Digital Storytelling: A Powerful Instructional Media Tool And Elements From An Expert's Perspective

Kogila d/o Muthu Samy[a], Abu Bakar Ibrahim[b*], Che Zalina Zulkifli[c*],
[a,b,c]Faculty of Arts, Computing and Creative Industry Sultan Idris Education University 35900 Tanjung Malim, Perak, Malaysia, Email: [a]kogila.ko@yahoo.com, [b*]abubakar.ibrahim@fskik.upsi.edu.my, [c*]chezalina@fskik.upsi.edu.my

ABSTRACT

Digital Storytelling (DST) has turned into an effective educational tool for both teachers and students. This paper provides a review of DST and also portrays exactly where it originated from, the way it really well could be used to help guide and also how understudies that learn how to whip their very own advanced stories improve a lot of training abilities. What is more, information is displayed about the equipment which may be used to assist the instructive utilization of DST. This paper, in addition, contains a discussion of the effectiveness of DST as an Instructional Media tools used in the education system. The purpose of this paper is to present the main elements of DST used by experts in DST concepts. This study also explained the overview of DST together with the learning environment, particulars certain DST modals and identified the important elements of DST from diverse experts in order to centralize them to develop the framework with support new ICT technology. Furthermore, the paper covers the benefits of DST inside the classroom and how it supports the student learning environment

Key words: *Digital Storytelling, Instructional Media, Education.*

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Introduction

Digital storytelling (DST) fuses the craft of recounting accounts having a mix of electronic media, like text, photographs, recorded good portrayal, music and video. These media elements are combined together, using Pc programming to recount a story that usually rotates around a certain subject or theme and typically consists of a particular view. Most digital stories are usually, light with a length of anywhere in the assortment of two and ten minutes, and also are spared within an advanced setup which may be observed on other gadget or a PC equipped for participating in video captures. Additionally, digital stories are frequently transferred into the intrigue, where they might be seen through any popular Internet browser. There are various sorts of advanced stories; however the creator has proposed arranging the significant kinds into the accompanying three classifications: 1) individual stories - stories that contain records of noteworthy episodes throughout one's life; 2) verifiable narratives – stories that inspect sensational occasions that assist us with comprehension the past, and 3) stories that advise or train the Advanced narrating joins the craft of recounting stories with a blend of digital media, including text, pictures, recorded sound portrayal, music and video(Robin, 2006). These media segments are combined using PC programming, to relate to a story that commonly pivots around a specific subject or topic and habitually contains a particular viewpoint. Most digital stories are generally, short with a length of somewhere in the range of 2 and 10 minutes, and are spared in an advanced configuration that can be seen on a PC or other gadget equipped for playing video records. Also, digital stories are regularly transferred to the intrigue, where they might be seen through any well-known internet browser. DST has relentlessly developed in prominence and is at present being polished in a heap of areas, including schools, libraries, public venues, historical centers, restorative and nursing schools, organizations and that's only the tip of the iceberg. In instructive settings, instructors and understudies from kindergarten through doctoral level college are making advanced stories on each subject possible, from craftsmanship to zoology, and various

substance zones in the middle. Advanced narrating has additionally become an overall marvel, with specialists from over the globe making digital stories to coordinate innovation into the homeroom, bolster language learning, encourage conversation, increment social nearness, and then some (Yuksel, 2011).

Instructional Media

Studies have inspected the significance of Instructional Media (IM) for successful study hall educating furthermore, learning. Fidanboylu (2014) contends that the utilization of visual guides in educating can spur the understudies and fortify the subject substance. Makewa, Role and Ngussa (2012) noticed that media assets are significant with regards to guidance. They contend that instructional assets are imperative to the instructing of any subject. As indicated by Seth (2009), the absence of divider diagrams, models and other ordinary media to commend the utilization of writing slates and reading material in the schools expanded hard for educators to offer quality instructing and learning to advance high scholarly execution for middle school's understudies in Ghana. Numerous creators have analyzed the noteworthiness of utilizing instructional media in educating/learning process. Wambura (2017) noticed that PC has numerous advantages in training, for instance: upgrading scholastic works, improving exercise and understudies understanding and impacting autonomous learning. As suggested by Karanja (2015), learning and educating property are crucial in education because they rouse as well as urge pupils to use numerous senses, henceforth growing the concern of theirs and upkeep restrict. What's more often, educating and learning assets produce inspiration in mastering (Monda, 2012).

