

**The Practice of Digital Storytelling in Graphic
Design Major in Middle East University in
Jordan**

ممارسة سرد القصص الرقمية في تخصص التصميم الجرافيكي
في جامعة الشرق الأوسط في الأردن

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**This Thesis was submitted in partial fulfillment of the
requirements for the Master's Degree in Graphic Design**


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Delegation

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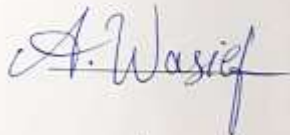

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Committee Decision

This Thesis (**The Practice of Digital Storytelling in Graphic Design Major in Middle East University in Jordan**) was successfully defended and approved on:
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Dedication

“As long as you’ve got passion, faith, and are willing to work hard, you can do anything you want in this life.” —Anonymous

My humble effort I dedicate to the closest people to my heart,

Mother & Father,

Whose affection, love, encouragement, and prayers made me able to succeed and be the person I am today.

My Brothers & Sisters,

I hope to be a source of inspiration and an example of hard work. If I can do it, you can as well.

My Dearest Friends,

Whose support, trust and motivation kept me going.

List of Contents

Subject	Page
Cover Page.....	I
Delegation	II
Committee Decision	III
Acknowledgments.....	IV
Dedication.....	V
List of Contents.....	VI
List of Tables.....	.VII
List of Figures.....	VIII
List of Appendices.....	X
Abstract.....	XI
Introduction.....	.1
Chapter One.....	3
Chapter Two.....	.11
Chapter Three.....	50
Chapter Four.....	.53
Chapter Five.....	.59
References.....	.67
Appendices.....	.. 73
Abstract in Arabic.....	.81

List of Tables

Chapter.no-Table.no	Table Caption	Page
1-2	Advantages and disadvantages of storytelling in education	16
2-4	Means and standard deviations for the digital storytelling approach (factors 1-5).	55
3-4	Means and standard deviations for the graphic poster approach (factors 6-10).	55
4-4	Paired t-Test on the means and standard deviations for the digital storytelling approach compared to the graphic poster approach	56
5-4	Means and standard deviations calculated for the challenges that graphic design students face when practicing digital storytelling (factors 11-15)	57
6-4	Means and standard deviations calculated for the values of digital storytelling practice. (factors 16-20)	58
7-5	Project-Based Experiment: Digital storytelling approach (Table 2) compared to Graphic Poster approach (Table 3).	60
8-5	Digital Storytelling Course Outline	65

List of Figures

Number	Figure Caption	Page
1	Story Structure	15
2	Robin's Digital storytelling types	20
3	Use of text in video	31
4	Animations & subtitles in video	31
5	Image of Ghaith's bookshop	32
6	Text animations on video.	33
7	Images used in "Blue"	33
8	Video overlays used in "Blue".	34
9	Title and a portrait of Abdullah.	34
10	Quote used in the digital story.	35
11	Dramatic question.	35
12	Big Dig's Motto	36
13	Text, images & soundtrack	36
14	Calling audiences' support	36
15	Text animation	36
16	Starting "dramatic question".	37
17	Ending sentence	37
18	Introducing the new Volvo V90.	38
19	Children's narration	39

20	Campaign's motto	39
21	Digital Storytelling Process	40
22	Group (A) output	61
23	Group (B) output	62

List of Appendices

Number	Description
1	Project-Based Experiment and Course Plan
2	Survey Evaluation Letter
3	Survey
4	Griffith University-Digital Storytelling Course

The Practice of Digital Storytelling in Graphic Design Major in Middle East University in Jordan

By Mada Mohammed Al-Rawahi Supervisor Wael Al-Azhari

Abstract

This Thesis studies the practice of digital storytelling in graphic design majors in Jordan, specifically in Middle East University. It identifies that there is no digital storytelling practice in the graphic design curriculums in Jordanian universities. Therefore, the main objective of this thesis implementation is to develop a project-based experiment where two groups of students are chosen, group (A) is taught the basics of digital storytelling and produce a digital story output, whereas group (B) produce graphic posters under the same topic. A survey was conducted to compare both approaches and to measure which approach is more affective. The digital storytelling approach has proven to be more effective with an average score of (4.39) out of 5 compared to the graphic poster approach which scored (2.80).

As a result, the digital storytelling output communicated with the audience much better than the graphic poster output, where it also was able to move the audience's emotions. The feedback from the surveys clearly stated the value and importance of digital storytelling for graphic design students where it could enhance creative thinking, problem-solving, concept developing, and team-work and communication skills.

Keywords: - Graphic design, digital storytelling, project-based experiment.

ممارسة وسيلة سرد القصص الرقمية في تخصص التصميم الجرافيكي

في الأردن: جامعة الشرق الأوسط كحالة دراسية.

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ملخص

تدرس هذه الرسالة ممارسة القصص الرقمية في تخصص التصميم الجرافيكي في الأردن، وتحديدًا في جامعة الشرق الأوسط، حيث أنه لا يوجد أي ممارسة للقصص الرقمية في خطة منهج التصميم الجرافيكي. ولذلك، فإن الهدف الرئيسي من هذه الدراسة هو تطوير تجربة قائمة على مشروع حيث يتم اختيار مجموعتين من الطلاب، وتدرس مجموعة (A) أساسيات القص الرقمي وإنتاج مشروع بصيغة القصة الرقمية، في حين أن مجموعة (B) تصمم ملصقات تحت نفس الموضوع. وأجريت دراسة استقصائية لمقارنة كلا النهجين وقياس النهج الذي يتسم بقدر أكبر من الفاعلية. وقد أثبتت طريقة القص الرقمي أن تكون أكثر فعالية بمتوسط (39.4) درجة مقارنة بنهج الملصق الجرافيكي الذي سجل (80.2).

ونتيجة لذلك، فإن مخرجات القصص الرقمية تلقت فعالية مع الجمهور أفضل بكثير من إخراج الملصق الجرافيكي، حيث تمكنت أيضا من تحريك مشاعر الجمهور. وقد بينت ردود الفعل من الدراسات الاستقصائية بوضوح قيمة وأهمية القص الرقمي في تعليم التصميم الجرافيكي حيث يمكن أن تعزز التفكير الإبداعي، وحل المشاكل، وتطوير المفاهيم، والعمل الجماعي ومهارات الاتصال.

الكلمات الدالة:- التصميم الجرافيكي، سرد القصص الرقمية، تجربة.

Introduction

Stories are the core of all cultures. They help establish a community, an ethnic group, a profession, a whole nation. They define its history, they carry its wisdom and perspective. Stories can makes us understand another person's life in a deeply personal level, creating empathy. Stories could help us care about something we might not care about otherwise. In academics, stories offer affective teaching which could lead the learner to a desire for greater cognitive learning. It takes deep understanding to tell your personal story about anything, place, person or event. Listening to another person's story can make the listener care more about what's being told than if facts alone have been conveyed. Stories can provide special ways of building a community in our own discipline, or in reaching out to other disciplines. (Ohio State University, October 2017)

Stories through the ages moved from caves to campfires, to libraries. They became a “communication tool” embraced by gurus of knowledge management, leaders and now, practitioners of strategy and design. Why? Because stories are memorable. In the words of Stephen Denning (2001), “Storytelling is natural and easy and entertaining and energizing. Stories help us to understand complexity. Stories can enhance or change perceptions. Stories are easy to remember...and engage our feelings... Storytelling enables individuals to see themselves in a different light, and accordingly take decisions, and change their behavior in accordance with these new perceptions, insights, and identities.”

Storytelling is a very old form of communication and an art that has been evolving over the years with each technological development. It is believed that communities started communicating with body language at first, and then progressed to oral communication, hieroglyphics, written communication, and, with the progression of new media technology, digital communication. Communities embraced the advances of each new way of communication, and have developed their abilities, skills, and literacies to engage more and reach out to greater audiences through each development in technology, (<https://librarydigitalstorytelling.wordpress.com/what/>, October 2017)

Today storytelling has become very valuable, as there are many various ways and forms to output these stories, and it is present in almost everything that's created. (Lambert, 2013)

The latest form of stories in the modern world is digital storytelling. There are endless ways and techniques of producing a digital story. This thesis tries to study the practice of digital storytelling for graphic design students at Middle East University as it plays a big role in improving creative thinking skills, enhancing student participation, problem-solving skills and improving communication and educational outcomes overall.

Chapter One

Thesis Overview

Table of Contents

1.1	Introduction
1.2	Thesis Problem
1.3	Thesis Objectives
1.4	Thesis Values
1.5	Thesis Questions
1.6	Thesis Hypothesis
1.7	Place and Time Limitations
1.8	Study Limitations
1.9	Definitions

1.1 Introduction

Digital storytelling is being practiced all around the world in increasingly diverse contexts, from cultural institutions and community development programs to screen innovation and commercial applications. However, digital stories in schools and universities worldwide have become popular in education, as they deliver information more effectively. Despite its popularity, the practice of digital storytelling is poor in graphic design majors in Jordan.

Graphic designers are creative problem solvers (Allen, 2014). They recognize the problem and then come up with the most compelling way to solve that problem. To capture the viewer's interest, designers need to capture their curiosity, and that is where the story side of a designer's job becomes necessary. They have various techniques and tools that allow them to create and build up emotional connections between the audience and the message. With these tools they can convert the core of the message into a story—a visual creative form that touches the audience's senses, capturing their curiosity and establishing a memorable image in their minds.

1.2 Thesis Problem

Digital storytelling can be recognized in design, in general, and in graphic design majors, in particular. A field search for a digital storytelling module in graphic design majors in Jordanian Universities was made and the outcome was that graphic design majors in Jordan do not have a digital storytelling module; therefore it is an unfamiliar term among graphic design students. To introduce digital storytelling in Jordanian universities as a module, it requires a mindset change, new methods and materials to establish memorable and persuasive stories. Hence, the problem presents itself in the nonexistence of digital storytelling in Graphic Design majors. The students' output are not strongly

communicated unless it involves an audience converted from passive viewers to engaged participants. So, this thesis is introducing a digital storytelling approach in the graphic design major as a practice through a project-based experiment implementation at Middle East University in Jordan.

1.3 Thesis Objectives

- To study the given modules of the graphic design major in Jordan in general, and in Middle East University in particular. Then, analyze the modules that briefly introduce the idea of digital storytelling and related modules taught to graphic design students to identify the core of the problem.
- To introduce digital storytelling as a practice for graphic design students, focusing on how to evoke their creative thinking and improve their problem-solving skills, concept developing, teamwork and communication skills.
- Develop a digital storytelling course outline to be implemented in graphic design majors in Jordanian universities.

