Animation Major for Undergraduates: Practice and Challenges

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ABSTRACT

Animation Major is a relatively new discipline for undergraduate students in Indonesia. Students who chose Animation Major will learn to visualize an idea through short animated films using a combination of drawing capabilities, technical aspects in CGI, cinematography principles, and managing the production process. This writing tries to elaborate on the practice of Animation Major for undergraduate students with its complexity and challenges. Most data are gained through class observation, student assessment, and students' feedback at the end of the semester about implementing the curriculum. Final year students' feedback was also incorporated in the data, and graduates' feedback from interviews. The result is a set of discussions and recommendations as feedback for faculty members in reviewing the curriculum to be more aligned with both industry and academic requirements.

Keywords: *Animation Major, curriculum, undergraduate, UMN Indonesia.*

1. INTRODUCTION

The Animation Major is a relatively new discipline for undergraduate students in Indonesia. Universitas Multimedia Nusantara (UMN) in Tangerang-Indonesia, opened Animation Major in 2007. There are around 300 students who enroll Film Study Program under the Art and Design Department at UMN each year, and 40% will choose Animation Major. Students who chose Animation Major will learn to visualize an idea through short animated films using a combination of drawing capabilities, technical aspects in CGI, cinematography principles, and managing the production process. With these four fundamentals of knowledge, it challenges the students to think multidisciplinary in harmonizing art, technology, management, and social studies to visualize ideas through animation—moving images; or what Williams [1] refers in his book as 'brought to life images.'

As it was established under the Art and Design Department, Animation Major has oriented its practice based on visual art education. According to Lightfoot, Sand, and Wilbur [2], practice and research in visual art education are related to science or social studies. What makes it different is the products of the research from art students; most of the time are more diverse and complex due to the medium and the creative process, which is unique in most students. In Animation Major, diversity can be seen in the animation medium; 2D animation, 3D animation, stop motion animation, or hybrid (combination from two or three different medium). In animation, those mediums have unique characteristics and challenges, which usually impact the pipeline of animation production [3].

In the animation industry project context, the medium's decision is usually based on careful considerations of the complex situation regarding studio capabilities, budget, collaboration team, the producer's style, and the film theme. The complexity makes animation is an art that combines technical knowledge of the animation process with individual style, experience, and business [4]. The animation is complex because bringing up images to life requires intricate steps and high technical and artistic value capabilities. A simple 15 seconds duration of character movement in an animated film might result

from days and weeks of work of a team of animators producing several images and putting it in motion. This makes a feature-length animated film project take years to complete, and the cost is very high [5].

2. METHOD

This article tries to elaborate on the practice of Animation Major for undergraduate students at UMN with its complexity and challenges. As a relatively new discipline, the Animation Major curriculum has been through some improvement process. By giving an overview of the animation discipline and its expected learning outcomes, writers describe what the campus offers in administering art education. The curriculum in Animation Major and its implementation is described further from junior year to the final year to better view curriculum and specific learning outcomes. This article also elaborates on how animation production in an industrial context is diverse and complex; thus, students from Animation Major must master some technical and artistic skills. By describing some core subjects designed to reinforce students' capability and skills, writers try to better view the curriculum's strategy to facilitate complexity and diversity. Students' final projects as the culmination of learning in the final semester are described as examples of how the final project is conducted. In the discussion section, writers open a discussion about issues and challenges during the curriculum's implementation and how it is anticipated.

Both writers are faculty members of the Art and Design Department at UMN who actively observe the implementation of the Animation Major curriculum as lecturers of some class in the first, second and third year of Animation Major and assigned faculty member final project. Most data are gained through class observation, student assessment, and students' feedback at the end of the semester about implementing the curriculum. Final year students' feedback at the end of the thesis presentation was incorporated to give information on how the faculty members perform to facilitate students' preparation for the final project. Graduates' feedback from interviews is also obtained to get more information about how the Animation Major curriculum meets industry needs for animation practitioners. One of the writers is also actively involved in many focus group discussions with industry practitioners, professional associations and government, and he also participated in formulating the national work competency standards for animation practitioners in Indonesia. Through some active observations and focus group discussions with some industry practitioners, the feedback from animation industry practitioners was extracted.

