

# Core Elements of Digital Storytelling from Experts' Perspective

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## ABSTRACT

Digital storytelling (DST) is an evolution of aged old traditional storytelling. Still harnessing the power of a story in passing on wisdom and knowledge, DST has augmented the power of storytelling many times via the fruit of modernity, which is technology. Center for Digital Storytelling defines DST as a "short, first-person video narrative created by combining recorded voice, still and moving images and music or other sounds. However, in order for the digital storyteller to construct a digital story, there are sets of elements introduced by experts who will guide the aspiring digital storytellers during the construction process. Nevertheless, there is more than one experts and each expert comes with varieties of elements though some are redundant. The main drive of this study is to represent the elements from diverse experts in order to centralize them to be the single guide for digital story construction. The purpose of this paper is to present the core elements of DST after undergoing expert review.

**Keywords:** Digital storytelling, multimedia technology, storytelling

## I INTRODUCTION

Story is an important element in human's life. According to Freeman (n.d.), story is an entertainment, learning and teaching tool in an effort to communicate, stir emotions and engage people to read to the end while storytelling, according to Dudley (1997), is the art of storytellers to achieve the aforementioned purposes. People communicate everyday through stories. Stories are told, heard, and responded to in order to convey and absorb messages or ideas (Grisham, 2006). For generations, stories are utilized as a tool to pass on knowledge and wisdom from parents to children. Most children remember bedtime stories by their parents or grandparents such as fairytales insinuated with moral values. It had been started informally as pictures on stone walls and has much evolved throughout history (Behmer, 2005).

In this modern day, stories have gone through a major makeover. From being an informal tool to

educate, it has become a formal medium to educate students in learning institutions. Moreover, with the intervention of new technology and the emergence of multimedia with its rich media elements such as audio, video, animation, and graphic, stories have diversified from its traditional root without leaving its genuine purpose, which is to impart knowledge and wisdom. Amalgamated with technology, storytelling has taken a fresh form with deeper impact in communicating ideas and knowledge sharing. The popular term coined for it is digital storytelling (DST).

According to Porter (2004), DST combines the art of traditional storytelling with multimedia elements such as images, graphics, music, and audio in order to craft a personally voiced narrative. As for Robin (2008), he states that DST is a combination of the art of storytelling with different digital media such as audio, video, and graphic. Regardless of the definitions given of DST; it is undeniable that this new form of storytelling is taking part in the world of digital communication in many areas, and it is here to stay.

### A. Transition Of Storytelling Into DST

The transition of DST from traditional to digital form was started by the late Atchley. He was a media producer and an artist in multi disciplines and through his multimedia autobiography called *Next Exit*, he collaborated with Lambert in utilizing multimedia technologies to turn the traditional story to be digital. In 1994, Mullen joined both of them and together they founded the San Francisco Digital Media Center which later became Center for Digital Storytelling (CDS) (Center for Digital Storytelling, n.d.). The main purpose of the center is to foster the people with zero backgrounds in storytelling or media production to tell personal stories in the digital form. The digital stories created would become their personal life mementos, and it can be shared with other people. Based on his observation in his digital story workshop, Lambert created seven elements to be considered in constructing a digital story. The elements are point of view, dramatic questions, emotional content, the gift of your voice, the power of soundtrack, economy, and finally pacing (Lambert, 2006). CDS has become references to so many talented and potential storytellers. Among

all, Robin (2008) from University of Houston adapted Lambert's seven elements into his own ten elements and according to him, CDS is frequently used as a starting point to work with digital stories. As time flies, more and more people started noticing the significance of DST's contribution in multiple contexts. As the consequence, more DST elements have been introduced into the domain, and this act brings out the interest of the research which is elaborated more in the next section.

## B. Problem Background

DST exists in many forms starting as short video and as it gains its momentum and breached many domains, other forms of DST bloomed such as interactive DST, web-based Storytelling, and multiplayer role-playing games (Lambert, 2006). Though seemingly easy to construct, DST is more than meets the eyes. People make mistakes by thinking that equipping them with digital literacy is sufficed to construct a digital story when in fact, story literacy is the priority in constructing a good digital story (Ohler, 2008). As stated by Ohler (2008) in his book *Digital Storytelling in the Classroom*, digital story elements play an important role in digital story construction. The elements provide the storytellers consideration in the construction process towards producing what is called a good digital story (Lambert, 2006). There are several experts who proposed their own sets of elements namely Lambert (2006) and Mullen, Paul and Fiebich (2005), Porter (2004), Salpeter (2005), Robin (2008), Ohler (2008), and Schafer (2008).