Media instructional teaching is one of the important components in the system instructional design (Holden & Gamor, 2010). Media teaching is also a platform for delivering the message, stimulating, motivating, students' attention and lead to effective learning (Rafiza & Mary, 2013; Rian & Kasimah, 2013). The teaching media category is split into 2 groups, media coaching classical and contemporary teaching media. Common types of teaching, blackboard, travel, dioramas, comics, cartoons, posters, images, templates, maps, magazines, including books, etc. Electric instructing aids, meanwhile, usually include efficient info, video clip clip, a stereo system, cell phone, tv, computer, projection info, the web together with extra electric media (Isman, 2011).

Digital story making in the classroom is a good teaching tool that has the possibility to transform pupil learning. Internet stories are lightweight as they're stored by digital computers and messages and are exchanged. This allows the teachers to archive the job process and outcome of the pupil while permitting the understudies to find crafted by others (Alonso et al.,2013).

Digital Storytelling (DST)

Innovation is a quick pace advancement and it influences numerous parts of life and various spaces. One of the areas influenced by innovation by and large or interactive media explicitly is narrating. Well before the introduction of innovation, conventional narrating is communicated in its most essential structures, which are orally or composed. Be that as it may, the presentation of interactive media has changed the point of view of narrating in another manner. Digital storytelling is one of the products of innovation. As indicated by Porter (2004), advanced narrating consolidates the specialty of customary narrating with interactive media components, for example, pictures, illustrations, music, and sound so as to make an actually voiced story. Concerning Robin (2008a), he expresses that advanced narrating is a mix of the specialty of narrating with various digital media, for example, sound, video, and realistic. Whatever the meanings of advanced narrating, it is irrefutable this new type of narrating is partaking in the realm of digital correspondence in numerous territories and it is digging in for the long haul.

Transition storytelling in the digital form involving injections of multimedia technology is the result of a collaborative partnership by Joe Lambert and Dana Atchley to develop effective narrative delivery, better known as Digital Storytelling (DST) (Signes, 2010). The difference in the views of experts who translate DST has led to various definitions of Digital Storytelling. Robin (2006) has described the art of storytelling DST as a combination of digital multimedia elements such as graphics, text, audio recordings, and music to view relevant topic-oriented content. Porter (2008b) and Ohler (2008) also revealed DST as the combination of the traditional art of storytelling verbally with multimedia technology equipment by

using images, graphics, music and sound as well as voice narrator with creativity and audience interaction to meet the satisfaction of delivering storytelling. In the book of his Digital Storytelling: A Creator 's Guide to Interactive Entertainment, Miller (2008), declared DST is a narrative amusement of the market to have interaction through technology and media. Lambert (2010) has realized that DST is a brief story, footage narrative made by a combination of soundtracks, pictures, music or sound, video and animation.

Digital Storytelling: Narrative

The narrative is a story that is flexible or a representative of an order of events or series of events that have occurred without any explanation and not necessarily the actual story in a period of time (Abbott, 2002). Depending on the story of storytelling, the narrative business presentation started with presentations by natural energy. For example, palm actually leaves in Europe, making use of the stone structure in Egypt, bones and skin in Greek, Indian cloth, rope sand of Africa and also in Australia. Meanwhile, the demonstration of historical narrative past in Malaysia, beginning with using puppets and storytelling voice with musical instruments as tambourines, flutes, or perhaps drums.

Digital Storytelling: Concepts and Uses of Narrative

The introduction of the concept of narrative in delivering learning content has attracted interest for learning. This concept has taken root of the human era to carve certain images on rocks and cave walls for 30,000 years ago, aims to communicate information to deliver something (Sova & Sova, 2011). This idea is discovered to be appropriate for the purposes of training regarding most subjects to enhance memory and communication (Robiatul A 'dawiah & Halimah, 2011). Based upon the conventional concept of the idea of narrative, a blend of text, visuals (sketch) as well as sound (musical instruments) has facilitated storytelling shipped better and attracted the market (Robin, 2006).

Key Elements Digital Storytelling

Storytelling elements meant to distinguish DST together with some other media like film, television, video and blogs (Lowenthal, 2006). This's since the market is interested in continuing to pay attention to the story content is determined by the component of storytelling. Table 1 outlines a variety of elements to understand the concept of DST from the perspective of different specialists. These elements need to be improved to support the research needs in terms of technology and interactivity.