3. ANIMATION MAJOR FOR UNDERGRADUATES: CURRICULUM AND PRACTICE

Animation Major at UMN is under Film Study Program in Arts and Design Faculty. It is an undergraduate program that offers students the knowledge and skills to visualize ideas through animation medium, be it 2D animation, 3D animation, stop-motion, and or hybrid (combination with more than one medium). The Animation Major curriculum is focused on learning outcomes and competencies to meet the animation industry's requirements. The curriculum is designed to scaffold the students to master the learning outcomes step by step, in technical and artistic skills and knowledge. The students must produce original thinking by understanding, applying, analyzing, evaluating, and or creating [6] the chosen topic for their projects through some supervised tasks each semester. The length of the program is eight semesters or four years.

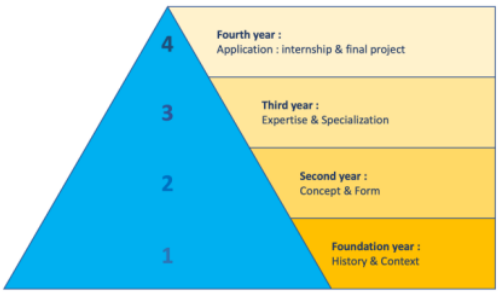

Figure 1 UMN Film Department education curricula structure. (source: UMN academic guidebook, 2019)

Each semester, Animation Major students must learn and master chosen animation techniques to produce a short-animated. They are also required to learn other subjects that will help them to have a further understanding of the conceptual area. For example, the social and historical aspect of the medium, and issues brought up in various animated films worldwide. In the final semester of the fourth year, students will do their final project expected to be learning and researching. Final year students will make a meaningful short animated film, either collaboratively or individually. When they graduate, it is expected they that obtain certain skills, experiences, and also portfolio. Graduated students

from the program are given a BFA degree, and they can have a career as a moving image designer, animator and academician in animation related industry and scholar.

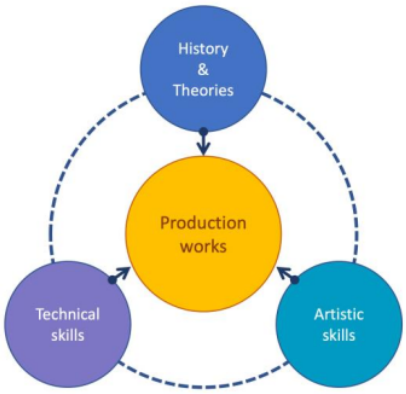

Figure 2 Animation Learning process. (source: UMN academic guidebook, 2019)

Animation Major students learn the same subjects as Film Major students under the same study program in the first year. Learning under the same study program gives students a chance to learn the basic concepts of film and animation, film and animation creations, and historical contexts. Students also have chances to learn and accustom context and vocabularies regarding film and animation production and knowledge. For example, in the World Art History class, they learn how human visual languages and visual references evolve from the prehistoric age to the modern age. In Visual Composition, students learn the concept of line, shape, color, vanishing points and perspectives, lighting and composition, and how it then be studied in cinematography principles in the Visual Storytelling. Also, in Visual Storytelling class, they learn how composition works on a screen by practicing the basic camera principles. Finally, the students are encouraged to realize what McIver [7] suggests: cinema is a strategy to tell a story through all the subjects they learn. Through the Critical Reading class, students learn how a story can be told in many different ways and make different results.

In the second year, students will be differentiated into Film Major and Animation Major based on their choices. Animation Major students in second-year will learn about animation scope and production and explore animation medium and techniques. Both animation and film students have the same class in Philosophy and Aesthetics about how philosophy and aesthetics work in moving images. These classes are designed to strengthen the students' knowledge in the conceptual area. While in the context of the skills, second-year students are introduced to both 2D and 3D animation. In the third year, students will be given more chances to explore 3d animation techniques and stop motion animation.