1.4 Thesis Values

Storytelling in graphic design is not only a problem-solving method or a form of art but it also carries meaning and relatable content, negative or positive, as it will touch the viewer's emotions. It could be anything like an awareness message, a cry for help, an expression of a social problem, etc. Or on a positive message like, unity, motherhood, saving the planet, etc.

Graphic designers have the ability to move an audience's emotions and get their messages across. As there are various tools, techniques, methods of creating the story to attract an audience.

1.5 Thesis Questions

This thesis tries to answer the following questions:

- How affective is the digital storytelling approach compared to the graphic poster approach?
- What are the challenges that graphic design students face when practicing digital storytelling? And, how can it be used to enhance creative thinking, concept developing and problem solving for graphic design students?
- Can digital storytelling be an independent course for graphic design students in the future in Jordanian universities?

1.6 Thesis Hypothesis

- Graphic design trends, methods, software and technology affect digital stories.
- Digital storytelling enhances creativity, problem solving, concept developing and communication skills for graphic design students.
- There is no digital storytelling practice in the graphic design major at Middle East University. Also, universities in Jordan do not have digital storytelling as an independent module.

1.7 Time and Place Limitations

Time: First Semester of the academic year 2017/2018

Place: Graphic Design Department, Faculty of Architecture and Design, Middle East University, Amman, Jordan.

1.8 Study Limitations

- Graphic design students who do not value the importance of digital storytelling and not willing to cooperate in improving their creative thinking/skills.
- The shortage of literature reviews regarding this issue.
- Unfamiliarity of the term digital storytelling among graphic design students and tutors.
- The rejection of Jordanian universities to acknowledge certain problems on developing a digital storytelling educational course in graphic design majors.

1.9 Definitions

Story:

According to Mark W. Travis (2011), a story is the telling of an event, either true or fictional, in such a way that the listener experiences or learns something just by the fact that he heard the story. A story is a means of transferring information, experience, attitude or point of view. Every story has a teller and a listener. No matter the medium, there has to be the one telling the story and the one receiving the story.

Storytelling:

The National Storytelling Network (2011), define storytelling as the art of using language, vocalization, and/or physical movement and gesture to reveal the elements and images of a story to a specific, live audience. A central, unique aspect of storytelling is its reliance on the audience to develop specific visual imagery and detail to complete and co-create the story.

Digital Story:

Roland (2006) defines a digital story as a multimedia movie that combine photographs, video, animation, sound, music, text, and often a narrative voice.

Digital Storytelling:

Ramona Bran (2010) wrote in her paper “*Message in a bottle: Telling stories in a digital world*”, A digital story is a short (usually between 3 to 5 minutes) clip, which consists of a series of still images, combined with oral and/or written text. Additional music is sometimes used to invoke emotion or induce other effects. People have always relied on stories to convey information and emotion. But in the age of the “disappearing book” and the emergence of newer and newer technologies, digital storytelling is an appropriate way to communicate what we do, who we are and what we care about or are interested in.

Digital Literacy:

Connecting the Digital Dots: Literacy of the 21st Century, an article written by Barbara R. Jones-Kavalier and Suzanne L Flannigan (2006), defines Digital Literacy as a person’s ability to perform tasks effectively in a digital environment, with “digital” meaning information represented in numeric form and primarily for use by a computer. Literacy includes the ability to read and interpret media (text, sound, images), to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments.

Multimodal Literacy:

As written by Walsh (2010), Multimodal Literacy refers to meaning-making that occurs through the reading, viewing, understanding, responding to and producing and interacting with multimedia and digital texts. It may include oral and gestural modes of talking, listening and dramatizing as well as writing, designing and producing such texts. The processing of modes, such as image, words, sound and movement within texts can occur simultaneously and is often cohesive and synchronous. Sometimes specific modes may dominate.

Storyboard(ing):

Roger Essley, Linda Rief and Amy Levy Rocci mentioned in their book, *Visual Tools for Differentiating Reading & Writing Instruction* (2009), Storyboarding, or picture writing, is the origin of all written languages, used by ancient cultures before text evolved and as a natural bridge to text. The Chinese language was built using pictographs. Egyptians used storyboards, or hieroglyphics, first etched in stone and later written on papyrus, to organize a complex society and to rule the ancient world. A storyboard is a writing format, generally a set of boxes (or rectangles, circles, or other shapes) placed in a logically sequenced order. Each box or frame is a place for the writer to put information, pictures, symbols, or text.

Timeline:

Vangie Beal (2017), defines timeline in video editing as a commonly used interface found in most video editing programs. This interface enables authors to lay a video project out in a linear fashion horizontally across a monitor.

Compositing:

As defined by Vangie Beal (2017), in video terminology, compositing is the merging of two video tracks in order to produce a new single image frame from the combined tracks. The term may also be used to describe the overlaying of text and titles on video clips. In graphics, compositing is the process of superimposing one image over top of another image, combined they create one new single image.

Video Transition:

Techopedia (2017) explains, a video transition is a technique used during the post-production process of film or video wherein separate shots or scenes are combined in order to present a cohesive whole. Commonly, especially with film, this is usually just in the form of a "cut," which leads directly to the next scene without any particular visual cue except that the scene has changed. For digital video, the transition can be more visual and obvious such as fade-outs, wipes, dissolves and fades or other visual effects.

Chapter Two

Literature Review and Previous Studies

Table of Contents

2.1	Literature Review
2.1.1	Introduction
2.1.2	What is Storytelling?
2.1.3	Who are the Storytellers?
2.1.4	Characteristics of a Good Story
2.1.5	Storytelling in Education
2.1.6	What is Digital Storytelling (DS)?
2.1.6.1	The History of Digital Storytelling
2.1.6.2	Digital Storytelling: Types
2.1.6.3	Digital Storytelling: Elements
2.1.6.4	Digital Storytelling: Process
2.1.7	Digital Storytelling in Design
2.1.7.1	Local Digital Storytellers
2.1.7.2	Successful Digital Stories
2.1.8	Digital Storytelling in Education
2.2	Previous Studies
2.3	Conclusion

2.1 Literature Review

2.1.1 Introduction

Storytelling is a powerful and magical craft. It could take the audience on an exciting journey into an imaginary world, however, it could also reveal dark secrets of human nature or encourage the audience with the desire to do noble deeds (Miller, 2004). Storytelling also can be used to serve in more functional goals: to educate, to promote, and to train. Storytelling is one of the earliest forms of transferring knowledge. Humans have continually used stories to educate, to entertain, to communicate, to inform, and to understand. Everyday communication requires listening, speaking and responding to stories. Storytelling has evolved throughout history. The oldest stories were told through glyphs and pictures on walls. Then, stories were passed down orally from generation to generation. As technology is advancing, the addition of numerous rich media forms is made available to be combined with the art of storytelling, the result is a modern way of telling stories, digital storytelling (Educause, 2007). The combination of text, voiceovers, photography, video clips, music, animations and illustrations, and sound effects adds a new aspect to sharing stories or releasing information—a level that attracts a greater audience because of the combined visual and audio components.

2.1.2 What is Storytelling?

Storytelling is as old and varied as human-kind itself (Capri, 2011). It is an ancient human activity. In many cultures, stories have been the foundation, and they continue to pass on traditions, experiences, knowledge to future generations. Stories were, and remain to be used in every aspect of a person's life. Storytelling is defined in several different ways. The practice of storytelling is closely associated with peoples' sense of identity (Postman,

1989); also, it is one of the core components of human memory and the foundation of several basic mental events (Schank, 2005). To understand and share their experiences, human beings use languages made up of signs which establish the basis of human culture. Hack, Ramos & Santos (2012) point out in their study that the tools humans built to mediate such symbolic activities change the way how human beings think.

Gere (2002) defines storytelling as “the act of using language and gesture in colorful ways to create scenes in a sequence”. Yet another definition states, storytelling is a compelling way of sharing experiences in order to understand the world. Stories build connections, and allow us a glimpse into another person’s life and find similarities in their stories and experiences. (Kozlovich, 2002).

According to McDrury and Alterio (2016), Storytelling is a unique human activity that allows us to carry words, traits of ourselves and others, and the worlds, real or imagined, that we inhabit. Stories help us to understand the world and our place in it given that we are all, relatively, constituted by stories: Stories about our own selves, our families, colleagues and friends, our communities, our traditions, our part in history.

Considering the resemblance of these definitions, storytelling is the sharing of thoughts and experiences through words and actions, to communicate and make meaning about our lives and the lives of others. The actual format of a story may vary, but the main focus is to transfer meaning.

2.1.3 Who are the Storytellers?

Everybody is a storyteller by default, every one of us loves to share our stories, background and experiences, and to listen and learn from others, but some people choose to become professionals or community storytellers.

Many storytellers link their love of stories with their childhood influences, but what unifies them is a commitment to the practice of their art. The storyteller's work stretches from sharing tales as an enjoyable activity, to coaching storytelling projects with vulnerable people, such as asylum seekers, people with additional needs and the elderly.

According to The Scottish Storytelling Centre (2017), there are several types of storytellers and they have been identified in the following list:

- **Tradition Bearers:** those who have maintained and carried on passing older traditions through stories.
- **Community Storytellers:** those who share stories to their communities or through their work in order to sustain human well-being and quality of life.
- **Professional Storytellers** - those who travel and practice their storytelling craft as a paid profession. (TRACS, 2017)

Stories can sometimes be used to create vision, to convey wisdom and knowledge, and to shape identity and organizational culture. Storytelling is considered as one of the most effective and influential techniques, and has been documented drastically in various fields. Sole & Wilson (2002) identify the role of storytelling as follows:

- **Share norms and values:** Stories serve as a medium for creating vision and passing on values.

- Develop trust and commitment: Personal stories can convey one's own ability and commitment, as well as allowing openness by sharing something personal.
- Share tacit knowledge: Allows the users to express tacit knowledge and communicate with emotion, which helps them deliver more than they realize that they know.
- Facilitate unlearning: Unlearning usually demands more than rational arguments. It requires an emotional and intuitive anchor, which stories can provide.
- Generate emotional connection: Connecting with stories emotionally and finding a story that made an impact can be easily remembered in the future.

