



# Twine as a Digital Tool in Writing Digital Fiction: A Creative Writing Instruction in Higher Education

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**Abstract.** Digital writing tool has been a support in the field of teaching and learning English as it helps modify students' writing into a better composition. Features in Twine as a digital writing tool build students' creativity, and hence it potentially becomes a part of creative writing instruction for EFL students. The purposes of this study were to determine the progression of students' digital fiction writing, the procedure facilitating the progress, and students' perspectives on the usage of Twine as a digital writing tool. A qualitative case study was designed to address the objectives by doing observation, documentation, and interview. The participants were 3 EFL students who took a Creative Writing course in a state university in South Sumatra, Indonesia. Data from observation and interview were analyzed using observation sheet and thematic analysis respectively, while data from documentation were assessed using a creative writing rubric. The findings show that the plot of the students' writing and language use developed from the developing stage to above average, and this was facilitated by the phase of integrating Twine into the lesson such as drafting story, branching story, creating images, audio, and video. Peer and lecturer feedback were claimed to support the students' writing progress. Finally, the students realize that Twine is beneficial for writing stories because it fosters motivation, creativity, and critical thinking.

**Keywords:** Creative writing · Digital fiction · Digital writing tool · Twine

## 1 Introduction

The wide use of technological advancements in classrooms nowadays has changed several aspects of learning. Students learn with a different way of thinking which then influences their learning styles, reading habits, and learning experiences. The students, for instance, must be ready to move from one screen to another by using smartphones, iPods, iPads, and computers instead of having a book to note down a learning note. At another time, they are required to access digital resources such as digital video, digital music, digital fiction, and digital news which are easily accessed through the internet. During class, they also need to recognize and use digital tools which could support them in learning. Furthermore, through social media, students explored self-directed learning and a stream of information which should be critically filtered. Finally, online learning

that has been popular since COVID-19 pandemic spread over the world, has replaced the role of face-to-face learning; students from various places study in the same place and at the same time. Indeed, technological advancement shapes new perspective and experiences as Bolter [1] stated the changes in the production, reception and distribution of information have affected the presentation, organization, and acquisition of knowledge and, more generally, the way students perceive the world.

In the field of English language teaching, quality of learning outcomes through the utilization of digital technology should be encouraged. Teachers and students cannot avoid technological advancements and the rapid growth of the times in the world of education [2]. For students, the use of technology will cover the variety of students' needs as Benway [3] stated that students learn through a variety of learning techniques, such as kinesthetics, visual and audio. This also enables educators, in their capacity as facilitators of learning, to teach their students using digital resources and digital tools in every skill demanded in English language teaching.

Creative writing subject as a part of English language teaching at the university level, as technology develops, needs to be directed to the production of digital fiction which can potentially be read by readers. This direction will make creative writers-students be more innovative, problem-solvers, and communicative. The use of digital fiction and or tool provides students' opportunity to imagine and explore ideas that are compatible with their abilities, which motivates them to be creative. It gives them more chance to be imaginative when writing as Akhter [4] said that creative writing is a process that incorporates imaginative elements into the creation of works such as poetry, short stories, and performances. Creative writing could support students to solve problems and to deliver the message or the meaning effectively, and thus it stimulates creativity and motivation. The freedom of expression here can be highlighted too as students could explore self-identity [5] in [6], as a way to "to make meaning of life" [6].

The use of digital tools in the process of creative writing provides varied meaning making sources. Unlike a conventional classroom which facilitates students to create monomodal text or text-only product, a classroom utilizing digital tool might encourage students to choose meaning other than text; they could select image, video, audio, motion-pictures to deliver messages. This really fits with millennial learners who spend a lot of time in the digital world (application, website, tools, social media) in their school life nowadays. Therefore, to meet the demand, the use of digital tool to produce digital fiction (flash fiction or short stories, poetry) as a product of creative writing, is suggested to be created in multimodal text to replace e-books (in pdf, rtf, or doc. Extension) in a monomodal mode which is read from page to page.

In Creative Writing classroom in English Education Study Program of the research setting, Twine was chosen and used to help students write digital fiction. According to Skains [7], digital writing tool like Twine could be integrated in class instruction in higher education and both of them create a learning model and module. His study showed that the integration of Twine gave impact on students' multiliteracies level, and students gave a positive attitude towards it [7]. Furthermore, he stated that the learning model he suggested is not one solution and hence other researchers are able to have different perspectives on the learning model applied in different classrooms [7]. Twine in classroom provides places where students can both read and write [8]. These works can

be used as digital arguments, text remixes, multimodal classroom components, and even publishable or sellable projects. A playful, evolving, multimodal approach to writing and learning through making in cross-genre projects. In the meantime, Diaz [9] claimed that Twine is good to be used for improving ‘learners’ written fluency” and language learning such as vocabulary, language registers and sentence construction. He added that Twine offers interactive fiction with hyperlink fiction which can build students’ creativity, personal voices and basic coding or programming knowledge.