After some exploration in the animation medium, the third-year students will learn more about putting a narrative in the animation medium. In the animation production process, images and motion are created separately, then series of moving images are put together into shots. Series of shots are put together into scenes and narratives that make sense to the audiences. Students will also learn to put a series of moving images so that the audience will make sense of the idea and the storytelling. Third-year students will also prepare the project for their fourth year.

In the fourth year or final year, students will be focused on two things; internship and final project. During the internship, students are required to have a total experience as a practitioner in the industry. The duration of the internship program is 320 hours work or at around three months. Students will apply for an internship program at production houses, animation studios, or other industry platforms that require moving image designers' competency in an internship program. After finishing 320 hours of internship, students will write an internship report that they will share in an internship seminary.

During the final year, students are also focused on their final projects. The final year project is the culmination of the students' learning process. Students of the final year must create a meaningful animated film, using animation techniques they may choose. The animated film should be meaningful in terms of the chosen content, medium and or designated purpose. Students will also write a final project report regarding what they have researched for their project and how they came up with some decision up on chosen issues, story and or medium regarding the final project. Students will have their thesis defense based on their final project and final project report.

To celebrate students' culmination in their final project, the faculty usually hold several exhibitions of students' final year project. Animation and film specialization students will have their work to be screened in campus' Lecture Theater. The audience who visits the screening is usually junior year students, final year college students, faculty

members and guests from other faculty, other campuses, alumni, and even practitioners in the animation industry.

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4. STUDENTS' WORKS IN FINAL YEAR

Final year students should have been preparing their project when they were in the third year of the program. Students are encouraged to practice a better preparation strategy in the pre-production stage. In their third year (in the sixth semester), they should plan a story concept, storyboard, characters and environment design concept. At the end of the sixth semester, third-year students will present their concept to the faculty members in the form of 'animatic.' An animatic is a rough animation concept in which the story universe concept and duration are shown. During the final project, final year students will need to discuss their work with assigned faculty members to meet 6-8 times in a semester. The faculty members will guide students with their development process, give feedback, supervise and assess the whole production process.

At the end of the final year, students will present their project and a paper regarding their research and exploration process from their work. If a student is responsible for the character design in the project, the student will write a report paper on how did he/she design the character that way. If she/he is responsible for the environment, lighting, color, rigging, and animating, they will write a paper about the exploration and design process of those areas. The design process, references, and results are expected to show their learning process, both conceptually and technically.

Some examples of students' group work will be explained further in this section. The first example, from a group of students who make an animated documentary about an ambulance driver who deals with Jakarta's traffic congestion almost every day. The medium chosen was 3d animation, and the project was done with a group consist of two students. The content is relevant due to the statistics that placed Jakarta as one of the world's worst traffic. The problem is then the medium; why animation, if most documentary films are executed with a live-action medium. According to Roe [8], animation characteristic does not match with live-action characteristics, since those two things are made from different origins. Through their research process, the students tried to make meaning of the animation characteristics and how it can function as what Roe referred to as "representational strategy."

In their first and second year, students learned History and Aesthetics, which one of the discussions was about visual style and film medium. One of the students in the group collaboration had researched about Expressionism in painting and the influence in the film (German Expressionism). So, the group came up with a concept that they will use expressionism style in their animated documentary to emphasize the ambulance driver's anxiety when he had to deliver emergency hospital patients through Jakarta's rush hour.

The students' chosen concept gave more meaning to the animation medium in the documentary film senses, since they tried to bring up something that the animation medium can represent more than live-action: expression and exaggeration. Through students' research on Expressionism as one of the non-representative visual styles developed from the anxiety of world war situations, the students then decided to exaggerate the driver's anxiety in facing an emergency condition in Jakarta's rush hour by using Expressionism style.