2.1.4 Characteristics of a Good Story

The best stories must have a beginning, middle, and an end (Figure 1). The more powerful and interesting the story is, the more likely it will be remembered. (Frost, 2015)

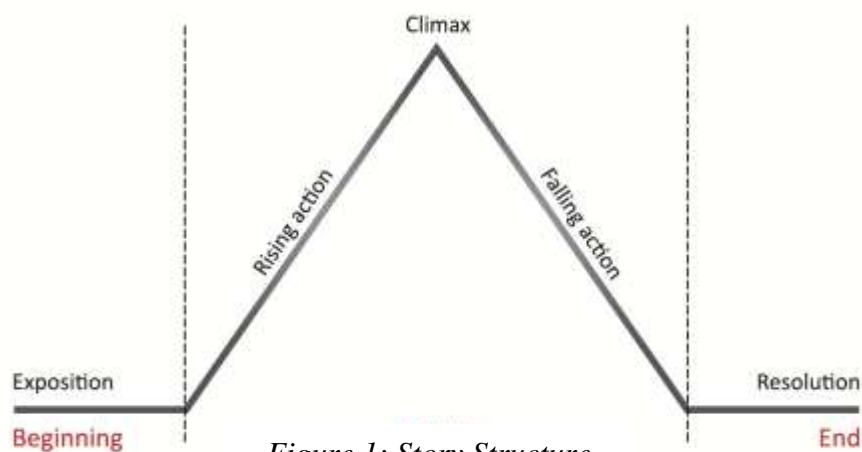


Figure 1: Story Structure
Source: (The Author, 2017)

Steve Denning (2001) notes a few characteristics of a good story, including:

- Focus on the positive (a "happy ending"), and convey successful stories.

- To have a "hero", and receive it from that person's perspective.
- To have an unusual plot - something that captures the viewers' attention.

2.1.5 Storytelling in Education

The use of stories has been recognized to be very effective in education, especially in challenging and information-heavy subjects. Woodhouse (2008) noted a number of advantages and disadvantages of storytelling in education (Table 1).

Table 1. Advantages and disadvantages of storytelling in education modified from (Woodhouse, 2008)

Advantages of storytelling	Disadvantages of storytelling
Storytelling enables students to share stories of success and develop a sense of community	Storytelling takes time to prepare
Storytelling allows students to explore personal roles and understand and relate to other students' stories.	Students may feel uncomfortable to share their personal stories
Storytelling can enhance creativity, imagination and contemplate the mind	Some topics may be crucial to some students and therefore can find it threatening
Imagination contributes into allowing stories to be memorable	Students require guidance at various stages of storytelling
Storytelling can improve critical thinking and listening skills	The students' response differs on their previous exposure to storytelling
Storytelling preserves the oral tradition	Storytelling requires visualization skills and might not suit everyone's learning style

Storytelling is a unique way of communicating. It allows students to express their thoughts and ideas in their own personal ways. As students prepare their stories and go through the writing process, it grants them opportunities for social interaction and an

opportunity for self-expression (Craig et al., 2001). The writing stage makes students work with one another as they read and write. Students openly exchange their stories with peers and start to build their literacy skills with support in a collaborative environment. Mello (2001) concluded, "...storytelling enhanced the students' abilities to reflect and develop relationships between the texts, teller, and themselves. As a result, these relationships supported and amplified students' comprehension, listening and interactions with others."

The storyline can make use of more or less any verbal or written form of communication, as well as images, video, etc. That leads us to the modern form of storytelling, *digital storytelling*.

2.1.6 What is Digital Storytelling (DS)?

Even though stories and the art form of storytelling have been around since the very beginning, new ways and techniques for increasingly effective storytelling continue to be developed. One of the more recent advances in storytelling is digital storytelling (DS); and even though it is yet a moderate process and art form, digital storytelling is arising worldwide in a multitude of disciplines.

Digital storytelling is a natural progression from oral storytelling. It could be said that storytelling plus technology equals digital storytelling. Gathering and storing oral histories became an academic endeavor starting in the seventies. Its popularity in academia lowered during the nineties, but the discipline has been revived and renewed as digital media spread more viciously. Digital storytelling is not just about the transfer of knowledge; it is also a movement designed to amplify the voice of a community (Burgess, 2006). Everyone has a story to tell.

There are different definitions of “Digital Storytelling”, but in general, they all are focused around the idea of combining the art of storytelling with mixed digital media, such as images, video, and audio. Pretty much all digital stories bring together some mixture of digital graphics, text, recorded audio narration, video and music to present information on a specific topic. Just like traditional storytelling, digital stories revolve around a chosen theme and often contain a particular viewpoint. The stories are often just a few minutes long ranging from (3-5) minutes and have a variety of types, including the sharing of personal experiences, the documentation of historical events, or as an attempt to instruct or inform on a specific topic. A lot of people find out about digital storytelling through workshops on how to use multimedia technology. Through abilities, digital skills, and literacies practiced in these environments, storytellers can go on creating and developing on their own.

The Digital Storytelling Association (2011) defines digital storytelling as ... the modern expression of the ancient art of storytelling... using digital media to establish media-rich stories to tell, spread, and to preserve. Digital stories acquire their value through mixing images, music, narrative and voice all together, which make it attain deep dimension and vivid color to characters, situations, and insights.

2.1.6.1 The History of Digital Storytelling

In the early nineties, Dana Atchley, Nina Mullen and Joe Lambert founded the Center for Digital Storytelling (CDS). Initially, The Center for Digital Storytelling and the Digital

Storytelling Association were established to help support digital storytelling in the business world (Digital Storytelling Association, 2002).

Today CDS has been renamed to simply *StoryCenter*. StoryCenter.org (2017) bases its roots in the artistic and cultural uprising in the United States during the seventies and eighties. During that time, educators and arts practitioners across disciplines challenged the assumption that art should be kept for the gifted or talented professional individuals. Knowing that amateur practitioners could make very big creative contributions, pioneering artists wanted to make art approachable to everyone, especially those traditionally left behind. The work of those artists and a large range of collaborators gave voice to influential stories of hope, change, and healing in the midst of social and political conflict.

Just as they desired to increase community access to artistic expression, artists and arts educators pursued to expand the scope of creative endeavor. The evolving digital technologies in the nineties offered new tools for expression and a different environment to experiment these tools. A group of San Francisco Bay Area media artists and designers gathered to explore and learn how digital media tools can empower personal storytelling.

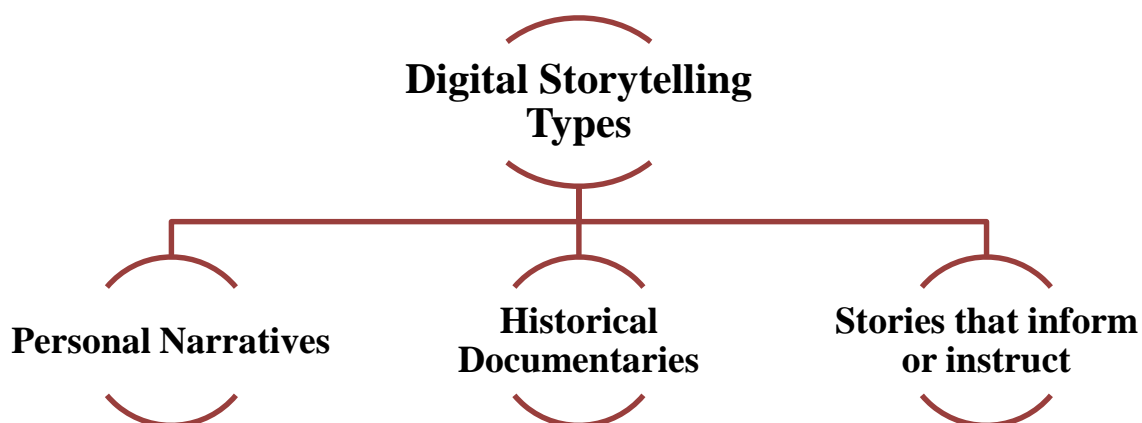
Several collaborators exchanged thoughts and found common ground in a shared vision of cultural democracy and social change, a partnership was formed. An interdisciplinary artist and media producer, Dana Atchley, developed a multimedia autobiography named, *Next Exit*. His work attracted local theater producer Joe Lambert as a collaborator in working to produce the piece on stage. Together, they have realized that people with little or no prior experience in multimedia have the ability to create powerful personal stories using the new digital media technology. In 1994, Joe and Dana, along with Nina Mullen, founded the San Francisco Digital Media Center. Over the next few years, the group

designed a curriculum that is the basis for a community workshop called “digital storytelling.”

In 1998, the San Francisco Center for Digital Media transferred to Berkeley and was then renamed to the Center for Digital Storytelling. As it is called today, StoryCenter, worked with almost a thousand organizations globally and trained more than fifteen thousand people in workshops to share personal stories. Through their wide-ranging work, they transformed the way that community activists, educators, health and human services agencies, business professionals, and artists think about the power of personal voice, in creating change.

2.1.6.2 Digital Storytelling: Types

There are a lot of different types of digital stories, but Robin (2006) categorized three types of DS as follow (Figure 2):



*Figure 2: Robin’s Digital storytelling types.
Source: (The Author, 2017)*

- i. **Personal narratives** – stories that consists of significant incidents in one’s life.
- ii. **Historical documentaries** – stories that pass on historical events that allows us to understand the past.
- iii. **Stories designed to inform or instruct** – providing and sharing information or instructions on a particular topic.

- **Personal Narratives:**

One of the most common reasons to produce a digital story is to create a personal narrative. This story type provides many benefits in an educational setting. First, viewers of the story learn about people from diverse backgrounds other than their own and they gain knowledge and an appreciation of one another’s background and experiences. These kind of stories can be used to facilitate discussions about current issues such as race, multiculturalism and the globalization that is taking place in the world today. Moreover, a student that creates such a story benefits from sharing it with others and then use that information as a way of removing some of the distance that students feel between themselves and their peers. A personal narrative story can also bring positive outcomes for example, if two students share similar experiences, the students feel connected and not struggling alone.

- **Digital Stories that Examine Historical Events:**

Even though, various personal narratives can include historical information in the context of the story, a different type of digital story could be created from historical material that students can learn and explore in the classroom. An audio

recording of US President Abraham Lincoln's Gettysburg Address was used to illustrate a popular American speech. The digital story was created by using historic photographs captured during the American Civil War and other materials resourced from the Internet.

- **Stories that Inform or Instruct:**

While it can be argued that every digital story perhaps could inform or instruct, the distinction is that there is a place to create a separate category for these kind of stories, which reflect instructional material in content areas like math, science, health education and instructional technology. In Search of the Pythagoreans is a good example of a digital story that has been created to assist students into understand the history and meaning of the Pythagorean Theorem. As for sure, stories can be created combining all three categories such as autobiographical stories that use historical references as the backdrop of a personal narrative.