Several scholars also believe that digital tool could be a trial space where students can challenge their creative multimodal ideas, language skills, and digital experience. Petrelli and Wright [10] found out there is much enthusiasm surrounding experimentation and the freedom to write in relation to writing stories online. However, readers seem uneasy about the position of co-creators that writers choose to allocate to them, preferring linear stories to more deconstructed ones. Writers like experimenting and mixing different media and readers like engaging with multimedia stories; this seems to open up an interactive narrative between writers and readers. This study reveals that digital fiction will arise hand in hand with new reading technologies. It can be stated that digital fiction has had a place in students’ life nowadays for the student-readers are accustomed to online reading and the student-writers love to have digital-online assistance in generating digital fiction. To support student-writers, creative writing subject could assist them in enhancing their achievement in writing stories [11, 12].

Departing from [7] and [9], this present study investigated the use of Twine in creative writing class to result in learning model and or instructions that potentially optimize EFL students’-participants’ performance as beginner creative writers. Portraying Twine integration from this present study’s setting offers another deeper understanding of effective procedures of Twine utilization.

Finally, this study is expected to contribute to Creative Writing course in which digital fiction and Twine as a digital writing tool were used to generate new insight in EFL instruction. This course is a new subject in the curriculum of English education study program, so it is hoped that the utilization of Twine becomes a successful start and enhances the quality of the learning process and outcomes. Not only do students create written items (poetry, short stories, and creative non-fiction) with this learning, but lecturers may also get an overview of teaching resources that they can develop in the future to teach creative writing courses. To get the contribution achieved, several research objectives were addressed. They were to identify the students’ creative writing development during the instruction using Twine, to identify learning procedures which accommodate or facilitate the story writing progress, and to identify students’ view on the utilization of Twine in writing digital fiction.

## 1.1 Digital Fiction in Creative Writing Course

Digital fiction is narrative which can be created digitally or born digital. It is machine-generated or typed and read from the computer. Digital fiction is characterized by sound effects, videos, movies, mini-games, and links. It typically invites the readers to engage actively and create their own stories by controlling the travels of the character from the given hyperlinks, photos, or mini-games. It is a fictional story accessible only through a smartphone, tablet or computer.

Digital fiction provides opportunities for students to absorb ideas and express what they perceive in various new ways, namely through visual language, apart from common language, namely spoken and written language. In addition, the number of online accesses has also increased every day. This is supported by an increase in the number of academic institutions that design their online classes, such as literature, language science, creative writing, and so on [13].

In creative writing course, learning through digital fiction is a successful way to encourage students to read and then write more, since they will feel more supported and confident by a new way and in line with their period, particularly for those who think reading or writing is unpleasant. In addition, in the learning process in the classroom, digital fiction is very helpful for learning English. By visualizing and freely expressing their ideas, feelings, and themselves, the digital world gives students the opportunity to get to know the world. They are also constantly challenged to prepare themselves to be the best, face the outside world, and be able to compete in the 21<sup>st</sup> century through various texts or readings supported by digital literacy and digital fiction. Through digital media, such as blogs or other online media, most people could express their thoughts [13]. Today's technology also allows everyone to communicate within the scope of literacy with each other (between readers, researchers, and writers).

## 1.2 Twine as a Digital Writing Tool

Twine which was created by Chris Klimas in 2009 and is now maintained by a whole bunch of people at several different repositories. Twine, which could be accessed in <http://twinery.org>, is a web-based application which is an opensource for telling interactive, nonlinear stories. To build a simple story with Twine, students do not need to write any code, but when they are ready, they can expand stories with variables, conditional logic, images, CSS, and JavaScript. Twine publishes HTML directly, so that students can publish their work almost anywhere. Through Twines, students are able to compose by creating passages added with image, sound and video and links.

## 2 Method

### 2.1 Research Design

This study was conducted by using qualitative case study design. Through case study, an in-depth investigation of a real-world phenomenon in relation to its environmental setting can be made [14]. This method was applied to have 'thick description [15] of the development of students' creative writing yielded during instructions with Twine. In this study, creative writing class was investigated through observation, documentation and interview which were used to explain students' writing progress and activities in teaching and learning process which facilitates the students' writing.

### 2.2 Setting and Participants

This research was conducted in a creative writing class: one of subjects offered in English Education Department in one state university in South Sumatera. The subject was aimed

to guide the students to be able to write creatively, such as short story, novel, poem and creative non-fiction. The time needed for the creative writing learning process was 14 meetings, following a one-semester learning process in creative writing courses. The learning procedure for each meeting was to follow Creative Writing syllabus with slight modifications due to the inclusion of a digital tool named Twine.

The participants of this research were the sixth-semester students who were taking creative writing courses. The number of participants was 19 students consisting of 4 males and 15 females. To get a detailed description of student's writing, 3 students were selected as the participants. These three students have different writing ability (high, mid and low) as it was indicated by their achievement in the creative writing subject. High achiever is the student with writing final score  $\geq 86$ , mid achiever with score between 71 and 85, and low achiever with score between 56 and 70.

