



Overall Competence Through Training on Making Web and Flash Map Animations for Students in the City of Banda Aceh

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Abstract: *This training is based on the use of animation in learning which will greatly encourage students' enthusiasm for learning because it is supported by media which attracts the attention of young millennials. The problem that occurs is that not all students can develop learning by utilizing the web and animation as learning media. With these problems, of course, students are required to be able to implement web and animation in learning activities that can be used as a source of learning and get to know the world of the animation-making industry. To support students' abilities in the application of science and technology, especially those related to the use of technology in the use of web and animation for learning, students need to be trained to be skilled in web design and create simple animations. The results of the activities carried out are; There is an increase in student knowledge about the use of flash animation so that students can improve their mastery in developing and mastering Web Design and flash map animation and participants are also able to master the knowledge gained as additional skills and create their own job opportunities.*

Introduction

Strategies in active learning activities can help students improve competence¹. The assessment process is different to measure the competence of students², some see

¹ Hyunsook Shin et al., "Competency and an Active Learning Program in Undergraduate Nursing Education," *Journal of Advanced Nursing* 71, no. 3 (2014): 591–598, <http://dx.doi.org/10.1111/jan.12564>.

² Ibid.

and measure from the level of understanding³, attitude⁴, and skills possessed⁵. Most of the competency obtained is measured by the level of understanding and use of computers.⁶ Knowledge of technology is something that must be owned by someone today⁷, especially when using computers⁸. To improve the overall competency of students, a whole process is needed in order to produce quality transformation of students before heading to lectures or work^{9 10 11}. In the case of AMIK Indonesia, the curriculum in computer use is absolutely used, the involvement of practicum is more than the theoretical material being taught. However, the need for markets makes some learning unnecessary¹². It takes something new for students to learn and adapt it to current local and national industry needs.¹³

Currently, creating a website has become a great opportunity for the last 10 years and is the best choice for business actors in developing their business^{14 15}. Website

³ Seema Sanghi, "The Handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations" (SAGE Publications, Inc., 2016), <http://dx.doi.org/10.4135/9789353280352>.

⁴ Mireille Krischler and Ineke M Pit-ten Cate, "Inclusive Education in Luxembourg: Implicit and Explicit Attitudes toward Inclusion and Students with Special Educational Needs," *International Journal of Inclusive Education* 24, no. 6 (2018): 597–615, <http://dx.doi.org/10.1080/13603116.2018.1474954>.

⁵ S A Male, M B Bush, and E S Chapman, "Understanding Generic Engineering Competencies," *Australasian Journal of Engineering Education* 17, no. 3 (2011): 147–156, <http://dx.doi.org/10.1080/22054952.2011.11464064>.

⁶ George F Shuster and Mona Pearl, "Computer Competency: A 7-Year Study to Identify Gaps in Student Computer Skills," *International Education Studies* 4, no. 4 (2011), <http://dx.doi.org/10.5539/ies.v4n4p137>.

⁷ Muhamad Ngafifi, "KEMAJUAN TEKNOLOGI DAN POLA HIDUP MANUSIA DALAM PERSPEKTIF SOSIAL BUDAYA," *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi* 2, no. 1 (2014), <http://dx.doi.org/10.21831/jppfa.v2i1.2616>.

⁸ Prayudi, Yudi, and Dedy Setyo Afrianto. "Antisipasi Cybercrime Menggunakan Teknik Komputer Forensik." *Seminar Nasional Aplikasi Teknologi Informasi (SNATI)*. 2007.

⁹ Meiselwitz, Gabriele, and Goran Trajkovski. "Effects of computer competency on usability and learning experience in online learning environments." *Seventh ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD'06)*. IEEE, 2006.

¹⁰ Asih Niati, Anitiyo Soelistiyono, and Teguh Ariefiantoro, "Pengembangan Kemampuan Sumber Daya Manusia Melalui Pelatihan Komputer Microsoft Office Excel Untuk Meningkatkan Kinerja Perangkat Desa Mranggen," *E-Dimas: Jurnal Pengabdian kepada Masyarakat* 10, no. 1 (2019): 105, <http://dx.doi.org/10.26877/e-dimas.v10i1.3557>.

