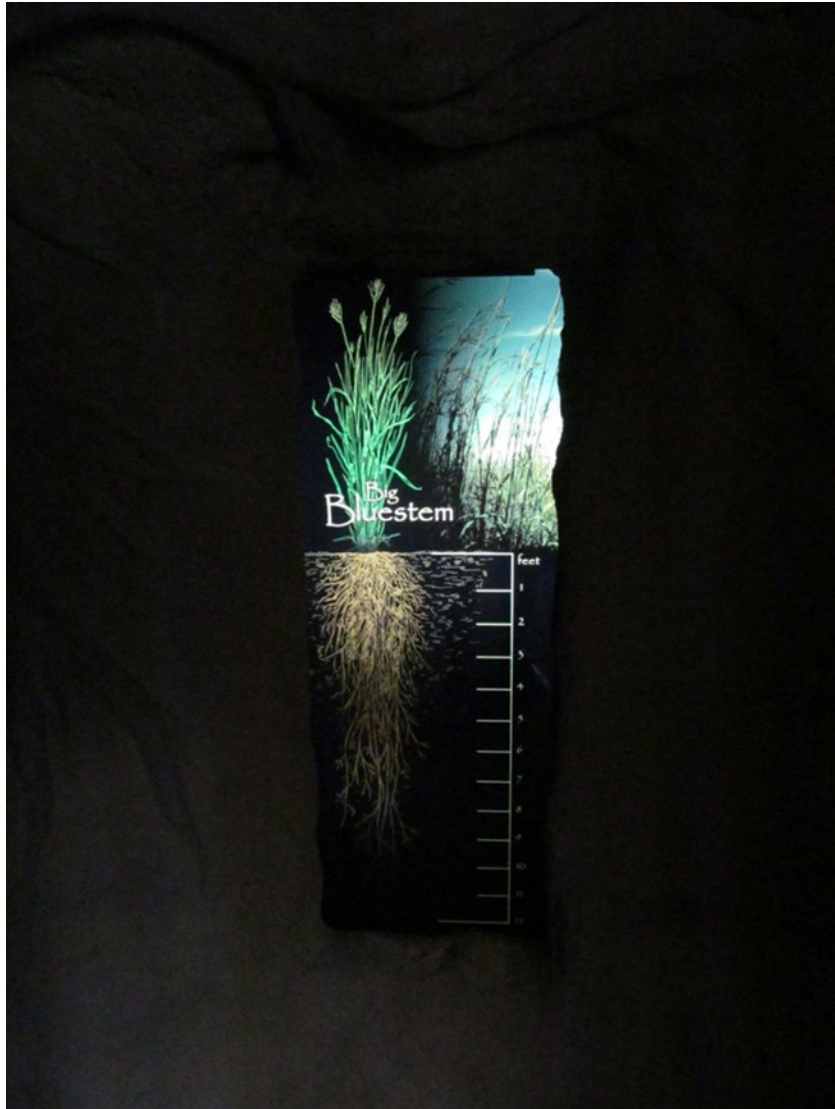


Figure 5. View inside the Underground Theater.



Figure 6. The Tornado Exhibit creating a water tornado.



Figure 7. Static elements of the Tornado Exhibit.



Figure 8. Description on QR codes and how to use them.



Figure 9. QR Code signs along trail at stop number 1.