### 2.3 Data Collection

Classroom observations were made for approximately 14 weeks to obtain an overview of the steps in writing digital fiction with Twine. The observation technique used was participant-observer. The participant-observers were one lecturer who taught creative writing and 3 students who were involved in the learning process. Observations were made by referring to observation sheet with the following guiding questions: 1) Which structure was observed during the teaching-learning process of creative writing?, 2) What did you appreciate in this session and why? What was, according to you, less good and why? and 3) Which alternatives (structure, content, didactical method, interaction assistant/student) would you consider for this session?

Documentation was done by collecting all forms of student's writings in the creative writing class. The forms were the individual writing draft resulting from joint writing and individual writing at the independent writing stage (including students' writing during drafting and revision). The documented files were the docs version of the story draft, the html version of the story draft, and the plot diagram screen shot in jpg or png.

Through documentation, progress in writing was described from stage to stage using a creative writing evaluation rubric created by [16]. This rubric was the result of their research where professors who were experts in the field of creative writing were asked to validate the content rubric. In addition, this rubric was validated with the Delphi technique to produce a valid creative writing assessment. In this rubric, there are 10 aspects evaluated which include narrative voice, characterization, story, setting, mood and atmosphere, language and writing mechanics, dialogue, plot, and image with 4 levels of performance scoring from 4 to 1: excellent, above average, developing, and need improvement.

Finally, the interview was done to elicit students' perspectives on their digital fiction and creative writing courses. To conduct the interview, an interview guide was constructed using the research questions as a guide. A semi-structured interview was chosen because it enables the interviewer to develop questions as necessary to convey additional facts. Three research participants were interviewed as their creative writing was also chosen for documentation.

To ensure the instrument's validity, two experienced lecturers in the field of writing instruction were asked to verify that the instruments in the form of observation sheets and interviews were relevant to the research problem. The validity check determined that the items on the observation sheet and in the interview was valid.

## 2.4 Data Analysis

A field notebook and an audio-video recording were taken during the class observation. The video and audio result were transcribed so that the entire and detailed picture of the students and teacher action could be seen. The transcription and field notes were then analyzed by classifying activities that facilitate students in the process of composing their stories.

The documentation data were textually examined using Vaezi and Rezaei's creative writing criteria [16]. The rubric is divided into nine sections: narrative voice, character development, mood and atmosphere, language and writing mechanics, dialogue, story, setting, picture, and plot. Each factor was graded on a four-point scale: outstanding, above average, developing, and in need of development. Meanwhile, data from the interview were analyzed thematically by referring to [17] who recommend six basic steps: 1) becoming familiar with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining themes, and 6) writing-up. Finally, all data obtained throughout the analysis phase were correlated to meet the research problems specified.

## 3 Findings

### 3.1 Observation

The observation was conducted for about fourteen meetings or one semester in a creative writing course in English education study program of one state university in South Sumatera. The results of observation reveal that the lecturer did several preparations before urging students to apply Twine in story writing. The preparation, done in 7 meetings, included introducing the concept of creative writing (definition, characteristics, and types), figurative language (simile, metaphor, personification, paradox), and components of story such as setting, plot, characterization, point of view, symbolism, and suspense. These activities were followed by 7 more meetings which engaged students in composing story through Twine. In this stage, students were introduced to creating plot diagram in the form of branches of a story. The branches demonstrate that story plot is not linear and ended with one solution. In other words, the stories have multiple plots and endings. The diagram, afterwards, were expanded by completing stories comprising story structure: exposition, rising action, complication, falling action and denouement. In the beginning phase of writing story, the students were having collaborative work with the lecturer. They composed a story together by contributing ideas, words, sentences, and correcting them. In this case, students and lecturer drafted one story in which students and lecturer could share their idea. In this occasion, they created a story entitled "Grandma and Gigi". The Table 1 describes the result of observation:

While the students had already had the story, they began to learn using Twine as the composition tool. In its procedure, using Twine was started with identifying the concept of Twine. The students got the explanation about Twine from the lecturers, and the lecturers provided the official videos and pictures about steps in using Twine. The use of these videos and images best illustrates classroom education during the coronavirus

**Table 1.** Activities facilitating students' ability in writing digital fiction

<b>Which structure was observed during the teaching and learning process</b>	
Different activities of the teaching-learning process	<ul style="list-style-type: none"> <li><i>a. Introduction to creative writing dan digital fiction</i></li> <li><i>b. Explanation for language style in creative writing (metaphor, personification, allegory)</i></li> <li><i>c. Practices of language style</i></li> <li><i>d. Peer's and Lecturer's Feedback on language style</i></li> <li><i>e. Revising draft</i></li> <li><i>f. Reading digital fiction (specifically flash fiction)</i></li> <li><i>g. Comparing flash fiction</i></li> <li><i>h. Summarizing flash fiction</i></li> <li><i>i. Explanation of plot, character, theme, symbolism, point of view, tension</i></li> <li><i>j. Introduction to Twine (video tutorial, modelling, and story structure)</i></li> <li><i>k. Collaborative writing</i></li> <li><i>l. Developing collaborative writing through Twine (individual work) in <a href="https://twinery.org">https://twinery.org</a></i></li> <li><i>m. Independent writing by drafting story through Twine</i></li> <li><i>n. Peer-feedback</i></li> <li><i>o. Lecturer feedback</i></li> <li><i>p. Adding Background image</i></li> <li><i>q. Adding sounds or music</i></li> <li><i>r. Final work</i></li> </ul>
Activities that facilitate students' development	<ul style="list-style-type: none"> <li><i>a. Guided task (collaborative writing)</i></li> <li><i>b. Modeling of creating branches through Twine</i></li> <li><i>c. Instructional Media (Video Tutorial)</i></li> <li><i>d. Peer-Feedback</i></li> <li><i>e. Lecturer's feedback</i></li> </ul>
Students' behavior and interaction between lecturer and students	<ul style="list-style-type: none"> <li><i>a. Attentive</i></li> <li><i>b. Motivated</i></li> <li><i>c. Interactive</i></li> <li><i>d. Critical</i></li> <li><i>e. Courious</i></li> <li><i>f. Challenged</i></li> </ul>