## II EXPERTS AND ELEMENTS OF DST

Initially started by Atchely and supported by Lambert, the movement of DST has taken its momentum and what began as linear and personal computer mediated storytelling has spun its thread of popularity and caught the interest of many successors of Atchely including Lambert himself. These people that the study labeled as expert have been involved in the movement and creation of DST to nurture the unique medium of information dissemination. Each of them has their own perception of DST and some of them remain true to the original form as invented by Atchley.

As stated in the previous section, the study has identified and restricted the number of people that are reckoned as the expert to seven. They are Lambert (2006), Porter (2004), Ohler (2008), Salpeter (2005), Paul and Fiebich (2005), Robin (2008) and Schafer (2008) as shown in Table 1.

Each of the experts contributes in inventing or adapting elements of DST in forming the core elements. The core elements were identified from

the sets of elements of seven selected DST experts. The commonalities of the elements were analyzed in order to find the core elements of DST. The elements in common were clustered based on the similarity of an element's definition in explaining its purpose in DST development. The elements that do not have any commonalities with any elements were isolated and not consider as core elements.

Table 1: List of Experts and Their Elements of DST

Experts	Elements
<b>Porter (2004)</b>	<ul style="list-style-type: none"> <li>▪ Living in your story</li> <li>▪ Unfolding lessons learning</li> <li>▪ Developing creative tension</li> <li>▪ Economizing the story told</li> <li>▪ Showing not telling</li> <li>▪ Developing craftsmanship</li> </ul>
<b>Salpeter (2005)</b>	<ul style="list-style-type: none"> <li>▪ Personal</li> <li>▪ Begin with the story or script</li> <li>▪ Concise</li> <li>▪ Use readily-available source materials</li> <li>▪ Include universal story elements</li> <li>▪ Involve collaboration</li> </ul>
<b>Paul &amp; Fiebich (2005)</b>	<ul style="list-style-type: none"> <li>▪ Media</li> <li>▪ Action</li> <li>▪ Relationship</li> <li>▪ Context</li> <li>▪ Communication</li> </ul>
<b>Lambert (2006)</b>	<ul style="list-style-type: none"> <li>▪ A point of view</li> <li>▪ A dramatic question</li> <li>▪ Emotional content</li> <li>▪ The gift of your voice</li> <li>▪ The power of the soundtrack</li> <li>▪ Economy</li> <li>▪ Pacing</li> </ul>
<b>Robin (2008)</b>	<ul style="list-style-type: none"> <li>▪ The overall purpose of the story</li> <li>▪ The narrator's point of view</li> <li>▪ A dramatic question or questions</li> <li>▪ Quality of the images, video &amp; other multimedia elements</li> <li>▪ Use of a meaningful audio soundtrack</li> <li>▪ The choice of content</li> <li>▪ Pacing of the narrative</li> <li>▪ Good grammar and language usage</li> <li>▪ Economy of the story detail</li> <li>▪ Clarity of voice</li> </ul>
<b>Ohler (2008)</b>	<ul style="list-style-type: none"> <li>▪ Point of view</li> <li>▪ Emotional engagement</li> <li>▪ Tone</li> <li>▪ Spoken narrative</li> <li>▪ Soundtrack music</li> <li>▪ Role of video and performance</li> <li>▪ Creativity and originality</li> <li>▪ Time, story length and economy</li> </ul>
<b>Schafer (2008)</b>	<ul style="list-style-type: none"> <li>▪ Concreteness</li> <li>▪ User contribution</li> <li>▪ Coherence</li> <li>▪ Continuity</li> <li>▪ (Conceptual) Structure</li> <li>▪ Stage</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Virtuality</li> <li>▪ Spatiality</li> <li>▪ Control</li> <li>▪ Interactivity</li> <li>▪ Collaboration</li> <li>▪ Immersion</li> </ul>
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The elements in common were proposed and defined as core elements of DST, then it is grouped together under four different yet related clusters adapted from Schafer's DST Reference Model (Schafer, 2008).