2.1.6.3 Digital Storytelling: Elements

The characteristics of a story have remained concrete despite the opportunities that have grown into digital storytelling. It seems the elements of a traditional, written story vary slightly depending on who you ask. However, there seems to be a common ground on the elements of setting, plot, character, conflict, and theme. What has evolved into digital storytelling now shares these same characteristics, but with the addition of multiple layers of media and other components available because of them.

The Center for Digital Storytelling (2017) identifies these seven elements of a digital story:

1. Point of View

All stories make a point. They follow the pattern of describing a desire, a need, or a problem that must be addressed by a central character (you). They follow the action the desire leads us to take, and then reveal realizations.

2. Dramatic Question

Well-crafted stories, from Shakespeare to Star Wars, set up a tension from the beginning that holds you. In a romance, will the girl get the guy? In an adventure, will the hero reach the goal? In a crime or murder mystery, who did it?

3. Emotional Content

This effect is principally a result of a truthful approach to emotional materials. To understand story's role in our lives is to think of most stories as resurrection tales. Every one of us has to wake up in the morning, and choose to go on, to resurrect ourselves in the face of fate and circumstance, the memory of loss and almost unbearable struggle.

4. The Gift of Your Voice

Those of us fortunate enough to be able to talk out loud should love our voices, because they tell everyone so much about who we are, both how strong we can be and how fragile. In a story, we are listening for an organic rhythmic pattern that allows us to float into reverie. The easiest way to improve upon a [spoken from script] recording of your voice is to keep the writing terse. Record several takes of the text. Work at speaking slowly in a conversational style.

5. The Power of the Soundtrack

People now walk around with soundtracks running in their heads, a movie that puts our life into a clearer perspective, or at least entertains us. Instrumental music or ambient sound is often better suited to the style and meaning of the story's text and visual narratives.

6. Economy

Most people do not realize that the story they have to tell can be effectively illustrated with a small number of images and video, and a relatively short text. Storytelling with images means consciously economizing language in relationship to the narrative that is provided by the images.

7. Pacing

Considered by many to be the true secret of successful storytelling. Changing pace, even in a short digital story, is very effective. Good stories breathe. They move along generally at an even pace, but once in a while they stop. They take a deep breath and proceed. Or if the story calls for it they walk a little faster and faster until they are running, but sooner or later they have to run out of breath and stop and wheeze at the side of the road.

2.1.6.4 Digital Storytelling: Process

The digital storytelling process, developed by Dana Atchley and Joe Lambert (2013), consists of seven main steps, which the digital storytelling co-founder Joe Lambert discusses and explains in detail in his book entitled: *Digital Storytelling Capturing Lives, Creating Community*, (2013).

The seven steps of the digital storytelling process are:

Step 1: Own Your Insights

Step 2: Own Your Emotion

Step 3: Find the Moment

Step 4: See Your Story

Step 5: Hear Your Story

Step 6: Assemble Your Story

Step 7: Share Your Story

In his book, Lambert (2013) analyzes and succinctly defines every one of these seven steps. The seven steps, in Lambert's words, are a journey. He also explains the methodology of how he and his team of DS workshop facilitators over the course of a three-day workshop guide beginners, non-profit, corporate, education, and health professionals and other several members of the community through the process of creating a digital story.

Step 1: Owning Your Insights

First, the Center for Digital Storytelling (CDS) team assist the workshop participants to identify the story each participant wants to tell and share. CDS facilitators help them by asking questions like: "What is the story you want to share?", "What do you think your story could mean?", "Why did you choose this story?", and "Who is your audience?". Lambert summarizes the basis of this step when he writes: Discovering and clarifying what a story is really about isn't that simple. It's a journey in which a storyteller's insight or wisdom can evolve, even revealing an unexpected outcome. Assisting storytellers to

find and own their deeper insights is the best part of the journey ...finding and clarifying stories helps people make meaning of the context of their lives.

Step 2: Own Your Emotion

In the process and journey of creating a digital story, the second step is for the storyteller to identify the feelings and emotions in his or her story. The CDS facilitators guide workshop participants and ask them questions like: “what emotions did you experience when sharing your story?”, “Identify which points in sharing your story you felt specific emotions?”, “Which emotions could best help your audience to understand the journey contained within your story?” and “Can you pass on your emotions without directly using feeling words or relying on clichés to describe them?”. Lambert concludes the importance of this step when he writes: “When we reflect on the emotions within our stories, we come to realize that they can be complicated, and with this realization we usually discover deeper layers of a story’s meaning,”

Step 3: Find the Moment

The third step in this process is identifying one moment that the storyteller can describe his or her own personal insight. As to facilitate this understanding, the CDS facilitators continue to ask the workshop participants questions such as: “What moment did you feel things have changed?”, “Are you aware of it?”, “If not, what was the specific moment you realized that things had changed?” and “Could you describe this moment in detail?”. Lambert summarizes the value of this step when he writes: “Compelling storytellers construct scenes to display how change happened, what they were like before changing and they’re like after...By building and creating a scene around the moment of change, the storyteller is “showing” rather than “telling”

Step 4: See Your Story

The fourth step in this process of creating a digital story, the storyteller should choose what visuals he or she wants to use to tell his or her story. The CDS team guides the storytellers in this part of the workshop by asking questions such as: “What visuals do you see when recalling the moment of change?”, “What images come to your mind for rest parts of the story?”, “Why this image specifically?”, “What does it mean to you?”, “Is the meaning explicit or implicit?”, “Does it several meanings?”, “If so, can you describe the other meanings?”, “Do you think the audience will be able to understand the story’s meaning without this image?” and “Is this image carrying another layer of meaning?”. Lambert highlights the impact of choosing powerful visuals when he writes: Well-chosen images act as mediators between the narrative and the audience...audiences meaning and require them to “jump in” in order to create their own connections. Images can capture the audience’s interest and show them the river’s immensity. Also, images have the power to reveal something to the audience that words just can’t describe.

Step 5: Hear Your Story

The fifth step in the digital storytelling process is to demonstrate how the storyteller uses his or her voice to tell his or her story. This step also lets the storyteller identify any other sounds he or she may want to use to add to the message of his or her story. In this step, the CDS team help the workshop participants understand that using a natural, authentic self-voice to narrate their stories is very important; the emphasis is on encouraging participants to use the exact voice tone that they use to speak to a close friend. CDS workshop facilitators also ask the participants to choose whether any other sounds like music or natural sound will add to or distract from their stories. Lambert highlights the importance of using the storyteller’s voice and/or other forms of sound when he writes:

The recorded voice of the storyteller telling their story is what makes a “digital story” a digital story--not a music video or narrated slideshow. By this point in the process, the emotional tone of the story is identified, and sound is one of the best ways to convey that tone through the way the voice-over is performed, the words that are spoken, and the ambient sound and music that work with the narrative.

Step 6: Assemble Your Story

The sixth step in the process is combining everything together. This step also comprises several other steps which Lambert discusses individually, also in his book. The sub-steps of gathering and composing a digital story are: spreading out all the storyteller’s media, writing a script, and creating a storyboard. The CDS workshop facilitators continue to ask the participants questions to help them formulate a story structure. Some of the questions that the CDS workshop facilitators asked them were: “How are you going to structure the story?”, “How are the layers of visual and audio narratives working together within that structure?”, “Where will you start?”, “At what point in the story can it appear?”, “Is it at the beginning, middle, or end, or is it divided to different points throughout your story?” and “What other scenes are necessary to provide context for the moment of change, what details do you want to add?”. In this step, Lambert discusses the power of pacing and the impact of silence when crafting the story structure. The significance of this step is concluded when Lambert explains: “The assemblage of your entry and exit time isn’t simple. However, the best advice is to keep it simple”

Step 7: Share Your Story

The seventh step in the process is identifying who is the suitable audience for the storyteller's digital story. Also in this step, workshop participants are asked to consider the following questions: "Who is your audience?", "What was the purpose when creating your story?", "Has the purpose changed during the process of creating the story?", "How will your digital story be viewed?" and "What life will the story have after it's completed?". Lambert also includes that this step, even though it is the last step, it can influence the context of how a digital story is structured and which particular elements will be used.

2.1.7 Digital Storytelling in Design

Good design, like good storytelling, brings ideas to life (Lupton, 2017). About one quarter of the human brain is involved in visual processing more than any other sense. To say the least, successful designers are those who know and understand how to capture the viewer's interest in the most effective way possible.

And to become a successful designer, storytelling is an essential part of design thinking. When it comes to storytelling, it's about using the narrative skill as a vehicle for change: It is a way to achieve a connection between meaning and information, to create connections between the design and the audience, to shift people's thinking by tapping into empathy and emotion, and to make abstract concepts true and clear. By giving the target audience something to belong to, that can encourage and inspire them in thoroughly new ways. Storytelling plays a big role in enabling change through design.

But storytelling isn't always what designers do, think about doing, or are taught to do. It needs a mindset change. If the designer has enough practice and is able to create stories from an idea, the end result will construct communications that relate, connect, build trust,

transforming audiences from passive viewers into engaged participants, and move people to desired and preferred responses.

2.1.7.1 Local Digital Storytellers.

The Jordanian population is a very youthful population. Those under the age of 35 represent almost three quarters (72.6%) of the total population. Out of 6 million inhabitants in Jordan in 2010, 1.7 million are aged 15-29 and 2.1 million are aged 15-34, representing 28.3% and 35.2% of the total population respectively (Amer, 2014). Therefore the youth in Jordan try to spread their messages in their communities, they strive for change and improvement in their lifestyle overall. Here are some successful digital stories created by Jordanian creative individuals:



- **Meter x Meter** by Abdullah Sharrw, Balqees Muhaisen, Ghazal Abu Nemeh , Hiba Nabulsi, Mohammad Hawwari and Tala Maragha.

“Meter x Meter” received the Adobe Youth Voices Awards in mid-July 2015 for the animated films category, according to director Hiba Nabulsi, who was among the six Jordanians between the ages of 18 and 20 who participated in creating the digital story, which combined video, animation, a voiceover and a soundtrack, challenging the patriarchal views common in society, (Goussous, The Jordan Times, 2015). The digital story began as a response to the “I Have a Story” national movie contest hosted by Woman and Girls Lead Global (WGLG) in Jordan. The students’ short abstract focuses on raising awareness about gender-based violence while sharing the story of many females in the Middle Eastern community who feel their identities being “wiped away.”

The pictures displaying title text (Figure 3) and subtitles with animations (Figure 4).