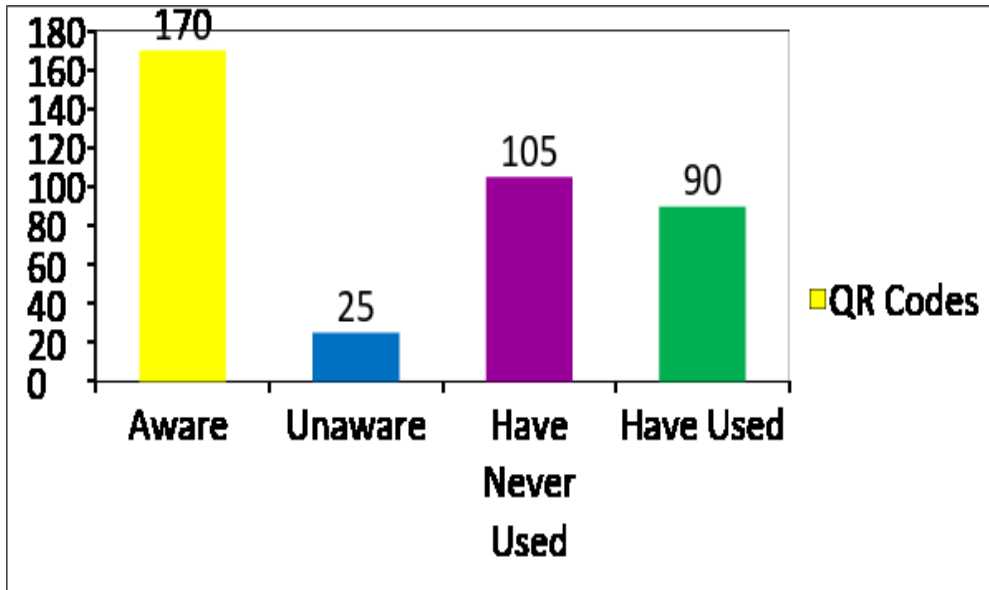


Figure 10. Visitor responses regarding their knowledge and use of QR codes.

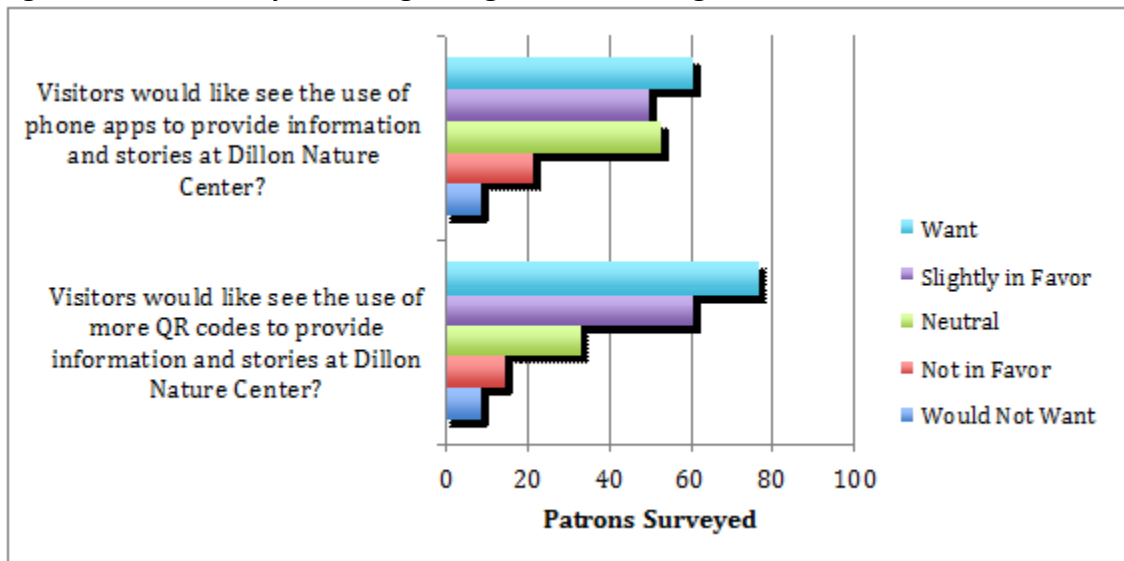


Figure 11: Percentage of Likert Scale responses to questions about apps and QR codes.