Table 1: List of key elements of DST

EXPERTS	ELEMENTS	LIMITATION
PORTAR (2004)	• Living in your story • Unfolding lessons learning • Developing creative tension • Economizing the story told • Showing not telling • Developing craftsmanship	• Less interactivity with the story • Limited technology such as multimedia, hardware and tools • Linear • One-way communication
SALPETER (2005)	• Personal • Begin with the story or script • Concise • Use readily-available source materials • Include universal story elements • Involve collaboration	• Less interactivity with the story • Limited multimedia elements • With the right tools • Linear
PAUL & FIEBICH (2005)	• Media • Action • Relationship • Context • Communication	• Less clear with hardware technology requirements • Less collaborative • Limited technology such as multimedia • Linear
LAMBERT (2006)	• A point of view • A dramatic question • Emotional content • The gift of your voice • The power of the soundtrack • Economy • Pacing	• Less clear with hardware technology requirements • Less interactive • Less obvious technology (multimedia, hardware, software) used
ROBIN (2008)	• The overall purpose of the story • The narrator's point of view • Quality of the images, video & other • multimedia elements • Use of a meaningful audio soundtrack • The choice of content • The pacing of the narrative • Good grammar and language usage • Clarity of voice	• Less clear with hardware technology requirements • Less interactive with multimedia elements • Less interactivity with the story • Less clarity with the audio and voice
OHLER (2008)	• Point of view • Emotional engagement • Tone • Spoken narrative • Soundtrack music • Role of video and performance • Creativity and originality • Time, story length and economy	• Less clear with hardware technology requirements • Less interactive with graphic elements. • Less interactivity with the story
FIGG & MCCARTNEY (2010)	• Interactive • Narrative • Sequential • Photo essay • Descriptive	• Less clear with hardware technology requirements • Less interactive with graphic elements.
KUAN ET, AL. (2012)	• Intension • Dramatical question • Soundtrack • Story track • Story map • Significant Content • Personal • Engagement • Expression	• Less interactive with graphic elements.

Thorough exploration by Tenh (2013) includes the construction of 14 important components DST drawn to study as well as make clear the thought of creating DST in serious accordance with the objectives of the investigation. These elements have been authorized by Seven leading experts like Robin DST, Sapeter, Lambert, Ohler, Porter, Fiebich and paul Schafer have been authored these elements and determining component DST learn. Nevertheless, these elements are found to be quite common to guide novice designers such as teachers, as shown in Table 2 . In addition, the proposed elements of the study should be adapted to the scope of the study involving aspects of mobile technology and interactivity.

Table 2: The main element of developing DST

BIL	Interactive Elements DST	Description
1.	Objective	• The story is built to achieve the objectives of an assignment (information, education, entertainment)
2.	Donations	• Users contribute to the construction of narrative storytelling that users interact with the system.
3.	Collaborative	• Users interact with other users to create stories.
4.	Question	• Problems and situations used in the process of dramatic storytelling, involving the audience and the final settlement.
5.	Perspective	• First- or third-person view.
6.	Articulation	• Use your voice to tell more effectively to convey a message.
7.	Soundtrack	• The soundtrack used for emotional support and a message to be delivered and impress your audience.
8.	Minimal	• Using material optimally without extravagance.
9.	Tempo	• Manipulated narrative speed together with the tempo on the music, sound intonation, the previous picture, the perspective of the digital camera can make an interesting story.
10	Map Story	• The story has a beginning from the introduction story structure, content and cover.
11.	Contents	• Materials contribute to the storytelling narrative plot.
12.	Appreciation	• The narrator appreciates the storytelling that influences and attracts the audience.
13.	Commitments	• Storytelling can attract an audience with the aim of how emotional or emotional arguments.
14.	The Expression	• The use of media such as images and sound without the use of text to convey the message.

Source: Tenh, H.K, 2013

A content analysis involving eight samples because the storytelling of previous studies has been carried out to identify some element DST. It also involves the design principle of the support element DST, as shown in Table 3.

Table 3: Justification for the selection of past studies related element of DST

Source/ Storytelling	**Justification of Study**	**Element Dst/ Design Principles**
Shin, Kim Dan Park, (2005) Ar Storyboard	Studies have suggested eight elements of narrative storytelling because, according to the understanding and enjoyment of users.	• Layout Object • Scene • Visual text • Interactivity • Transition • Character • Articulation • Realistic