Another example of a student's final project is an individual project. Students used 2D limited animation medium since it is a manageable medium for an individual project. Her work is focused on social critic about stardom syndrome. Using a short-animated medium, she brought up a character, a young popular-seeker singer named Aji, who lived around the 1980s when dangdut was very popular in Indonesia. Dangdut is an eclectic folk music genre, derived from Arab, Malay, and other eclectic elements. Aji, the character, was a strip piece of poster paper who dreamed of living in a big billboard to enjoy people's attention and all the spotlight, without realizing that he was that small and invisible in the big billboard.

A more complex animated project may require more than three persons in a group, while the maximum person in one final project can be up to 6 persons. The personnel in a group should be limited to a maximum of six persons, so the specificity of each students' research upon the same project can still be ascertained. 3D animation final project is the most probable project, which usually consists of 4-6 students. An example of a final collaborative project that occupied five persons is a 3d short animated film that brought environmental issues about mining activities in Papua, Indonesia. As the group member consists of more persons, group coordination becomes more important. Compared to another group

that consists of fewer members, this group consumed more time in the brainstorming process for story ideas and further developed animation concepts. As they went further into the production process, the working division became more effective. More group member also means the more details can be achieved in the production process. The group consists of 5-6 members, persons responsible for designing characters, environment, lighting and or coloring, shots, animation (movement), rig (characters' joint system design), and texturing.

Regarding diversity in the outcome, Animation Major students have a diverse outcome in the final project. As mentioned, the final project requires students to produce meaningful short animation, whether the project is done collaboratively or individually. Some students who are not into moving image production can also choose to write a thesis analysis over animation subject, be it analyzing an animated film, the practice of the animation industry, or even the process of animating. The thesis is done individually. Students who choose to work on a thesis will need more guidance and supervision from the faculty members. Thus, they will need to meet the assigned faculty member 8-10 times in a semester to discuss their thesis progress.)

5. DIVERSITY AS CHALLENGE

Regarding diversity in visual art education, Lightfoot, Sand, and Wilbur [2] recommended that the university design a curriculum that embraces a wide range of students' prior knowledge. This section tries to elaborate on challenges regarding the diversity of students' prior knowledge to improve learning performance [9]. Out of many factors that create diversity in students' prior knowledge, one factor is a common understanding of the animation medium. In Indonesia, the animation medium was introduced in animated serial films for children's entertainment, like Disney's films, Saturday Morning Cartoons, and children's anime from Japan. When it comes to an understanding the medium, it becomes a narrowed-common sense that animation content belongs to children's entertainment only. This narrowed-common sense exposes other assumption that content in animation film is all about children related entertainment.

For some students, memories of some animated films they were grown up with trigger them to have a dream job and career in the animation industry. Some students who enrolled themselves in Animation Major with those dreams are usually passionate about animation. They are willing to challenge themselves to learn the technical and artistic aspects of animation. Sometimes, for others without proper knowledge, the animation process can be too demanding, and they might be overwhelmed due to its complexity.

Having competency to do observational drawing is one of the necessities the Animation Major students should prepare. The animation process needs the animator to be observant of an animated object, so they should visualize the object's motion. For most students who have prior skills and knowledge in observational drawing, the Visual Composition subject is designed to enrich students' observational drawing capabilities. For students who have no prior skill and knowledge in drawing, the challenge might be overwhelming. Similar things apply in the technology aspect. Since animators used to draw a series of images with every single motion manually, CGI facilitates the animation process to be more time-efficient. Students' capability to use CGI often relies on how well they are accustomed to the technology itself. If the students are already familiar with the technology or are well-motivated to spend more time accustomed to CGI technology, the animation process's complexity can be managed.

Although animation is a new discipline for undergraduate students, some animation vocational schools can be found around some areas in Indonesia. These vocational schools prepare their students to continue their studies to Animation Major in university. Students who have a background in animation vocational school have adequate prior knowledge in technical animation skills. Some other students came from government or private schools with different nurturing Art Education approaches to its curriculum. Students who came from a school with nurtured Art Education will most likely build a better observational drawing skill, which is very useful. Regarding diversity in motivation, some students might be high achievers, while some others are struggling.