(continued)

**Table 1.** (continued)

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**Constructive and limitation of the writing instruction**

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Constructive*Twine introduction opened students' opportunity to enhance writing skill**Instructional Media through video tutorial assisted students to create code for adding images, sound, music or video.**Preference autonomy can stimulate creativity and language style**Rubric guided students to write**Critical thinking supports creative writing**Lecturer's feedback yielded in improvement*Limitation*Lack of time, students need more time to understand Twine and create story there.*

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**Alternatives for improvement**

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*Good Time Management*

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epidemic era. Afterward, the students and the lecturers collaboratively drafted story for Twine. They wrote together by contributing sentences or words to the text and adding some mechanics. Then, the students individually transferred the story into Twine with several plots and titles. In this phase, creativity arises as they must create more than one plot. In final stage, students wrote their own stories after going through several stages such as drafting, editing, and revising.

According to Table 1, several phases offer more students' development. The potential phases are guided task, modelling, instructional media, peer, and lecturer feedback. It was also found that students' behavior during class show positive vibes as students were attentive, motivated, interactive, curious, challenged, and critical. The students were really interested in Twine as a new tool for facilitating their creative digital fiction.

Furthermore, the observation sheet demonstrates that incorporating Twine into the classroom is beneficial to the creative writing classroom. This is true for a variety of reasons. The introduction to Twine has been a motivation for the students before they began to write. This motivation grows when video tutorial was given by the lecturer; the video tutorial provides how to do coding for creating images, sound, music, or video. Furthermore, this integration offers learners' autonomy which can stimulate creativity and varied language style. Giving rubric for guiding writing and lecturer's feedback also facilitates the writing progress. However, based on the observation, integrating Twine in Creative Writing instruction needs more time. It took longer time for students to create story in Twine as they need to have deep thinking on having multiple plots and to learn coding to add multimodality to their stories.

### 3.2 Documentation

The documented files are plot Twine diagrams, html files as well as final drafts written individually at the group writing stage and draft and revised draft at the time of writing independently. By analyzing the documents, it was found that the three students-participants showed progress in the language and writing mechanics use of at least



**Table 2.** Students’ progress in drafting and final phase

	High Achiever (SA)		Mid Achiever (TS)		Low Achiever (ADL)	
	<i>Individual Group Writing</i>	<i>Independent writing</i>	<i>Individual Group Writing</i>	<i>Independent Writing</i>	<i>Individual Group Writing</i>	<i>Independent Writing</i>
<b>Narrative Voice</b>	Above average	Above average	Developing	Developing	Developing	Developing
<b>Characterization</b>	Above average	Above Average	Needs Improvement	Needs Improvement	Needs Improvement	Needs Improvement
<b>Language and Writing Mechanics</b>	<i>Developing</i>	<i>Above average</i>	<i>Needs improvement</i>	<i>Developing</i>	<i>Needs Improvement</i>	<i>Developing</i>
<b>Dialogue</b>	Above average	Above average	Above average	Above average	Above average	Above average
<b>Story</b>	Developing	Developing	Developing	Developing	Developing	Developing
<b>Setting</b>	Above average	Above average	Needs Improvement	Needs improvement	Needs improvement	Needs improvement
<b>Image</b>	Above average	Above average	Needs improvement	Needs improvement	Needs improvement	Needs improvement
<b>Plot</b>	Above average	Above average	<i>Developing</i>	<i>Above Average</i>	Developing	Developing

one level up from the previous level (Table 2). For the plot aspect, high achiever and low achiever students did not show progress. They remain at the same level, namely above average and developing. Mid achiever students increase their writing plot from developing to above average.

The Table 2 also shows that students did not experience a progress in several aspects namely narrative voice, characterization, dialogue, story, setting and image in both individual group writing and independent writing. However, each category presents different potentials. High achiever, for example, is already good in writing their story as his or her writing was categorized as above average. Meanwhile, mid-achiever and low achiever were struggling to create characterization, setting and image. These aspects are said to be ‘need improvement’. In terms of narrative voice and story, mid and low achiever has reached a ‘developing’ stage. Similar to high achiever, mid and low achiever were good in inserting dialogue in the story.