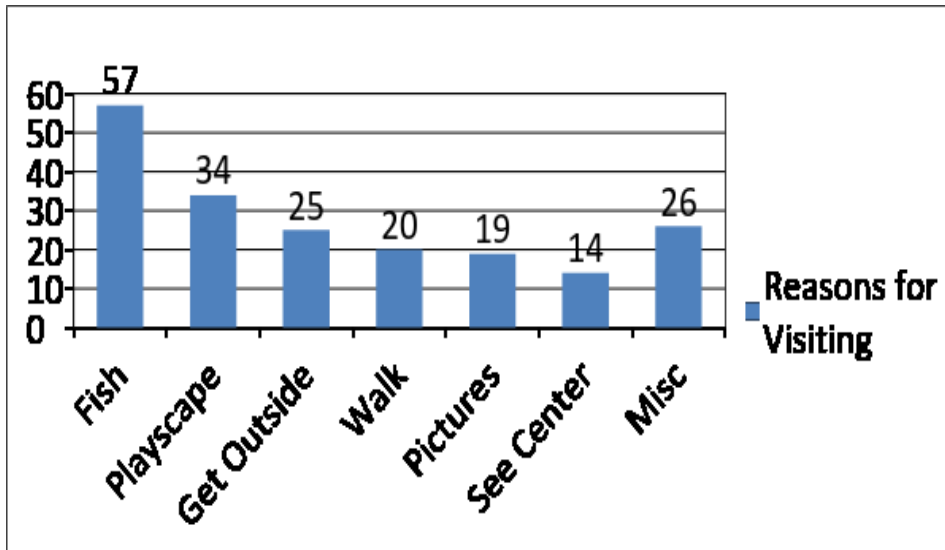


Figure 12. Visitor's primary reason for visiting the site.

Appendix A. A few major milestones in the history of Dillon Nature Center.

1975: The first Visitor Center opened in a converted picnic shelter. School and public programming was developed. Most mowing stopped, trails were developed, brush piles were built, and other habitat improvements were made.

1978: More emphasis was put on making the center open to the public for longer hours. Several more programs developed. Schools from across Kansas began to visit. New indoor displays were developed.

1982: The Little Forest project started with donations from a local family. This project was funded to develop new habitat areas. Plantings from this fund continue today.

Early 1990s: The first flower gardens were developed next to the old Visitor Center. A small amount of land was donated to the Nature Center from KP&L (now Westar Energy) to use for public parking. Fund-raising began for the new Visitor Center.

1994: The new Visitor Center building opens with the U.S. Secretary of the Interior and other government officials' on-hand for the ribbon cutting.

Since 1994: New garden areas were developed around the Visitor Center. The Nature Center started managing about 60 acres of native prairie for Westar in which the Prairie Hills Trail was developed through the prairie land. The "Closer Look at Nature" indoor display gallery opens in the Visitor Center.

April 2012: The Nature Center added the Jim Smith Family Playscape. The Playscape is an area where children can explore, discover new things, and play. This area includes everything from a garden from which the kids can grow and harvest vegetables to a sand castle/river building area.

September 2014: The Nature Center received a new look and updated exhibits throughout the Center.

Appendix B. The questionnaire used in this study.

Survey Questions

Exhibit evaluation

1. Did you go into the Visitor Center? If NO, skip to Number # 6

Yes _____ No _____

2) Did you go into the Underground Theater exhibit? If NO, skip to # 4

Yes _____ No _____

3) Please finish this sentence. "The main thing I got out of that exhibit was

_____ "

4) Did you look at the tornado exhibit? If NO, skip to # 6

Yes _____ No _____

5) Please finish this sentence. "The main thing I got out of the tornado exhibit was

_____ "

Trail QRC Evaluation

6) Did you walk the Woodard Interpretive Trail Loop (blue arrows)? If no, skip to #10:

Yes _____ No _____

7) This is a QR code. Did you use the QR codes along the trail?

Yes _____ No _____

a) If NO, why not? _____

b) If YES, did the QR codes help you learn anything new? Yes _____ No _____

c) If YES, what was the most memorable trail stop about where you used the QR code?

9. Do you FAVOR the use of QR codes to provide information or stories along the trail?

Yes _____ No _____

Why or why not? _____

VISITOR CHARACTERISTICS

10) Gender: Male Female (mark without asking)

11) Age: USE DECADES (Are you in your teens, 20s, 30s 40s, 50s, 60s?) _____

12) What town do you live in? _____ State? _____

13) About how many times have you visited Dillon Nature Center? _____

14) What was the main reason for visiting the Nature Center today?

Fishing Hiking Visitor Center Nature Playscape Bird watching

Educational Programs Nature Camp Gardens Other

15) Do you own a smart phone? NOTE: Mark YES without asking if they already indicated use of QRs on the Trail (above) Yes _____ No _____

16) [This is a QR code. Show them sample if not used above.] Had you heard of QR codes before today? Yes _____ No _____

17) Have you used QR codes anywhere else before today?

Yes _____ No _____

18) On a scale of 1-5 with 5 being strongly desired and 1 being would not want, would you like see the use of more QR codes to provide information and stories at Dillon Nature Center?

1 2 3 4 5

19) On a scale of 1-5 with 5 be strongly desire and 1 being would not want, would you like see the use of phone apps to provide information and stories at Dillon Nature Center?

1 2 3 4 5

THANK YOU FOR YOUR TIME!