Based on the outcome of the comparative analysis, there are 15 core elements of DST identified as the result of the comparisons of seven DST experts. From the perspective of the study, core elements of DST is defined as the most essential elements proposed and expected to become a single guide in the development of both interactive and non-interactive DST. These core elements are as presented in Table 2.

**Table 2: Core elements of DST**

Elements	Experts' Element
Perspective	<b>Point of View</b> ( <i>Lambert, Ohler</i> ) <b>The narrator's point of view</b> ( <i>Robin</i> )
Intention	<b>The overall purpose of the story</b> ( <i>Robin</i> ) <b>Unfolding lesson learned</b> ( <i>Porter</i> )
Personal	<b>Living in your story</b> ( <i>Porter</i> ) <b>Are personal</b> ( <i>Salpeter</i> )
Dramatical Question	<b>A Dramatic Question</b> ( <i>Lambert, Robin</i> ) <b>Developing creative tension</b> ( <i>Porter</i> )
Engagement	<b>Emotional Content</b> ( <i>Lambert</i> ) <b>Emotional engagement</b> ( <i>Ohler</i> ) <b>Immersion</b> ( <i>Schafer</i> )
Articulation	<b>The Gift of your Voice</b> ( <i>Lambert</i> ) <b>Spoken narrative</b> ( <i>Ohler</i> )
Soundtrack	<b>Power of Soundtrack</b> ( <i>Lambert</i> ) <b>Use of meaningful audio soundtrack</b> ( <i>Robin</i> ) <b>Soundtrack music</b> ( <i>Ohler</i> )
Minimal	<b>Economy</b> ( <i>Lambert</i> ) <b>Economy of the story detail</b> ( <i>Robin</i> ) <b>Economizing the story told</b> ( <i>Porter</i> ) <b>Are concise, Use readily available source materials</b> ( <i>Salpeter</i> ) <b>Time, story length and economy, Role of video and performance</b> ( <i>Ohler</i> )
Tempo	<b>Pacing</b> ( <i>Lambert</i> ) <b>Pacing of the narrative</b> ( <i>Robin</i> ) <b>Tone</b> ( <i>Ohler</i> )
Story Map	<b>Including universal story elements</b> ( <i>Salpeter</i> ) (Conceptual) <b>Structure</b> ( <i>Schafer</i> )
Expression	<b>Choice of content, Quality of the image, video</b> ( <i>Robin</i> ) <b>Showing not telling</b> ( <i>Porter</i> )
Significant Content	<b>Developing craftsmanship</b> ( <i>Porter</i> ) <b>Economy</b> ( <i>Lambert</i> )

Collaboration	<b>Involve collaboration</b> ( <i>Salpeter</i> ) <b>Collaboration</b> ( <i>Schafer</i> ) <b>Communication</b> ( <i>Paul</i> )
Communication	<b>Control, Interactivity</b> ( <i>Schafer</i> ) (User) <b>Action</b> ( <i>Paul</i> )
User Contribution	(Open) <b>Relationship</b> ( <i>Paul</i> ) <b>User contribution</b> ( <i>Schafer</i> )

### III EXPERT REVIEW

This section is dedicated to discuss and elaborate the result of the expert review conducted on the constructed DST core elements. The review was conducted in order get the opinion and feedback regarding the core elements identified and proposed as DST's. Five experts with more than five years experience on DST at hands had reviewed the constructed core elements, and the result of the review has been analyzed and discussed.

These pivotal elements, inclusive non-interactive and interactive DST, are deemed as core elements which the researchers aspire to become the guide in the development of a DST. The core elements are comprised of 12 elements of non-interactive DST and 15 elements of interactive DST identified. Twelve of the core elements from both categories do cross categories and can be applied in both. Therefore these elements were integrated and 15 core elements emerged. The proposed core elements are as listed in the following Table 3.

**Table 3: Initial Core Elements and Categories of DST**

NON-INTERACTIVE DST ELEMENTS	INTERACTIVE DST ELEMENTS
Perspective	Perspective
Intention	Intention
Personal	Personal
Dramatical Question	Dramatical Question
Engagement	Engagement
Articulation	Articulation
Soundtrack	Soundtrack
Minimal	Minimal
Tempo	Tempo
Story Map	Story Map
Expression	Expression
Significant Content	Significant Content
	Collaboration

	Communication
	User Contribution

As an effort to acquire feedback and fruit of thoughts regarding the core elements discerned from the study, reviews of the experts of DST are necessary to be procured. The reviews were conducted by five experts of DST, which have been painted their hands with DST for more than five years. Each expert was provided with the core elements together with a set of descriptions designed to obtain their feedback on each of the core elements.