The findings above were also evidenced by the plot diagrams created by the students when writing through Twine. They improved a lot in plotting their digital fiction. Twine gave them opportunity to branch the stories. As described in Figs. 1, 2, and 3, students’ branch of stories could be managed and doubled depending upon their creativity.

The students plot diagrams can be seen from the following figures when they created individual story in the group writing stage:

The three diagrams contain non-linear stories; a story that has several different plots and endings. The variations on this plot show the creative side of students from which they can develop their ideas. High achiever and mid achiever students wrote stories with 2 different plots and different endings, while low achiever students wrote one story outline that has two plot branches and 1 ending.

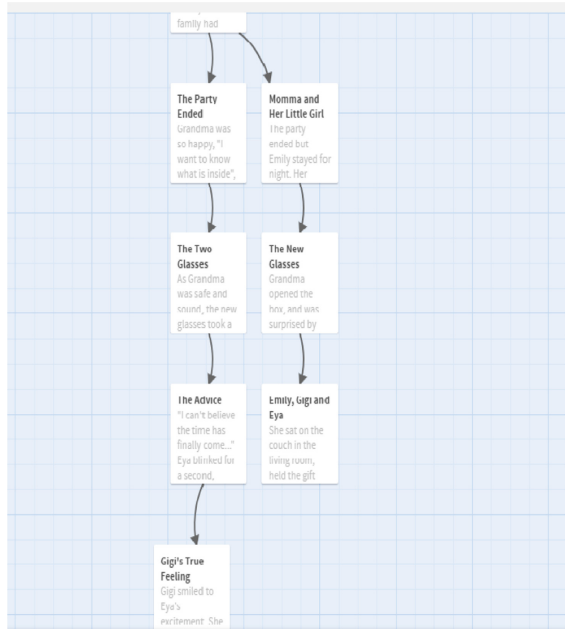


Fig. 1. High Achiever



Fig. 2. Mid Achiever

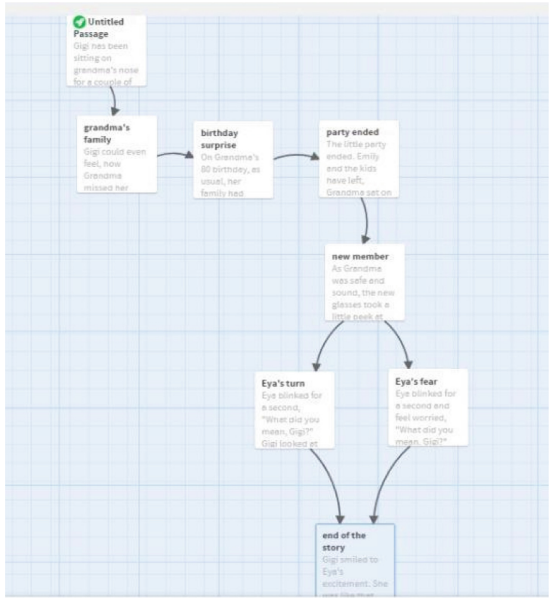


Fig. 3. Low achiever

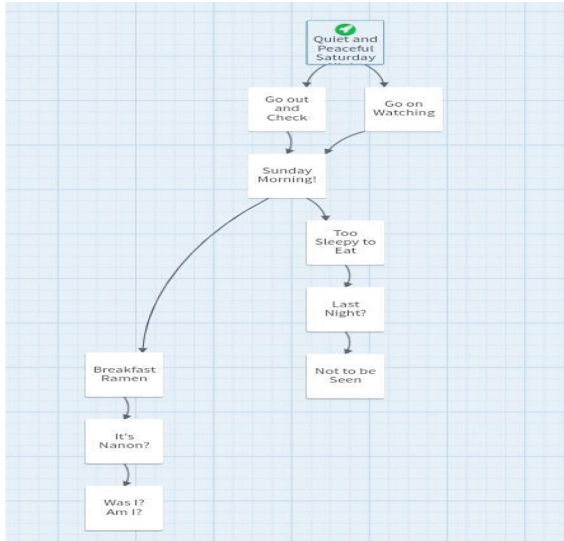


Fig. 4. High achiever

At the time of writing independently, the three students had made a non-linear story with at least two plot variations and two endings (Figs. 4, 5, and 6).