Figure 3: Use of text in video.

Source: (<https://www.youtube.com/watch?v=pTLFcdt9jLL>, November 2017)



Figure 4: Animations & subtitles in video.

Source: (<https://www.youtube.com/watch?v=pTLFcdt9jLL>, November 2017)



- **Wordcatcher** by Amal Elhudhud, Bayan Habib and Yasmeen Afaneh. "Wordcatcher" is a short documentary film created during a SDI (Scottish Documentary Institute) workshop in Jordan, organized by the British Council in partnership with the Royal Film Commission of Jordan. The three individuals come from different backgrounds, all sharing the same passion of creating digital stories to improve their communities.

The documentary is about a Jordanian guy named Ghaith, who chose his deep passion for reading and seeking knowledge as a career, giving up the financial security of an insurance sales life for setting up a bookshop with a difference (Figure 5).



Figure 5: Image of Ghaith's bookshop

Source: (<https://vimeo.com/album/4556165/video/216529275>, November 2017)

The documentary featured images, videos, text animations (Figure 6), soundtrack and voice narration.



Figure 6: Text animations on video.

Source: (<https://vimeo.com/album/4556165/video/216529275>, November 2017)



- **Blue** by Hiba Nabulsi.

Hiba is an art student who has great passion in photography and film-making. She has directed and created the digital story “Blue” as a part of SDI’s workshop in Jordan. Hiba describes her work “Depression is frowned upon in most societies however it is a great source of shame in a Middle Eastern culture. Manar, a young Jordanian woman breaks the taboo and talks freely about her experience in this short documentary.”

The use of images (Figure 7), text, videos, music, voice narration and overlays (Figure 8) all led to a successful digital story.



Figure 7: Images used in “Blue”

Source: (<https://vimeo.com/album/4556165/video/213051364>, November 2017)



Figure 8: Video overlays used in “Blue”.

Source: (<https://vimeo.com/album/4556165/video/213051364>, November 2017)



- **Nasama** by Abdullah Sharrw.

Abdullah creates this digital story to share his personal experience on living without an ID card nor a passport. He films himself talking about the struggles he faced and the opportunities he couldn't take because he had no citizenship (Figure 9).



Figure 9: Title and a portrait of Abdullah.

Source: (https://www.youtube.com/watch?v=ik_tBHAJgww, November 2017)

Abdullah used his voice to narrate his story, soundtracks and text (Figure 10).



Figure 10: Quote used in the digital story.

Source: (https://www.youtube.com/watch?v=ik_tBHAJgww, November 2017)



- **The Harmonic Salt; Between Bells & Adhan** by Loay AlTal

“The Harmonic Salt” is a submission for As-Salt Competition organized by the Royal Film Commission of Jordan describing the harmonic lifestyle of the Salt community between Muslims and Christians. Loay is an architecture student who is specializing in photography and visual content creating. His digital story starts with a dramatic question (Figure 11), which is one of the 7 elements of digital storytelling. Loay has used his own voice, video footage, subtitles and sound effects.



Figure 11: Dramatic question.

Source: (<https://facebook.com/loayotal>, November 2017)

2.1.7.2 International Digital Stories.



- **The Big Dig** by WaterAid

An integrated campaign which brought fundraising, communications and country programme teams together to raise over £2.5m for WaterAid’s work in Malawi through digital storytelling. The organization used this method to alert the viewers about the water crisis in Malawi and call for support. The digital story started with a sentence “*This summer be part of something amazing.*” (Figure 12), immediately capturing the viewers’ attention and stimulating emotions.



*Figure 12: Big Dig’s Motto.
Source: WaterAid (2012)*



*Figure 13: Text, images & soundtrack.
Source: WaterAid (2012)*

The goal of this digital story is to raise funds to provide clean water in Malawi. The story is not only delivering the message (Figure 13) and asks for contributors (Figure 14), but it shows the viewer how his/her individual act could support the organization, grant more support from the UK Government (Figure 15) and change lives of those in need.



*Figure 14: Calling audiences’ support
Source: WaterAid (2012)*



*Figure 15: Text animation
Source: WaterAid (2012)*



- **What Will They Say About You?** by Nike Women

An Arabic digital story created by Nike that showcases how women in sports are viewed by the Arabian communities. It delivers the story in question-answer narration format, starting with “what will they say about you?” (Figure 16).



Figure 16: Starting question.

Source: (<https://www.youtube.com/watch?v=F-UO9vMS7AI>, November 2017)

The digital story scored more than 267 thousand views on Youtube. It ends with a 3 word sentence (Figure 17), “believe in more” assuring women that there is no shame in pursuing a career in sports or practicing any, this digital story’s goal is to empower Arabian women.



Figure 17: Ending sentence.

Source: (<https://www.youtube.com/watch?v=F-UO9vMS7AI>, November 2017)



designer. Eric tells his story on stepping into life's deep end –the ocean. Volvo introduces its new V90 car (Figure 18) creating a digital story to connect and gain an audience through Eric’s story and adventure.



Figure 18: Introducing the new Volvo V90.

Source: (<https://www.youtube.com/watch?v=Y2dbRKgOTJk>, November 2017)



- **The Labels We Put On Refugee & Migrant Children Matter** by UNICEF

One of many digital stories created under the movement #ChildrenUprooted where UNICEF is sharing stories of children (Figure 19) stating: “Whether a migrant, refugee or internally displaced, a child is a child (Figure 20). And its every child’s right to get education.

Children who are uprooted from their homes lose much more than the roof over their heads. Many lose family members, friends, safety and routines. Without an education, they risk losing their futures.”



Figure 19: Children's narration.

Source: (<https://youtu.be/86haaJ9MA3o>,
November 2017)

Figure 20: Campaign's motto.

Source: (<https://youtu.be/86haaJ9MA3o>,
November 2017)

2.1.8 Digital Storytelling in Education

Digital storytelling encourages students to become the creators of content, rather than only being receivers. Combining together images, music, text, and voice, digital stories can be created in all content areas and at all levels while incorporating the 21st century skills of creating, communicating, and collaborating.

Movies, created over a century ago, represent the beginning of digital storytelling. Consuming movies have grown to be a cultural phenomenon, but making them was not possible to the average person many years. Video cameras, 8mm and even film cameras served as massive breakthroughs, however editing the content was still a challenge until technology progressed with software, websites, and apps breaking out on the scene and putting advanced editing skills into the palms of everyone. Taking into consideration, look at the meteoric rise of YouTube and other video sharing websites. At no other time in history was it able to create, edit and share video on both a personal and global scale. In fact, video and images have turn out to be the main ways of communicating, taking the place of traditional print literacies in some regions.

Samantha Morra (2014), a Google certified teacher, has designed this visual on the process of digital storytelling in education (Figure 21).

This process comprises eight steps:



Figure 21: Digital Storytelling Process
Source: (Morra, 2014)

1. Start with an Idea

All stories begin with an idea, and digital stories aren't any different. This idea could be anything from the topic of a lesson, a title in a textbook, or even a question asked in class. Digital stories can be fiction or non-fiction. As soon as the student has an idea, he or she should make it concrete: write a draft, craft a paragraph, draw a mind-map, or use any other pre-writing tool.

2. Research/Explore/Learn

Whether writing a fiction or nonfiction digital story, students should research, explore and learn more about the topic they have chosen in order to create a base of information on which the story will be constructed. During this process, students learn both about validating information and information bias as they search deeper into a topic.

At this stage, organization is very important. Students should organize their information digitally, whether using apps or writing notes.

If done correctly, it makes the next steps much easier.

3. Write/Script

If students wrote a draft, with a bit of editing, it can become the introduction. If students research and explore the topic well, the body of the script can easily fall into place like a jigsaw puzzle. The pieces already exist, students just need to work and make them fit.

This is also the time in which literary decisions come into play. Students need to decide whether or not they'll use first, second or third person, and to challenge themselves into expanding word choices.

4. Storyboard/Plan

Good stories always start with a good script, but they do not end there. George Lucas (2004) once said, "If people are not taught the language of sound and pictures, shouldn't they be considered as illiterate as though they left college without being able to read or write?" Storyboarding is the first step towards understanding sound and images. It's the plan or blueprint that can guide decision making about images, video and sound. Simple storyboards will simply have a place for images/video and the script. More advanced ones may even include places for transitions, and background music.

5. Gather and Create Images, Audio and Video

These are the "elements" that makes the magic happen and writing come to life. Using the storyboard as a guide, students have to collect – or create – images, audio and video. Everything they have chosen will make an impact and set the tone for their digital story. Introducing concepts such as visual hierarchy, tone, and illustration. This is also a good time to talk about Copyright, Fair Use, and Creative Commons. Students should use this time to record themselves reading their scripts. Sometimes, students rewrite their scripts

as they record. Through this step in the process, they become aware of the mistakes and poor choice of words.

6. Put It All Together

This is where the actual magic happens – where students find out if their storyboard needs improving and if they have enough “elements” to create their digital story. Students should revisit and revise their storyboard several times during this step. They tend to find ways to push the technology and tools beyond expectations – blending images, creating unique transitions between video clips, incorporating music or sound effects.

7. Share

Sharing online has become deeply implanted in today’s culture. With internet and social media platforms, gaining a wider audience has never been this easy. Knowing that other people might view their work often encourages the student to create their story the best possible way that they can.

8. Reflection and Feedback

In education, educators do not value spending time in reflection and gathering feedback. Students need to be taught how to reflect on their own work and give feedback to others that is both constructive and valuable. Blogs, wikis discussion boards, and student response systems or polling tools at this stage can be used to help the students.

2.2 Previous Studies

2.1.1. Michelle Iva Hlubinka, Digital Storytelling as a Tool for Reflective Practice, 2003. (Published Master’s Thesis)

Learners in the constructionist learning field tend to stop too early in their design process. They imagine what is achievable and then shape their vision, but they don't demonstrate on the outcome—that is, they don't take a step back from their work to get a true understanding of how and why they are doing what they do. In this thesis, the Author describes and discusses her workshop which she developed to foster the practice of reflection among young people engaged in a constructionist learning environment. She describes the set of tools, activities, and contexts used, and examines the successes and challenges the workshop presented. Through analysis of the resulting stories, individual interviews, and transcripts of workshop discussions, she proposed strategies for spreading the use of digital storytelling for reflective practice to other constructionist environments, especially among adolescents. The Author concluded suggestions for new software tools, activities, and contexts for creating, editing, and sharing digital video stories. These support the development of a culture of reflection among constructionist learners by promoting the creation of short digital video pieces produced by and for these youth.