Five experts were kindly requested to deliver their feedback and opinion on the conceptual model proposed based on the core elements, clusters and categories they belonged to. The core elements and its description were separated into two categories which are non interactive and interactive DST and organized into tables. The experts' feedbacks were measured using Likert Scale with five levels of responds. They were strongly agreed, agreed, neutral, disagreed, and strongly disagreed.

Based on the feedback provided using the Likert scale, the experts' feedbacks were measured to acquire their review on the core elements proposed. The review was deemed as agree or disagree. In the case of the value of agreement is high, the core element proposed remains unchanged. Nevertheless, if the experts disagreed, the researchers have determined not to use the elements as part of the proposed core unless the researcher deems the core elements as necessary as justify and supported by theories. Once an element is removed, the conceptual model needs to be altered, which means the process is reversed to the previous phase which is Iteration. This was done in order to mend the conceptual model proposed to match the review of the experts. Once the mending process was completed, the conceptual model proposed is considered as completed and reached the closure.

The verdicts of the review by the expert on both types of DST core elements are elaborated more in the next section starting with the non-interactive DST core elements.

#### A. Expert Review on non- interactive core elements

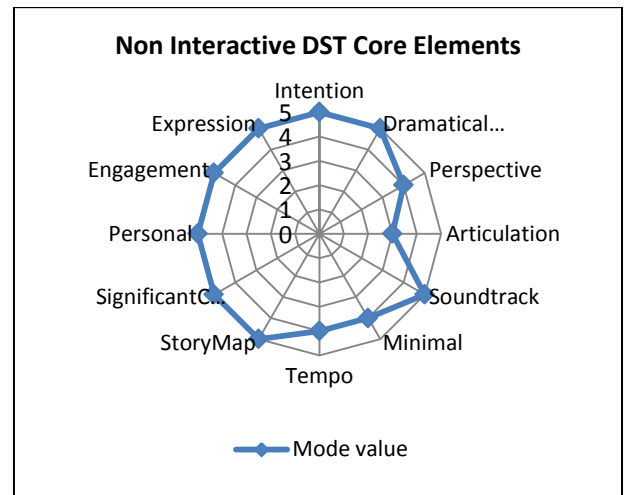


Figure 1: Radar Chart of Non-Interactive DST Core Elements

Twelve core elements were proposed under the category of non-interactive DST. Judging from the pattern of the chart plotted in Figure 1, it can be synthesized that the experts are strongly agreed on eight of the core elements propose. Those core elements are Intention, Dramatical Question, Soundtrack, Storymap, Significant Content, Personal, Engagement, and Expression. The mode analysis of the aforementioned core elements returned the value of 5, and evidently they are accepted by the experts as core elements of on interactive DST. Moving on to other core elements proposed, the experts reached a consensus that the core element Perspective, Minimal and Tempo are needed in non-interactive DST development based on the mode value acquired, which is 4. However, the experts' review on core element Articulation is debatable since the mode analysis gave a value of 3. The equivocal state of the analysis called for the researchers' intervention to determine the circumstance of core element Articulation. In the circle of the study conducted, Articulation is defined as the use of voice to narrate a story in order to leave a better impact in message deliverance. Rewinding time to the pivotal moments where technology was none to be found to support storytelling, voice, among others, was the prominent channel to narrate stories. It is fitting that voice is not always necessary to narrate a story. Porter (2004) and Schafer (2008), for instance, never mentioned about the use of voice in their set of elements. Nevertheless, it cannot be denied that the inclusion of voice in DST development would assist in augmenting the value of the DST. Ohler (2008) states that voice in DST is not a necessity, but it always exists in DST.