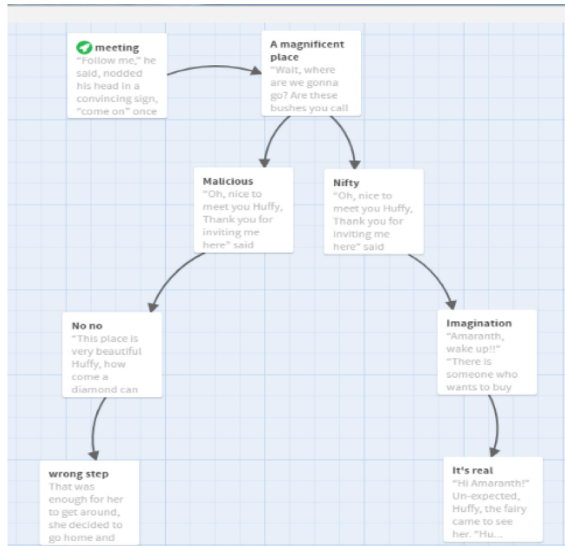


Fig. 5. Mid achiever

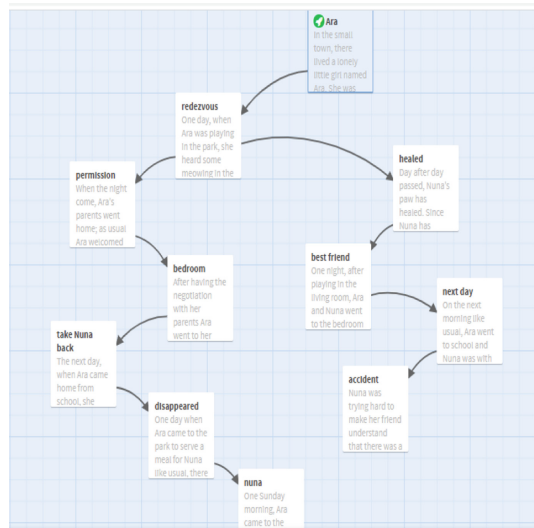


Fig. 6. Low achiever

### 3.3 Students' View

The interview was conducted with 3 participants whose story texts were documented. The results of the interviews showed that Twine as a digital tool helps students in writing stories, especially Twine helps them build ideas and develop stories with the help of pictures, sound and video.

*SA: Not really, actually. At some points, Twine helps me in developing the story, but at most times, I just write my story without paying attention on how it will look like on Twine. I mean, I just think about the plot, characters and setting as I usual.*

*TS: Yes, Twine helps me write my story as a place to express my ideas through writing.*

*ADL: Yes, it did. Twine helps me write my story because twine has story map which made me easily to develop my ideas to write the story.*

They were quite satisfied with the use of Twine in story writing. They said that Twine helped them write even though they had to face difficulties in coming up with ideas at the beginning of writing.

*SA: Yes, I was. As I mentioned before, I found myself amazed by my own ability in creating the alternative plots.*

*TS: Yes, I am satisfied with what I have written because I think the story is good enough though there are still weaknesses.*

*ADL: I was not really satisfied because I think the plot was little bit light.*

*SA: Of course, I do. Mainly, it is about the idea. Sometimes, I just could find no ideas to write, not even a terrible one.*

*TS: The difficulties that I faced was when I want to start writing, I take much time to think about what topic will be used and the grammatical structure.*

*ADL: It was hard to find the ideas because I keep thinking that the ideas are not interesting.*

In addition, two students stated that they like writing stories because they can express their thought and feeling where they can be free in delivering their genuine identity. According to the interview, one student did not like writing stories. She said that getting ideas in writing stories was hard to do and it led to the difficulty in developing the story.

*SA: Yes, I do. I don't really know why, but I found myself as someone who likes to tell stories. I always want people to listen to my thoughts and feelings, or just my imaginations. But I fully realize that not everyone wants to hear me, and I can be annoying sometimes, so writing helps me deliver my feelings and thoughts without worrying others' judgement. Writing also makes me feel like I have my own world where I'm able to learn many new things. In short, I just love writing that I don't realize how much and why do I love it.*

*TS: Yes, I like writing story because I can write anything based on my imagination and express my thoughts.*

*ADL: I do not really like. Like I said before, it is hard to find the ideas of the story and develop the plot.*

However, when using Twine, the students who did not like writing, felt motivated to write a story like the one depicted in this conversation:

*SA: I cannot say I like it, but it's not that I don't like it either. I enjoy using Twine, but at some points, I often found myself stressing over it and once again, I just don't know why. Maybe, because Twine is a new thing for me, so I need more time to engage with.*

*TS: Yes, I like writing story through Twine because it makes the story more organized and creative.*

They claimed that Twine assisted them in writing story in that, as TS argued, Twine could help her in organizing the story line and Twine challenged their creativity. Yet, using Twine as digital writing tool offers another problem. The students stated that they

need a longer time to understand Twine as Twine is a new thing for them. As ADL stated, when using Twine, students should recognize codes and create code for inserting image, picture, or sound.

*ADL: I like writing story through Twine because it has story map which made me easily to develop the ideas, but Twine also made me confused because of the code which I have to use to add the image, picture, and sound. If I type a wrong space in the code, it will ruin my story. I think if the class was not online it will be easy to us to learn Twine.*

In addition to finding ideas, application or coding is also an obstacle for students to write. This was also admitted by one participant who said that it took time to learn the coding process for publishing stories through Twine.

They also said that creative writing classes using Twine made them more creative in developing stories, as they said:

*SA: For this question, yes. Basically, Twine lets us to have alternative plot, and it helps me a lot in developing my story.*

*TS: Yes, it makes me become creative to create a story because Twine is not only about writing a story, but it also requires me to become more creative by creating story branches and adding photos, video, audio, and background to make the story more interesting to read.*

*ADL: Yes, it did. Because Twine has many features, like in every story map we can add an image, picture, sound etc. I think it really helps me become creative by making an interesting plot with a suitable image or even to make the reader feel comfortable reading the stories because of a good feature.*

In terms of procedures, learning with Twine was carried out by writing in groups and individually. For each of these sessions, drafting-editing-revision process were carried out.