2.1.2. Glynda A. Hull and Mira-Lisa Katz, *Crafting an Agentic Self: Case Studies of Digital Storytelling*, 2006. (Journal Article)

This comparative case study presents portraits of two authors in the picture--one is a child and the other is a young adult--who used numerous media and tools to express important moments in their lives and reflect on life trajectories. The abstract framework merges recent studies on narrative, identity, and performance, with an eye towards further developing agency. These cases reveal how digital storytelling, in combination with supportive social relationships and opportunities

for engagement in a community-based organization, presents powerful means and motivation for forming and giving voice to agentive selves.

2.1.3. Penny A. Garcia and Marsha Rossiter, Digital Storytelling as Narrative Pedagogy, 2010. (Proceeding)

The authors set the background, current application, and power of digital storytelling as a tool used in education. The authors explore methodological implications, process issues and fitting learning outcomes for digital storytelling when added to a narrative pedagogical framework. Their primary hypothesis is that an understanding and consideration of the narrative orientation to teaching and learning will allow educators to make more effective and reliant use of digital storytelling.

2.1.4. Pelin Yuksel, Bernard R. Robin Sara McNeil, Educational Uses of Digital Storytelling Around the World, 2011. (Proceeding)

This research study's purpose is to demonstrate how educators, students and others around the globe are using digital storytelling to support the teaching procedure. A general framework was provided in this study showing the educational uses of digital storytelling in many countries and it describes the contrasted views of people in different cultures about this technology.

Feedback from a group of educators, students and others in educational settings were collected through an online survey to demonstrate how they are using digital storytelling for educational objectives. The results show the present situation of

educational uses of digital storytelling around the globe and look into some of the advantages and drawbacks educators face in showcasing digital storytelling in their work. Nevertheless, the paper stated the basis for using digital storytelling with students, most of the candidates agreed that digital storytelling can be used with students to allow them to create their own understanding or experience in a content area, make collaborative activities in which students work together in a small group easier, encourage in-class discussion, help them learn problem solving and critical thinking skills, understand complicated ideas and showcase them to new content. The responses from the United States included the observation that students using digital storytelling can: “at times, come to grips with past experiences they might not have shared,” “speak in public; the more macho the less they want to speak in public!” and “share knowledge and ideas from a personal perspective and understanding.” A response from the United Kingdom indicated that digital storytelling “Injects fun into the lesson where the student's voice is audible and peer support is palpable.” The responses from Canada suppose that digital storytelling has a place in “Counseling / Therapy,” where it allows students to “engage more deeply with subjects or in my case, clients in community” and gives students “primarily permission to express themselves and remove barriers between people.” One response from Australia stated that “especially if used as an e-portfolio - relating 'a story of learning.’” Finally, a participant from Austria described using digital storytelling to “document learning processes.”

2.1.5. Chun-Ming Hung, Gwo-Jen Hwang and Iwen Huang, A Project-based Digital Storytelling Approach for Improving Students' Learning Motivation, Problem-Solving Competence and Learning Achievement, 2012. (Proceeding)

Despite project-based learning being a popular and globally used educational strategy, it remains a daring issue to effectively apply this approach to practical situations for improving the learning fulfillment of students. A project-based digital storytelling approach is proposed to deal with this problem in this study. With a quasi-experiment, the indicated approach has been applied to a learning task of a science course in an elementary school. A total of 117 Grade 5 students in an elementary school in southern Taiwan were tasked to an experimental group (N = 60) and a control group (N = 57) to compare the execution of the approach with that of typical project-based learning. A web-based information-searching system, Meta-Analyzer, was used to allow the students to gather data on the Internet based on the questions presented by the teachers, and Microsoft's Photo Story was used to assist the experimental group develop movies for storytelling based on the data that was collected. Moreover, many measuring tools, including the science learning motivation scale, the problem-solving capability scale and the science achievement test, were used to receive results as well as help the learning performance of the students. The experimental results show that the project-based learning with digital storytelling could practically enhance the students' science learning motivation, problem-solving capability, and learning achievement.

2.1.6. Nicholas Vanderschantz, Using Digital Storytelling as a Methodology for the Introduction of Socially Responsible Graphic Design in a University Bachelor of Computer Graphic Design Programme, 2015. (Conference Proceedings)

This paper case studies the pedagogical technique for a digital storytelling project including final semester Bachelor of Computer Graphic Design students and students from a community based charitable arts trust. A young artist is paired with a senior tertiary graphic design student to create digital stories that aim to remain within the spirit of the original goals of the Digital Storytelling Movement. The project intends to introduce socially responsible graphic design to tertiary computer graphic design students and foundation arts students. The outcomes of this project lead to a discussion indicating that the result of personal developments that are shown by the students are seen in their written accounts in project completion surveys in a detailed manner. Social graphics and socially responsible graphic design have been appreciated by graphic designers, knowing that it could play a part in their futures as professional graphic designers. The students have learnt how important their individual skill sets are in visualizing narratives for reasons other than advertising, selling, promoting or branding. Graphic design students have started to realize how non-designers can appreciate their skill sets and can benefit from the shared inspection of these skills in a project that benefits multiple stakeholders. The most valuable thing, is that the graphic design students have been introduced to ways to use their skills in a socially minded manner with the formal aspects of their future careers.

2.1.7. Maha Fasi, Digital Storytelling in Education, 2015. (Masters' Thesis)

Digital storytelling has become an impactful source or a tool for both students and educators. It is a brilliant way to involve students in learning and creating. Many studies have been conducted on the effective usage of digital storytelling in education. This paper presents an overview of digital storytelling, seven elements of digital storytelling, types of digital stories, how supportive it can be in instruction and how students improve multiple literacy skills, tools that can support digital storytelling, other important methods that students and educators need to know before implementing digital storytelling and the practicality of digital storytelling for both students and educators. This paper also covers some major research that has been conducted by researchers and postmodernism approach to digital storytelling.

2.3 Conclusion

From the previous studies mentioned above, the points that have been taken into consideration is that the digital storytelling process allows students to make form of their ideas and create meaningful, visual and emotional stories. Also, students' creativity starts to enhance gradually as they practice designing information and communicating understandings from images, graphics, movement, and music of digital media. The experiments that have been conducted in the previous studies all result into similar conclusions, stating that digital storytelling favors teamwork and collaboration, and through working as a group, students develop their technical skills as well as social and communication skills. Digital storytelling grants a unique opportunity to combine

different types of media together until they coalesce into something that didn't exist previously. Creating digital stories helps students to practice and master numerous 21st-century skills.

In an article titled "*Enhancing Student Engagement with Their Studies: A Digital Storytelling Approach*" written by Eunice Ivala, Daniela Gachago, Janet Condy and Agnes Chigona (2013), the results showed that the production of digital stories improved student engagement with their studies which led to high levels of reflection on the subject matter, which as a result brought a deep understanding of the subject matter. Conclusions of this study contributes knowledge in the field which may be valuable in improving student engagement with their studies.

Overall, digital storytelling is an important practice for students as it improves technical skills and communication skills, teamwork and collaboration, oral speaking, creativity, visual and sound literacy, and project management skills. It also helps develop a range of digital communication styles necessary to function in a knowledge society (Porter, 2017).

Chapter Three

Thesis Methodology and Structure

Table of Contents

3.1	Thesis Methodology
3.2	Thesis Population
3.3	Study Sample
3.4	Thesis Methods
3.5	Method Credibility
3.6	Method Stability
3.7	Study Variables

3.1 Thesis Methodology

This study is referring to the descriptive analytical method on the literature review and the empirical method on the project-based experiment.

It contains a local study of the graphic design major at Middle East University in Jordan to specify the core of the problem in graphic design education, and to measure the value of digital storytelling, seven interviews are conducted with successful individuals, as a focus group, in digital storytelling practice to discuss about their experience, opportunities and obstacles in their field to check the thesis findings.

3.2 Thesis Population

The study is a local study based in Amman city in Jordan, targeting Graphic Design students at Middle East University, and a few successful digital storytelling practitioners as a focus group.

3.3 Study Sample

The study targets graphic design students of Middle East University to implement a complete digital storytelling course based on a project-based experiment, and prove its importance in the curriculum. The group samples are chosen from fourth year graphic design students, then they are divided into two groups; group (A) and group (B). Group (A) are the students who choose the digital storytelling as a design approach, and group (B) are the students who use the common way of design; who do not participate in the digital storytelling approach.

3.4 Study Method

A digital storytelling introduction course is taught to fourth year graphic design students according to a designed 3-week plan (appendix 1). After understanding the elements, types and process of digital storytelling, the students are asked to create a digital story. A protocol analysis is held to examine the response and engagement of the students. A survey is created by the Author and then given out to graphic design tutors to analyze the students' output on how affective are digital stories; group (A) compared to the graphic poster output; group (B). A paired t-test is used to compare the result means from the survey where observations in one sample can be paired with observations in the other sample. Interviews are arranged with successful digital storytelling practitioners in Jordan to check the effectiveness of such approach, and to validate its importance for graphic design students.

3.5 Method Credibility

A digital storytelling course outline is created to learn all important information regarding digital storytelling steps, elements and practice correctly.

3.6 Method Stability

The projects are reviewed by trusted professors in the Faculty of Architecture and Design and the data collected is then handed to a statistical analyst for final results referring to Likert's scale. A copy of the survey is attached (appendix 3).

3.7 Study Variables

This thesis consists of the following variables:

Independent Variables University, Module, Students, Programs and Software

Absolute Variables Graphic Design, Digital Storytelling

Chapter Four

Thesis Results

Table of Contents

4.1	Introduction
4.2	Statistical Analysis

4.1 Introduction

Each factor in the survey is answered and measured according to the Five-point *Likert's scale* with point (5) labelled Strongly Agree, (4) labelled Agree, (3) labelled Neutral, (2) labelled Disagree and finally (1) being the lowest labelled Strongly Disagree. The results will be measured and ranked as (high, medium, low) according to the following criteria:

The number of points = $(5-1) / 3 = 1.33$

The “low” rank is given if it is less than 2.33.

The “medium” rank is given at 2.34 – 3.66.

The “high” rank is given at 3.67 – 5.

4.2 Statistical Analysis

To answer the thesis questions, the factors in the survey were divided into 3 main topics being, Project-Based experiment, Digital storytelling values and limitations.

Now to measure the experiment, the survey contained a section for Group (A) –The Digital storytelling approach and Group (B) –The graphic poster approach.

1- How effective is the digital storytelling approach compared to the common graphic approach?