#### B. Expert Review on interactive core elements

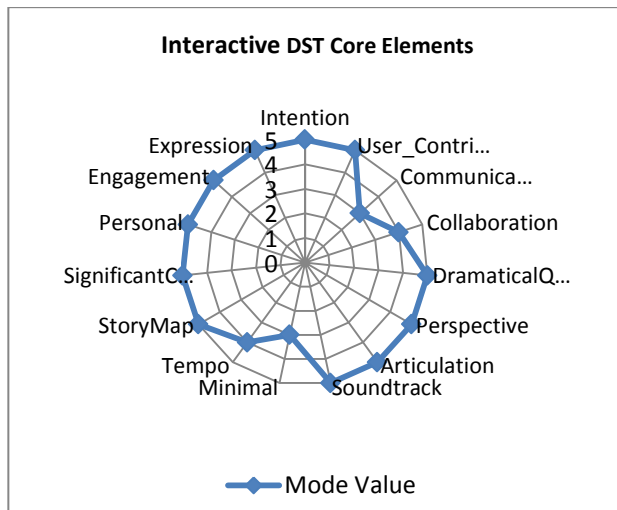


Figure 2: Radar Chart of Interactive DST Core Elements

Based on the chart plotted in Figure 2, it can be seen that the experts strongly agreed on the acceptance of eleven core elements proposed in the study as the value of mode analysis yielded for each of the core elements proposed is of 5. The core elements are Intention, User Contribution, Dramatical Question, Perspective, Articulation, Soundtrack, Storymap, Significant Content, Personal, Engagement, and Expression. Another two core elements proposed, which are Collaboration and Tempo received the value of 4 as the result of mode analysis conducted. This shows that the experts agreed on the core elements proposed. The remaining two core elements proposed are Communication and Minimal. These two particular core elements received the mode value of 3, and it signifies that most of the experts' feedbacks were sitting on the fence of disagree and agree. As stated previously, only valued frequency of review of 4 and 5 are accepted outright, and the value of 3 is in need of the researchers' consideration.

The core element communication is about the ability of the audience or user to interact with the story through the interaction either causing changes to the story or none affecting. There is a possibility that the particular element is viewed as similar by the experts with another core element proposed, which is User Contribution. User Contribution is the interaction between the audience/user with the story towards the creation of content. Since both core elements relate to interaction and influencing the flow of the story, core element Communication is discarded of one of the core elements. Secondly, the core element Minimal is a shared element between interactive and non-interactive element. Minimal is about the use of sufficient and unexaggerated multimedia materials in developing a DST.

In the case of non-interactive DST, this very core element is one of the fundamental elements to some of the experts identified from literature studies done. Even so, the core element Minimal had caused the reviewing experts of two minds in deciding the acceptance of it as one of the core elements. This is possibly due to the nature of interactivity itself. Injecting interactivity into a DST caused it to be expandable and massive in terms of its content and flow of a story, thus shattering the idealism of brevity uphelds by the non-interactive DST. Therefore, coupled with the undecided review of the experts, it is imperative that core element Minimal is abdicated from the core elements proposed in the study. All these assumptions are yet to be proven and have been reserved as future works as stated in Chapter 6.

#### IV CONCLUSION

From the reviews on the entire core elements proposed, the results plotted on the chart, and the mode value calculated; it can be clearly perceived that only 13 elements proposed are accepted by the five experts as core elements of interactive DST. Two of the core elements proposed, which are Communication and Minimal are disposed by the researchers considering the undetermined review by the experts. This decision is made based on the standard of mode value set by the researchers on the analysis conducted on the reviews. This finding is very useful for reshaping a conceptual model representing the core element in accordance to the DST experts' feedback.

The result of the review by the experts is of magnitude since it was aimed to obtain their respond and feedback on the core elements proposed.

Perceiving the Table 3, it is noticeable the core element had a major makeover. The exclusion of two of the interactive core elements (Communication and Minimal) as reviewed by the experts required momentous alteration of the form. The elimination of Communication as one of the core elements proposed, does not give a significant impact since the singularity nature of it that belonged only to Interactive DST category. Nevertheless, Minimal is a whole different case. Since the comparison analysis had done revealed that it belonged to both categories of DST, eliminating it gave a major impact.

**Table 4: FinaliseCore Elements and Categories of DST**

NON-INTERACTIVE DST ELEMENTS	INTERACTIVE DST ELEMENTS
Perspective	Perspective
Intention	Intention
Personal	Personal
Dramatical Question	Dramatical Question
Engagement	Engagement
Articulation	Articulation
Soundtrack	Soundtrack
Minimal	Tempo
Tempo	Story Map
Story Map	Expression
Expression	Significant Content
Significant Content	Collaboration
	User Contribution

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