Other challenges related to students' abilities are images and assets plagiarism. Images and assets plagiarism occurs when students copy images and or animation assets from other sources and claim it as their original works. There are usually some changes in color and composition to prevent close similarities, t. This kind of plagiarism is more difficult to detect or to prove. Other related problems with this condition are that a skillful student gets commissioned from another student to create a work of art to be submitted under their names.

Regarding the plagiarism issue, it is clear enough that plagiarism is intolerable on the campus. The faculty has assigned the Board of Ethics whose tasks are to investigate any report of plagiarisms. Above all, faculty members are expected to prevent plagiarism by socializing anti-plagiarism article in the first place to the students at the beginning of the class. The campus has also subscribed to anti-plagiarism applications did request all students and faculty members are checked before submission.

6. CHALLENGES IN COLLABORATION

The animation specialization curriculum is built based on the visual art curriculum, where students are expected to learn and practice art-related knowledge. Due to the complexity of the animation medium, students must be competent in other aspects, aside from art-related competence, such as technology, management, and social studies. It is also recommended that the students develop collaboration skills since most of the time, the animation project is group work. What makes the animation medium slightly different is; the animation medium relies on collaborative work to make it happens, even though some animation projects can be done individually with limited movement and duration.

The faculty allows students to collaborate with other students from the same or different majors, even across departments and faculty. Even though the campus recommends it, the students' collaboration across departments and faculty is still rare. Some final project collaboration happened through Animation Major students with Film Major students under the same faculty. Collaboration enables students to develop communication and managing skills, while it also opens an opportunity to mix different mediums (live-action and animation) for their project.

However, the collaboration also provides challenges for students with a lack of social skills and motivation. Animation students are very diverse in background, prior knowledge, social skills, and motivation. Although there is still a possibility for students who would like to work individually, collaboration is critical for the real animation industry. Other challenges regarding collaboration, some students experienced difficulties in finding group work. It happened when the student had an issue regarding commitment in a group work previously.

7. ANIMATION MAJOR GRADUATES AND CHALLENGES FROM INDUSTRY

Gizycki [10] stated that animation had been the part of human life in the form of anything we see on the screen. Although the public has become very familiar with the animation medium, the long and complex process in producing an animated film is rarely understood. The animation process requires complex skills in many aspects; artistic, technical and management. An animated film product is the synthesis of human collaboration in art, technology and management. With such a huge collaboration team, budgeting plays a very important role and determines visual quality in an animation product. As the public has been familiarized with visual achievement from high-budget animated film production, it will be a challenge for Animation Major graduates who are starting their careers and are still struggling to develop technical and artistic skills.

The animation industry is a developing industry in Indonesia. Although the development is promising, with many animation studios and talents are flourishing in Indonesia [11], Animation Major graduates need more time to upgrade their technical skills and competency to meet the expectation of the industry. Due to a different focus in academia and industry, while academics prepared the students to experience all animation mediums, the industry requires skills that are focused on certain animation medium during the production process. However, the conceptual skills the students have learned in the undergraduate program will be very useful in the pre-production aspect of the industry.

The faculty has tried to implement several strategies to improve the Animation Major curriculum. One of the most important steps that have been done was created a focus group discussion with industry practitioners, professional associations and government regarding these issues. The purpose of this process is to align the learning outcomes to meet the requirement of the industry. Some faculty members are also involved in formulating the national work competency standards for animation practitioners in Indonesia.

8. CONCLUSION

Animation Major in UMN is a relatively new discipline with an evolving curriculum that strives to be in line with the industry's growth. There are many challenges in designing the curriculum related to the discipline's characteristics, as animation combines

art, technology, management and social skills. The complexity of technical aspects, students' diversity, and industry requirements also shape the curriculum. Participation from all stakeholders; is needed to facilitate the complexity of the animation discipline. To expand many possibilities in developing the discipline, the faculty members of Animation Major are actively in progressing scholarly needs to anticipate many animation development probabilities and disciplines.

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