¹¹ Nanang Supriadi, "PEMBELAJARAN GEOMETRI BERBASIS GEOGEBRA SEBAGAI UPAYA MENINGKATKAN KEMAMPUAN KOMUNIKASI MATEMATIS SISWA MADRASAH TSANAWIYAH (MTs)," *Al-Jabar : Jurnal Pendidikan Matematika* 6, no. 2 (2015): 99–110, <http://dx.doi.org/10.24042/ajpm.v6i2.20>.

¹² Bahruni, Bahruni, and Fathurrahmad Fathurrahmad. "Analisis Trend Topik Pengembangan Rekayasa Perangkat Lunak dalam mendukung Strategi Kurikulum Perguruan Tinggi." *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)* 3.2 (2019): 70-74.

¹³ Syafwandhinata, Jhony, and Lukman Ahmad. "Sistem Pemasaran Jasa Freelancer IT (Studi Kasus: AMIK Indonesia)." *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)* 3.1 (2019): 1-6.

¹⁴ Johan Wiklund et al., "The Future of Entrepreneurship Research," *Entrepreneurship Theory and Practice* 35, no. 1 (2011): 1–9, <http://dx.doi.org/10.1111/j.1540-6520.2010.00420.x>.

¹⁵ Rachel Doern, Nick Williams, and Tim Vorley, "Special Issue on Entrepreneurship and Crises: Business as Usual? An Introduction and Review of the Literature," *Entrepreneurship & Regional Development* 31, no. 5–6 (2018): 400–412, <http://dx.doi.org/10.1080/08985626.2018.1541590>.

developers always present an attractive appearance according to customer requests^{16 17}. Customer interest prefers the appearance of their website to be more attractive and sometimes forgets the security and efficiency of website performance¹⁸. One alternative to making a website look more attractive is using flash animation^{19 20}. The challenge in developing or designing a website is to make the website look more attractive, by using animations involving GIF, SVG, WebGL, video and so on^{21 22 23}. Flash Map is a type of animation in the form of a map and is visualized interactively so that users have the impression and convenience of getting information in animated form, and has become the choice of some companies or agencies to visualize their projects. In order to support students' ability to utilize technology in web development and combined with the ability to design an animation is something new for students. Curriculums that study more programming languages in application development are commonplace for students majoring in computers, but web design involving flash animation is something new in student learning activities in Banda Aceh. It is hoped that web design training with flash map animation will become an additional extracurricular activity in increasing the overall competence of students in Banda Aceh City. The purpose of the training is to increase students' knowledge and develop overall competence regarding web design and making flash map applications so as to provide skills and inspiration in learning website application development.

Methods

In the training implementation method, the training process will produce values that describe and represent the status and overall competence of each participant. Some are carried out in stages and sometimes practicum is carried out repeatedly so that the quality can be known. The training methods used are described as follows:

¹⁶ Saad, Muhammad Ibnu. Otodidak Web Programming: Membuat Website Edutainment. Elex Media Komputindo, 2020.

¹⁷ Paulo Rita, Tiago Oliveira, and Almira Farisa, "The Impact of E-Service Quality and Customer Satisfaction on Customer Behavior in Online Shopping," *Heliyon* 5, no. 10 (November 1, 2019): e02690–e02690, <https://pubmed.ncbi.nlm.nih.gov/31720459>.

¹⁸ Minos-Athanasios Karyotakis and Nikos Antonopoulos, "Web Communication: A Content Analysis of Green Hosting Companies," *Sustainability* 13, no. 2 (2021): 495, <http://dx.doi.org/10.3390/su13020495>.

¹⁹ Elma Ayu Nur Fandini, Siswandari, and Kristiani, "The Impact Adobe Flash Media in Learning Economics," *Journal of Physics: Conference Series* 1808, no. 1 (2021): 12039, <http://dx.doi.org/10.1088/1742-6596/1808/1/012039>.

²⁰ Theofilus Gratiamus Gusemanto et al., "The Level of Critical Thinking Ability of Students in the Learning by Using Adobe Animate Based Learning Media," *Advances in Social Science, Education and Humanities Research* (Atlantis Press, 2021), <http://dx.doi.org/10.2991/assehr.k.210326.057>.

²¹ JVG Mills, *Ying-Yai Sheng-Lan: The Overall Survey of the Ocean's Shores*, ed. Feng Ch'eng-Chun (Cambridge, 1970).

²² Bellamy-Royds, Amelia, Kurt Cagle, and Dudley Storey. Using SVG with CSS3 and HTML5: Vector Graphics for Web Design. "O'Reilly Media, Inc.", 2017.