YU Et Al. (2009) Interactive Storyboard	The study aims to help novice designers with seven elements to produce a prototype because of storytelling in a simple, efficient and enhance the creativity of the designer	• Interaction touch screen • Interactivity • Character • Object • Scenes • Narrative content
Bidwell, Reitmaier, Marsden Dan Hansen, (2010) Mobile Multimedia Presentation	The study tested the effectiveness of the eight elements of the interface because of storytelling with mobile devices.	• The touch screen interaction • Icon • Collaborative • Editing • Articulation • Audio • Content narrative • Purpose
Chang & Breazeal, (2011) Thinkrbook	The study aims to encourage the habit of reading among children by involving the six elements of touch screen interaction in storytelling tools.	• The interaction of the touch screen • Articulation • Interactivity • Structure of narrative • Animation • Content of the story
Atosoy & Martens, (2011) Storify	Studies have identified five elements to build communication skills and strategies in storytelling experience with storytelling tools to help designers.	• Interactivity • Character • Beat story • Audio music • Scenes
BONGSHIN Et Al. (2013) SKETCHSTORY	The study involved seven elements touch screen interaction with mobile devices because of storytelling to encourage audience participation in DST.	• The involvement of the audience • Interaction of touch screen • icon • Graphic • Interactivity • Expression • Narrative
Yuksel.P,Yildirim & Robin.R.B (2016)	The study aims to support the use of technology in early childhood teaching.	• Student Collaborative • Narrative • Technology • Interactivity • Multimedia • Learning process • Audio music

Hashiroh Hussain (2017) Digital Storytelling Concept For Touch Screen Tablet	The study identified nine elements touch screen tablet to design the framework for digital storytelling.	• Interaction touch screen • Interactivity • Character • Object • Scenes • Narrative content • Functional dimension • Collaborative • Audio music • Story beats • Originality
Vinayakumar.R, Kp Sonan, Menon.P (2018) Digital Storytelling (Dst) Using Scratch	This analysis explores the DST much more fascinating and unforgettable for kids. DST is recognized as being a motivating instructional strategy which engages the learner in 21st century learning skills.	• Interaction of mobile technology • Narrative content • Audio music • Video content • 3D animation • Technology block-based programming. • Text, scenes & character

Digital Storytelling in Education

There are many ways that Digital Storytelling could be utilized in education. One of the primary decisions being done when choosing to make use of this device within the curriculum is whether a teacher can create the Digital Stories or even have their pupils do it. A number of educators might want to produce their own stories of theirs and show them to the students of theirs as a means to provide new material. An engaging, multimedia-rich digital story is able to serve as an anticipatory established or maybe hook to capture the interest of pupils and to raise the interest of theirs in exploring new ideas.

Teacher-created digital stories might, in addition, be applied to boost the latest lessons within a larger device, as a means to facilitate talk about a story was presented by the topics and as a means of making conceptual or abstract content even more understandable. Even though many educators continue to miss a cohesive for integrating multimedia into the instruction of theirs, an expanding number of instructors are excited about exploring ways to engage the students of theirs by adding images, sound and video components in their instruction. Study indicates the usage of multimedia in teaching will help pupils retain information that is new, along with aids within the comprehension of hard material. And Digital Storytelling is able to provide educators with an effective tool to work within the classrooms of theirs.

One of the primary options to be done when choosing to use this unit in the educational approach is whether an educator can make the Digital Stories or even have their understudies undertake it. A number of educators might choose to create their own accounts of theirs and demonstrate them to the understudies of theirs as an approach to display brand new material. A joining with media-rich Digital Story is able to fill up in as an expectant established or maybe snare in order to capture the consideration of understudies and to grow the enthusiasm of theirs for investigating brand new thoughts. Various analysts strengthen the utilization of expectant sets to the beginning of a workout to help you visit understudies in the learning process (Burmark, 2004; Ormrod, 2004) and also as a scaffold

between current new material and information (Ausbel, 1978).

Educator made advanced stories may likewise be used improving latest exercises inside a larger device, as a method of inspiring discussion about a story was introduced by the subjects and as a technique to make theoretical or dynamic substance increasingly reasonable while many coaches, despite whatever, do not have a good for corresponding diverse press into the assistance of theirs, an expanding number of educators are clear on looking into methods to make the understudies of theirs by incorporating pictures, sound in addition to video components within the direction of theirs. Specialists, for example, Hibbing and Rankin-Erikson (2003) and Boster, Meyer, Toberto, and the Inge (2002), have recommended the utilization of effective press in displaying helps understudies withholding information that is new just as can help inside the appreciation of troublesome material. Additionally, (DST) is able to provide teachers an amazing advantage to utilize inside their learn halls.