To answer this question, means and standard deviations were calculated for the digital storytelling approach and the common graphic approach, and the results are included in the following tables:

Table (2)

Means and standard deviations for the digital storytelling approach (factors 1-5).

Project-Based Experiment- Group (A) Digital Storytelling approach				
#	Factor	Mean	Standard deviation	Rank
1	The student's output is creative.	3.73	0.704	High
2	The student's output message is understood.	4.53	0.516	High
3	The student's output is strongly communicated.	4.73	0.458	High
4	The student's output can move the audiences' emotions.	4.60	0.507	High
5	The student's output is professional and can be published.	4.33	0.617	High
	Total Score	4.39	0.245	High

Table (2) reveals the mean ranging between (3.73–4.73) making its rank high, where the total score is (4.39). The factor number (3), "The student's output is strongly communicated." Came first with an average mean of (4.73), ranked high and the factor number (1) "The student's output is creative." with an average of (3.73) came last, ranked high as well .

Table (3)

Means and standard deviations for the graphic poster approach (factors 6-10).

Project-Based Experiment- Group (B) Digital Storytelling approach				
#	Factor	Mean	Standard deviation	Rank
6	The student's output is creative.	3.27	0.594	Medium
7	The student's output message is understood.	3.00	0.655	Medium
8	The student's output is strongly communicated.	2.53	0.640	Medium
9	The student's output can move the audiences' emotions.	2.67	0.488	Medium
10	The student's output is professional and can be published.	2.53	0.834	Medium
	Total Score	2.80	0.338	Medium

Table (3) reveals the mean ranging between (2.53–3.27) making its rank medium for the graphic poster approach, scoring a total of (2.80). The factor number (8) "The student's output is strongly communicated" scored the highest average of (3.27) ranked medium, while the factor (10) "The student's output is professional and can be published." scores the least with an average of (2.53) ranked medium.

Table (4)

Paired t-Test on the means and standard deviations for the digital storytelling approach compared to the graphic poster approach

Section	Approach	Number	Mean	Standard deviation	t-value	Sig
Project-Based Experiment	Digital Storytelling	15	4.39	.245	17.151	.000
	Graphic Poster	15	2.80	.338		

Table (4) shows the (t) value for the "Project-Based Experiment" section is (17.151) which is a statistically significant value at significance level ($\alpha = 0.05$), which means there is a significant amount of statistical differences between the digital storytelling approach and the graphic poster approach. The difference came in favor of the digital storytelling approach –Group (A), which means that the digital storytelling approach output was better than the output of the graphic poster approach on the Project-Based Experiment.

2- What are the challenges that graphic design students face when practicing digital storytelling? And, how can it be used to enhance creative thinking, concept developing and problem solving for graphic design students?

To answer this question, the survey covered the limitations of digital storytelling practice as following:

Table (5)

Means and standard deviations calculated for the challenges that graphic design students face when practicing digital storytelling (factors 11-15)

Digital Storytelling Practice- Limitations				
#	Factor	Mean	Standard deviation	Rank
11	Graphic design students are familiar with the term "Digital Storytelling".	2.93	0.594	Medium
12	Graphic design students have access to the tools when needed.	2.07	0.704	Low
13	Graphic design students have enough knowledge about digital storytelling.	2.40	0.632	Medium
14	Computer labs carry updated software.	2.53	0.640	Medium
15	Graphic design students have many resources of digital storytelling.	2.93	0.594	Medium
	Total Score	2.36	0.314	Medium

Table (5) shows that the mean ranges between (2.07–2.93), rankings vary from low to medium for the challenges that graphic design students face when practicing digital storytelling (Limitations), scoring an average total of (2.36). The factor number (11) "Graphic design students are familiar with the term "Digital Storytelling"" and number (15) "Graphic design students have many resources of digital storytelling" scoring the highest with an average mean of (2.93) falling in the medium rank, whereas factor number (12) "Graphic design students have access to the tools when needed." scoring an average of (2.07), falling under the low rank.

3- What are the values of Digital storytelling? And, can it be an independent course for graphic design students in the future?

To answer this question, the survey covered the values of digital storytelling practice as following:

Table (6)

Means and standard deviations calculated for the values of digital storytelling practice.

(factors 16-20)

Digital Storytelling Practice- Value				
#	Factor	Mean	Standard deviation	Rank
16	Digital storytelling can enhance creative thinking.	4.47	0.516	High
17	Digital storytelling can improve concept developing skills.	3.93	0.799	High
18	Digital storytelling encourages teamwork and collaboration.	4.53	0.640	High
19	Digital storytelling can change passive viewers into an engaged, more interacting audience.	4.40	0.507	High
20	Digital storytelling should be an independent course in the graphic design major.	3.87	1.060	High
	Total Score	4.24	0.304	High

Table (6) shows that the means ranging between (3.87–4.53) scoring a high rank. The value of digital storytelling practice score an average total (4.24), where the factor number (18) "Digital storytelling encourages teamwork and collaboration" scores the highest (4.53), with a high rank, whereas factor number (20) "Digital storytelling should be an independent course in the graphic design major" scores an average of (3.87), with a high rank as well.

Chapter Five

Conclusions & Recommendations

Table of Contents

5.1	Conclusions
5.1.1	First Question Conclusion
5.1.2	Second Question Conclusion
5.1.3	Third Question Conclusion
5.2	Recommendations

5.1 Conclusion

A digital storytelling course outline (see page 64) is developed by the author referenced from Griffith University's digital storytelling course (appendix 4) to apply digital storytelling practice in graphic design majors in Jordanian universities.

Based on the survey results, the following conclusions are discussed further with accurate statistics to answer the thesis questions:

5.1.1 First Question Conclusion

As stated in Table (2) the average total score for the digital storytelling approach –Group (A) is (4.39) and in Table (3) the total average score for the graphic poster approach –Group (B) is (2.80) which makes the digital storytelling approach better than the graphic poster approach. The following table will compare the means of both approaches to measure the differences and showcase the factors statistics of each approach.

Table (7)

Project-Based Experiment: Digital storytelling approach (Table 2) compared to Graphic Poster approach (Table 3).

Factors	Table (2) Mean	Table (3) Mean
The student's output is creative.	3.73	3.27
The student's output message is understood.	4.53	3.00
The student's output is strongly communicated.	4.73	2.53
The student's output can move the audiences' emotions.	4.60	2.67
The student's output is professional and can be published.	4.33	2.53
Total Score	4.39	2.80

The results of Table (2) in comparison to Table (3) are significantly different where the factor “The student’s output is creative” is the least different with a value of 0.46 while the factor “The student output is strongly communicated” scored the highest difference with a value of 2.2 stating that the digital storytelling approach is more effective in communicating with an audience as it scored the highest average followed by “The student’s output can move the audiences’ emotions” with the second highest average.

Therefore, based on the results, digital storytelling is a better approach as it is strongly communicated, understood, can move the audience’s emotions, creative and does not require a lot of revisions.

Samples of Group (A) – Digital Storytelling Approach



Figure 22: Group (A) output
Source: (The Author, 2017)

Samples of Group (B) – Graphic Poster Approach

Figure 23: Group (B) output

Source: (The Author, 2017)

5.1.2 Second Question Conclusion

From the results of Table (4), it is clear that not all graphic design students are familiar with the term “Digital storytelling” as it scored an average of (2.93) which makes it almost neutral. One of the most common challenges graphic design students face is not having access to the tools when needed as it scored (2.07), therefore the university needs to provide spaces and tools and work on make them accessible easily. It is clear that there are challenges regarding updated software in computer labs, not receiving enough knowledge about digital storytelling and not having many resources and practice.

5.1.3 Third Question Conclusion

This question studies the importance of digital storytelling practice and referring to Table (6), the most important value is “Digital storytelling encourages teamwork and collaboration” followed by “Digital storytelling can enhance creative thinking” and “Digital storytelling can change passive viewers into an engaged, more interacting audience” supporting these results, Bran (2010) explains the benefits of digital storytelling as it allows students to explore and share their experiences and discoveries, hence focusing on the students’ personal voice; it can provide learners with a personal way to display their knowledge, skills and creativity; the writing process can take students through an engaging way; it provokes an increased interest in both creator and audience”.

As for digital storytelling being an independent course in the graphic design major, the average score was (3.87), falling under the high rank, proves that

this course is highly valued, and is important and beneficial for graphic design students.

5.2 Recommendations

- 5.2.1.** The survey results proved that digital storytelling output is more effective than the graphic poster output, it is recommended to introduce this practice in the graphic design majors in Jordanian Universities.
- 5.2.2.** To develop and to implement digital storytelling as a full subject in graphic design majors to increase student creative thinking, problem-solving, teamwork and concept developing skills. A complete digital storytelling course is developed by the author (see page 65) based on an Australian university's course syllables (see appendix 4) "Griffin University".
- 5.2.3.** Due to lack of tools access, updated software, it is advised that universities should keep their computer laboratories always available for students who are willing to practice digital storytelling, provide updated software and other creative spaces, tools or equipment needed.
- 5.2.4.** Educators should motivate students to produce more digital stories and provide them with various resources.
- 5.2.5.** Through digital storytelling practice students should develop communication skills, learn to ask questions, express opinions, construct narratives and write for an audience to improve their creative and technical skills, they need to be taught how to use software that combines a variety of multimedia: text, images, audio, video and animation.

5.3 Digital Storytelling Course Outline

The course outline is designed based on the literature review, previous studies and project-based experiment. The Author referred to the Australian “Griffith University” digital storytelling course plan as a foundation to design the course.

The following table is a complete course of digital storytelling to be implemented in graphic design majors in Jordanian universities:

Digital Storytelling Course

Developed by Mada Al-Rawahi

Table (8)

Digital Storytelling Course Outline

Week	Lecture	Description
1	Introduction to Digital Storytelling	Students learn about digital storytelling definition, history and types. Task: Download digital stories to review.
2	Digital Storytelling Elements and Process	Students learn the 7 elements of digital storytelling and review samples of digital stories. Students learn the process of creating a digital story and the variations of software that is used to gather all media on one file. Choosing “Premiere Pro” by Adobe for upcoming project. Task: Choose a digital story and state its elements
3	Digital Story Project 1 (Mid-Semester Project)	Every 4 students form a group and brainstorm an idea for the digital story. Task: Create a storyboard to present the idea.