*SA: First, the teacher asked the whole class, as a team, to write a story with the two characters given. After that, we were asked to check the story and revised it. Next, we were individually assigned to write an alternative plot to the presented story and lastly, we were asked to write both plots on Twine. We were also advised to add some images and sound effects to our story. Aside from that, we were also asked to write our own story, together with the alternative plot. Then, we had a peer feedback session and teacher's feedback too. Next, we revised the draft and started using Twine just like we did with the first story.*

*TS: We start to think about what story we will make, after that we start to write draft based on the story that we have created in Ms. Word. Then we make branches by making two endings. After that, our story draft is corrected by peers and lecturer. If we find that the story is already good, we copy paste the story to Twine. In Twine, we can add background, photo, and video.*

*ADL: At first, I was thinking what kind of story I will make, the plot, the character, the problem etc. After that I started to write it in the Ms. Word until it finished. Then I wrote it in the Twine, divided it into each sub in the story map, chose the title in every story map, added images, picture, sound, video, and published it.*

The transcript above reveals that students began writing by having collaborative writing, together with their peers. The lecturer also played a role in guiding them by modelling the text. Another important highlight from the interview was the students

always planned their story very well. After getting the idea, the students wrote their first draft in Microsoft word. When the draft was ready, they inserted it to the provided branch in Twine. During this time, they could add pictures, video, or audio.

Peer feedback and lecturer feedback are believed to be factors in learning procedure which possibly promote students' progression in writing their story.

*SA: Since we did peer feedback, yes, my friend read my story, and she said that my alternative plot is interesting, and she enjoyed reading it. Additionally, I also asked some of my friends—not my classmates—to read the story, in order to check whether or not the images show up and the music plays. Fortunately, all of them—I asked about eight friends if I'm not mistaken—said that they enjoyed reading it. Some of them said that the music background and images did scare them even more. There was also a friend who were curious about how to use Twine after reading my story.*

*TS: Yes, she read and give comment on my story she told me that it's a good story because she knows real characters so that she can imagine the story she also told me that it's a very sad story. She also helps me to make my story become better.*

*ADL: Yes, she did. Tesya commented, she likes my story which starts with a dialogue between the characters and the idea of the branch is good, but she suggested me to add more details to describe the main character emotion.*

## 4 Discussion

There are 3 objectives in this study, namely: to find out students' writing progression during writing using Twine, 2) learning activities that facilitate students in developing their creative writing? 3) students' perceptions of creative writing using Twine for digital composition? This discussion section will address these objectives.

According to the findings, the students' narrative plots developed very well from the individual-group writing to the individual writing stage. Linear plots have become non-linear and have various endings. This is because Twine includes a storyline diagram menu. Students were forced to be imaginative and produce numerous story concepts in this menu. Twine, as a digital tool in the twenty-first century, makes writing production more effective in terms of idea generation. Students also improved their use of standard language and writing mechanics. They mostly improve grammar, capitalization, word choice, and spelling. In creative writing, learning activities carried out in class contribute to the success of learning. Any classroom activities carried out in a holistic manner will have a positive impact on students' writing. However, certain learning stages make a big contribution, such as in this study students' writing could develop because there are guided tasks (collaborative writing), modeling on creating branches through Twine, instructional media (video tutorials) as well as peer feedback and lecturer feedback. The activity stage guides students directly in writing stories with Twine.

Finally, students gave a good perception of story writing with Twine. This was proposed by the students when responding to interview questions. They agreed that Twine contributed greatly to the development of story ideas. It provides pictures, sounds, and videos which motivates them to write stories. Writing with the help of Twine makes them creative and aware of the components in building a story. This is in line with [7, 8], and [9] which promoted creativity as an impact of using Twine in writing process.

However, writing with Twine will not produce good results if it is not integrated with a standard learning-to-write stages as it is done in this research. Writing with Twine still has to be juxtaposed with relevant instructions related to teaching writing. Writing processes such as drafting, revising, and editing remain the main procedures. Lecturers or teachers should design learning scenarios in such a way that learning outcomes are achieved.

Writing through digital tool such as the use of Twine is an effective way to encourage students to extra read or write because in a new way and in accordance with their era, they will feel more helpful and confident, especially for those who think that reading or writing is necessary. Not fun. Digital literacy is capable to make learning in the classroom more lively specially to support social interaction between students through discussions, group work, and debate.

## 5 Conclusion

Twine could be a potential benefit for students in learning to make creative writing in higher education. Twine meets the demand of the students nowadays in which they build imagination and create their innovation when writing digital fiction. Students are both digital content creators and consumers, and hence they should be directed with several applicable or significant learning procedures to address the learning goals. The findings of this study therefore could be a reference for EFL teachers teaching multimodal composition using Twine in higher education. However, future researchers are suggested to investigate the utilization of digital tool and or Twine in secondary schools and illustrate the teaching stages in this level. Another challenging issue that could also be considered for research is how coding through Twine and English language learning are interrelated.