Digital Storytelling Supports Student Learning

Digital Storytelling (DST) is usually an amazing instructive printer for understudies at every age and grade level that are entrusted with producing their own accounts of theirs. This utilization of superior narrating earnings by the new abilities of understudies while they research and also recount accounts of their very own, figure out how you can use the library furthermore, the internet to explore abundant, powerful substance while dissecting and also including a broad range of feelings and data. Also, understudies that take part in the development of digital stories make improved relational abilities by determining how you can organize the thoughts of theirs, express feelings, pose inquiries, and also develop accounts. Understudies who have the chance to impart their work to their friends may likewise increase important involvement with evaluating their own and other understudies' work, which can advance gains in enthusiastic knowledge, joint effort and social learning. Overall, a wide assortment of research considers has demonstrated that DST decidedly influences and supports educating and learning in a few different ways. Smeda, Dakich and Sharda (2014) investigated the instructive advantages of DST and to survey the effect of DST on understudy learning and commitment. They found that DST can improve various learning aptitudes, for example, composing, investigate, utilization of innovation and correspondence. According to (Bernard R. Robin,2019), making a compelling and connecting with DST is a difficult undertaking. Creators must ponder composing a powerful content regarding copyright for the media components remembered for the story, recording portrayal that imparts the story, picking music that upgrades, however, doesn't overwhelm the portrayal, and utilizing input to improve the story. Creators and Instructors must discover approaches to control the imaginative procedure, survey the narratives, and model licensed innovation use just as ensure understudies' security when utilizing on the web assets. The plan and advancement of a DST is a multi-step process that starts with the determination of the theme for the story and finishes with the distributing of the finished advanced record, with various strides in the middle.

Conclusion

DST is an effective tool for creating learning environments based on constructionist principles of learning and teaching. It's the potential to engage learners in integrated approaches to learning with electronic media. There are a lot more advantages that DST can serve in training that it surpasses the limit of this article. From the reviews on the entire DST elements and the impact of DST on student learning, the outcomes of this research will enable both teachers and students to tap into the power of DST and more engaged teaching and learning process. The research focused on how to develop the framework of DST with main elements and modified the elements to support the new technology education system.

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Biographies

Kogila is a second-year Ph.D. student in the Multimedia department at the Faculty of Arts, Computing and Creative Industry at Sultan Idris Education University, Malaysia. Her doctoral research investigates the developing the framework of Digital Storytelling using a mobile application for primary school students. she is a Lecturer in the Department of Polytechnic Malaysia. She had 13 years of professional teaching experience as academia in Computer Application courses and Engineering Mathematic courses in Polytechnic. She also has experience in research in the Instructional Media field. She has developed confidence and interest in researching and teaching areas to enhance creative Innovation in Multimedia, Instructional Media and Information Technology.

Abu Bakar Ibrahim*(correspondence author) is an Associate Professor in the Computing Department, Faculty of Arts, Computing and Creative Industry at Sultan Idris Education University, Malaysia. He is received a B.Sc. in Electrical Engineering and a Master's Degree from Universiti Teknologi Malaysia (UTM)in 1998 and 2000, respectively. He received a Ph.D. in Electronic Engineering (Communication) from Universiti Teknikal Malaysia Melaka (UTEM) in the years 2013. He had professional teaching experience in the development of Low Noise Amplifier (LNA), Radio Frequency Communication System, Instructional Technology, Engineering Mathematics, Wireless Communication and Engineering Education. He has developed confidence and interest in researching and teaching areas to enhance creative Innovation in Engineering, Science & Technology.

Che Zalina Zulkifli*(correspondence author) is an Associate Professor in the Computing Department, Faculty of Arts, Computing and Creative Industry at Sultan Idris Education University, Malaysia. She had over 20 years of professional teaching experience as academia and active researcher in the Electronics & Electrical Engineering, Information Technology, Embedded System, Industry Creative & Networking area. Experience as a Test Engineer in the multinational company. Her research projects have collaborated with a multinational company and government agencies, which contributes to a network that leads to new ideas and concrete research projects. The developed automation projects that focused on Sensor Monitoring, Embedded System, Software, loT and Wireless Communication fields have been successfully adopted by the industry to date. A total of more than a million Ringgit has been generated as an income to the University mainly from the Research Grant, Commercialization of innovative research products and also the services as a principal consultant. Expertise in the agriculture sector with a new invention to improve crop production adopted high technology. She is sincerely dedicated to the very wise in the green project about recycling and reuse of waste. She has won several international awards and national awards. She has developed confidence and interest in researching and

teaching areas to enhance creative Innovation in Engineering, Science & Technology.