4	Project 1 Practical Work Lab or Studio	Filming videos, recording audio, gathering images, finding media for the digital story. Start creating the timeline of the story in Adobe Premiere Pro
5	Project 1 Practical Work Lab	Video composing and editing sessions, creating drafts, working on final production.
6	Project 1 Submission and Presentation Project 2 Introduction	Students submit their final video and present it to the rest of the class. Reflecting and feedback. Then students work in pairs to work on new project and develop an idea and storyboard for the project
7	Project 2 (Final Project) Lab or Studio	Students present their storyboards to tutor. Start filming videos, recording audio, gathering images, finding media for the digital story.
8	Project 2 Practical Work Lab or Studio	Start creating the timeline of the story in Adobe Premiere Pro and producing a draft to review with tutor.
9	Project 2 Submission and Presentation	Presenting the final digital story to a Jury. Submitting the file to the tutor for final grades.

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Appendix (1)

Project-Based Experiment and Course Plan

Project-Based Experiment on Digital Storytelling Practice
First Semester 2017/2018
By: Mada Al-Rawahi

Topic: Plastic usage & recycling in Middle East University

Description: The class will be divided into 2 groups. Group (A) and Group (B).

Group (A) – Will be introduced to a new approach: Digital Storytelling. Students are expected to produce the project in a digital story format. According to the plan, the students will learn, research, then finally create the project.

Group (B) – Will continue working on the common approach. The students are expected to produce the project in graphic poster format.

Group (A)

Duration	Plan
Lecture 1 15/Nov (Wed)	Introduction to Digital Storytelling (Presentation) Review samples & project discussion
Lecture 2 20/Nov (Mon)	Brainstorming session. Researching and script writing. Brief storyboard sketching.
Lecture 3 22/Nov (Wed)	Start gathering media for the story (text, soundtracks, images) Begin composing the digital story.
Lecture 4 27/Nov (Mon)	Filming any desired videos, and recording the voiceover for the digital story.
Lecture 5 29/Nov (Wed)	Finalizing the digital story. Produce a draft copy for feedback.
Lecture 6 4/Dec (Mon)	Final cut and production. Submission day.

Appendix (2)

Survey Evaluation Letter

MEU جامعة الشرق الأوسط
MIDDLE EAST UNIVERSITY
Faculty of Architecture & Design
Graphic Design Sector

Survey Evaluation

Name..... Major.....
Position..... Faculty.....

As part of my thesis case study entitled: **"The Practice of Digital Storytelling in Graphic Design Education in Jordan: The Case Study of Middle East University"** supervised by Dr. Wael Al-Azhari, I am conducting a survey that measures the output of graphic design students from Group (A) and Group (B) and the importance of digital storytelling practice in graphic design education in Middle East University. I ask you to evaluate these factors, to establish its validity for it to be used for accurate data collection. I would appreciate it if you give your honest answer, using (x) for the option selected under each key-title and note down any suggestions.

No.	Factors	Grammar Check		Relevance to Thesis		Clarity of Sentences		Notes
		Good	Not Good	Yes	No	Good	Not Good	
Project-Based Experiment								
*	Group (A) – Digital Storytelling Project							
1	The student's output is creative.							
2	The student's output message is understood.							
3	The student's output is strongly communicated.							
4	The student's output can move the audiences' emotions.							
5	The student's output is professional and can be published.							
*	Group (B) – Graphic Poster Project							
6	The student's output is creative.							
7	The student's output message is understood.							

8	The student's output is strongly communicated.								
9	The student's output can move the audiences' emotions.								
10	The student's output is professional and can be published.								
Digital Storytelling Practice									
*	Value								
11	Digital storytelling can enhance creative thinking.								
12	Digital storytelling can improve concept developing skills.								
13	Digital storytelling encourages teamwork and collaboration.								
14	Digital storytelling can change passive viewers into an engaged, more interacting audience.								
15	Digital storytelling should be an independent course in graphic design education.								
*	Limitations								
16	Graphic design students are familiar with the term "Digital Storytelling".								
17	Graphic design students have access to the tools when needed.								
18	Graphic design students have enough knowledge about digital storytelling.								
19	Computer labs carry updated software.								
20	Graphic design students have many resources of digital storytelling.								

Appendix (3)

Survey



Name..... Major.....

Position..... Faculty.....

As part of my thesis case study entitled: “**The Practice of Digital Storytelling in Graphic Design Education in Jordan: The Case Study of Middle East University**” supervised by Dr. Wael Al-Azhari, I am conducting a survey that evaluates the output of graphic design students from Group (A) and Group (B) and the importance of digital storytelling practice in graphic design education in Middle East University. I will appreciate if you could complete the following survey referring to *Likert's Scale* to fill your answers, as following:

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	(4)	(3)	(2)	(1)

No.	Factors	(1)	(2)	(3)	(4)	(5)
Project-Based Experiment						
❖ Group (A) –Digital Storytelling Sample						
1	The student's output is creative.					
2	The student's output message is understood.					
3	The student's output is strongly communicated.					
4	The student's output can move the audiences' emotions.					
5	The student's output is professional and can be published.					
❖ Group (B) –Graphic Poster Sample						
6	The student's output is creative.					
7	The student's output message is understood.					
8	The student's output is strongly communicated.					
9	The student's output can move the audiences' emotions.					
10	The student's output is professional and can be published.					

No.	Factors	(1)	(2)	(3)	(4)	(5)
Digital Storytelling Practice						
❖ Value						
11	Digital storytelling can enhance creative thinking.					
12	Digital storytelling can improve concept developing skills.					
13	Digital storytelling encourages teamwork and collaboration.					
14	Digital storytelling can change passive viewers into an engaged, more interacting audience.					
15	Digital storytelling should be an independent course in graphic design education.					
❖ Limitations						
16	Graphic design students are familiar with the term “Digital Storytelling”.					
17	Graphic design students have access to the tools when needed.					
18	Graphic design students have enough knowledge about digital storytelling.					
19	Computer labs carry updated software.					
20	Graphic design students have many resources of digital storytelling.					

Appendix (4)

Griffith University-Digital Storytelling Course

- **Course Aims**

This course aims to provide a foundation in the basic creative and technical terminology and workflows involved in the production of moving and still image composites. This includes the development of key competencies in creative development, image acquisition and layered post production, as well as the capacity for informed evaluation of creative endeavours.

- **Learning Outcomes**

After successfully completing this course you should be able to:

1. Knowledge

- 1.1 Describe key technical terms, specifications and concepts of media acquisition, manipulation and delivery;
- 1.2 Identify the major processes, practices and workflows involved in professional audiovisual production;

2. Skills

- 2.1 Employ basic skills in shooting, editing and manipulating still and moving images using industry leading software and tools;
- 2.2 Plan a safe and efficient pathway for the production of a still or moving image composite;

3. Application

- 3.1 Develop and deliver a creative pitch and articulate its merits;
- 3.2 Negotiate and deliver creative outcomes in a collaborative team environment;
- 3.3 Appraise the merits of still and moving image composites with respect to their technical and aesthetic qualities;

- **Graduate Attributes**

Griffith University prepares influential graduates to be:

- Knowledgeable and skilled, with critical judgement
- Effective communicators and collaborators
- Innovative, creative and entrepreneurial

- Socially responsible and engaged in their communities
- Culturally capable when working with First Australians
- Effective in culturally diverse and international environments

Lecture	Tutorial
STILL IMAGE [Block 1] - Week 1: Story Worlds Learning Outcomes: 1.1, 1.2	Photoshop Introduction: Layout & Tools (Santorini Sunset Exercise) Learning Outcomes: 1.1, 1.2, 2.1
Week 2: Story Structure Learning Outcomes: 1.1, 1.2	Ps: Compositing: Layers & Masks (Monkey's Lunchbox Exercise) Learning Outcomes: 1.1, 1.2, 2.1
Week 3: Character Arcs Learning Outcomes: 1.1, 1.2	Ps: Compositing: Smart Objects (Dragon's Bane Movie Poster Exercise) Learning Outcomes: 1.1, 1.2, 2.1, 3.1
Week 4: Pitching Learning Outcomes: 1.1, 1.2	Ps: Colour Correction & Retouching: Colour Correction Exercises Learning Outcomes: 1.1, 1.2, 2.1, 3.1
Week 5: Pitch Critique Learning Outcomes: 1.1, 1.2	A1: Pitches: Assignment 1 Submission: In Class Pitching Learning Outcomes: 1.2, 3.1, 3.3
MOVING IMAGE [Block 2] - Week 6: Storyboarding Learning Outcomes: 1.1, 1.2	Ae: Keying & Rotoscoping: (Animated Poster Exercise) Production Meetings: Proposals Learning Outcomes: 1.1, 1.2, 2.1, 3.2
Week 7: Previsualisation Learning Outcomes: 1.1, 1.2	Ae: Motion Tracking: (London Premiere Exercise) Production Meetings: Risk Assessment Learning Outcomes: 1.1, 1.2, 2.1, 2.2, 3.2

Lecture	Tutorial
<p>Week 8: Editing (Screen Grammar) Learning Outcomes: 1.1, 1.2</p>	<p>Pr: Previs Production: Shoot & Edit Previs Production Meeting: Previs Learning Outcomes: 1.1, 1.2, 2.1, 2.2, 3.2</p>
<p>Week 9 [No Lecture]: Shoot Learning Outcomes: 1.1, 1.2</p>	<p>Shoot: No Classes due to Labour Day Public Holiday Learning Outcomes: 1.1, 1.2, 2.1, 2.2, 3.2</p>
<p>Week 10: Sound Design Learning Outcomes: 1.1, 1.2</p>	<p>Pr: Sound Design & Rushes Feedback: (Sound Design Exercise) Production Meeting: Rushes Review Learning Outcomes: 1.1, 1.2, 2.1, 2.2, 3.2</p>
<p>Week 11: Titles Learning Outcomes: 1.1, 1.2</p>	<p>Ae: Title Design & Rough Cut Feedback: Groups submit Rough Cut at start of class and work towards Fine Cuts Production Meeting: Rough Cut Learning Outcomes: 1.1, 1.2, 2.1, 2.2, 3.2, 3.3</p>
<p>Week 12: Non-Linear Narratives Learning Outcomes: 1.1, 1.2</p>	<p>VR Exploratory Session & Fine Cut Feedback: Please note: Feedback on Assignments will be given verbally in this Workshop and the next rather than in written form after submission Production Meeting: Fine Cut Learning Outcomes: 1.2, 2.2, 3.1, 3.2, 3.3</p>
<p>Week 13: - Screening Learning Outcomes: 3.3</p>	<p>Exam and Film Assessment Feedback Session: Quiz Please note: Final feedback on Assignments will be given verbally in this Workshop rather than in written form. Learning Outcomes: 1.2, 2.2, 3.3</p>