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## References

1. J. D. Bolter. *Writing Space: Computers, Hypertext, and the Remediation Point*, 2<sup>nd</sup> ed. New York, NY: Routledge, 2001, pp. 1–13.
2. N. Saubari and M. F. Baharuddin, "Digital literacy awareness among students," *Research Hub*, vol. 2, no. 1, pp. 57–63, Oct. 2016. [Online]. Available: [https://www.researchgate.net/publication/309506225\\_Digital\\_Literacy\\_Awareness\\_among\\_Students](https://www.researchgate.net/publication/309506225_Digital_Literacy_Awareness_among_Students)
3. K. Benway. "Using digital novels to enhance the reading experience," M.S. thesis, Lit. Edu., St. John Fisher College, New York, Aug. 2011. [Online]. Available: [https://fisherpub.sjfc.edu/education\\_ETD\\_masters/25/](https://fisherpub.sjfc.edu/education_ETD_masters/25/)



4. N. Akhter. "The effectiveness of creative writing in language learning: A comparative study between Bangla medium and English medium elementary level. M.S. thesis, Dept. of Eng. and Hum., BRAC Univ., Bangladesh, 2014. [Online]. Available: <http://dspace.bracu.ac.bd/xmlui/handle/10361/3326>
5. D. Morley and P. Neilsen, "Introduction," in *The Cambridge Companion to Creative Writing*, D. Morley and P. Neilsen, Eds. Cambridge: Cambridge University Press, 2012, pp. 1–8.
6. N. Anae, "Creative writing as freedom, education as exploration: Creative writing as literary and visual arts pedagogy in the first year teacher-education experience," *Australian Journal of Teacher Education*, vol. 39, no. 8, pp. 122–142, Aug. 2014. <https://doi.org/10.14221/ajte.2014v39n8.8>. [Online]. Available: <http://ro.ecu.edu.au/ajte/vol39/iss8/7>
7. R. L. Skains, "Teaching digital fiction: Integrating experimental writing and current technologies," *Palgrave Communications*, vol. 5, no. 13, pp. 1–10, Feb. 2019. <https://doi.org/10.1057/s41599-019-0223-z>. [Online]. Available: <https://www.nature.com/articles/s41599-019-0223-z#citeas>
8. J. C. Dias and U. D. D. E. Varsóvia, "Universi dade de varsóvia orcid: 0000-0003-4211-4121," vol. 1, pp. 167–188, 2020.
9. D. Frank, "Walking Simulators and Interactive Fiction in the Composition Classroom: Reading, Writing, and Making.," *Press Start*, vol. 5, no. 2, pp. 72–87, 2019.
10. D. Petrelli and H. Wright, "On the writing, reading and publishing of digital stories," *Library Review*, vol. 58, no. 7, pp. 509–526, Aug. 2009. <https://doi.org/10.1108/00242530910978208>. [Online]. Available: [https://www.researchgate.net/publication/235307171\\_On\\_the\\_writing\\_reading\\_and\\_publishing\\_of\\_digital\\_stories](https://www.researchgate.net/publication/235307171_On_the_writing_reading_and_publishing_of_digital_stories)
11. G. Gocen, "The effect of creative writing activities on elementary school students' creative writing achievement, writing attitude and motivation," *Journal of Language and Linguistic Studies*, vol. 15, no. 3, pp. 1032–1044, Aug. 2019. [Online]. Available: <https://eric.ed.gov/?id=EJ1230224>
12. J. Pawliczak, "Creative writing as a best way to improve writing skills of students," *Sino-US English Teaching*, vol. 12, no. 5, pp. 347–352, May. 2015. <https://doi.org/10.17265/1539-8072/2015.05.004>. [Online]. Available: [https://www.researchgate.net/publication/345034581\\_Creative\\_Writing\\_as\\_a\\_Best\\_Way\\_to\\_Improve\\_Writing\\_Skills\\_of\\_Students](https://www.researchgate.net/publication/345034581_Creative_Writing_as_a_Best_Way_to_Improve_Writing_Skills_of_Students)
13. F. Kaba, "Teaching and studying literature in the digital era – From text to hypertext," *TURKOPHONE*, vol. 4, no. 1, pp. 6–13, Jun. 2017. [Online]. Available: <https://dergipark.org.tr/tr/pub/turkophone/issue/31605/346643>
14. H. G. Ridder, "The theory contribution of case study research designs," *Bus. Res.*, vol. 10, no. 2, pp. 281–305, 2017.
15. S.B. Merriam. *Case Study Research in Education: A Qualitative Approach*. The Jossey-Bass Social and Behavioral Science Series, 1988.
16. M. Vaezi and S. Rezaei, "Development of a rubric for evaluating creative writing: a multi-phase research," *New Writ.*, vol. 16, no. 3, pp. 303–317, 2019.
17. V. Braun and V. Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology*, vol.3, no. 2, pp. 77–101, 2006.

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