²³ Ed Angel and Eric Haines, "An Interactive Introduction to WebGL and Three.js," *ACM SIGGRAPH 2017 Courses* (ACM, 2017), <http://dx.doi.org/10.1145/3084873.3084875>.

1. Knowledge Exchange
Exchange of knowledge is an activity where there is communication between participants and instructors to find out opinions, ideas and opinions regarding a particular subject.
2. Demonstration
At the stage of demonstration of how to use tools in an application to be used. The applications used are Adobe Flash and Adobe Dreamweaver.
3. Exercise/Practice
Each participant is given hands-on training and practice and then the teacher can check the knowledge that has been given before.
4. Work Instruction Exercise
At this stage the participants carry out the tasks determined by the teacher.
5. Case Study
At the final stage, each participant is asked to analyze a case from a customer request and determine and make a decision in dealing with the problem and participants are required to develop the case. It aims to train the skills of analyzing problems and applying the knowledge gained in situations that are close to real.

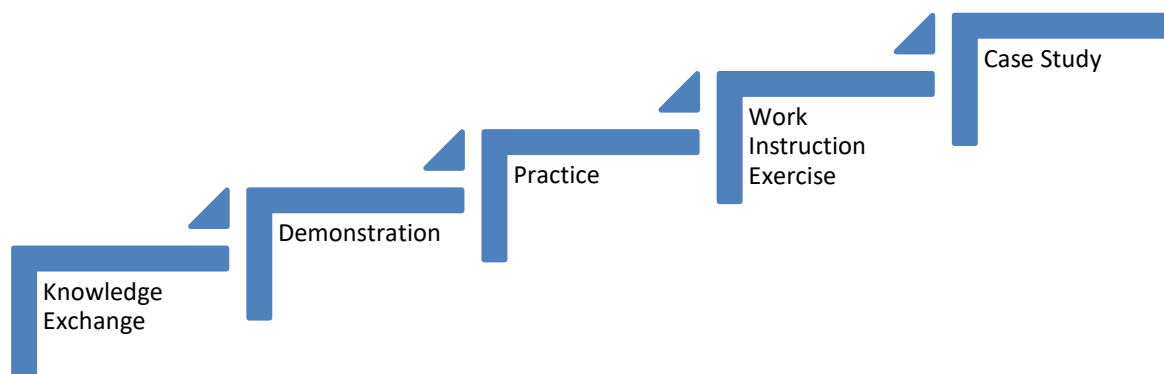


Figure 1. Process Flow for the Method of Implementation of Training Activities

Result

The results of the training activities for making Web and Flash Map Animations for Students were held on 3-5 October 2019 at the AMIK Indonesia Computer Laboratory. For 3 days, students/participants are given material starting from getting to know the participants' knowledge by involving each other's experiences and observations. Next, we introduced a software application to start and study each menu and tools used in designing flash animations. On the second day, participants were given training to complete by practicing directly making animations. Furthermore, the teacher provides techniques and tricks to speed up the creation of flash animations based on the

instructor's experience that has been made by the animation making industry so far. On the third day, the participants were given a case based on a client's request and the participants analyzed the problems and needs in making flash map animation. The stages of the training activities are illustrated in the activity process flow in Figure 1. The results that have been achieved in the activities carried out are:

1. Participants are well acquainted with the tools available in Adobe Flash software and the HTML programming language.
2. Participants are able to master Web Design and animation and create flash-map animation works for the City of Banda Aceh and the City of Sabang.
3. Participants are able to use their time.
4. Participants are also able to master the knowledge gained as additional skills and create their own job opportunities.

With this activity increasing the quality of the participants' interest in knowing more about web design and animation, in the process of this training the talents and abilities of the participants have begun to be seen. Participants also said that this activity was very useful because it not only added knowledge but also honed skills. The obstacles encountered in this activity were only a matter of time, the participants did not come on time, but the committee could overcome this by increasing the time so that all the material was delivered.



Figure 2. Activities During Assistance

Follow-up activities will be carried out routinely every year for students who have not had the opportunity to take part in training, and it is planned to be held 2 times each year so that later cadres are created that are beneficial to the community and have their

own work opportunities later in the world of animation production industry. Students are also invited to visit the application development company (PT. E-Padi Corporation) and animation design company (PT. Go Print Indo) in Banda Aceh City, so that understanding in the animation manufacturing industry can be understood in real terms.



Figure 3. Visits to Industrial Sites/Animation Application Development Companies

The results of the training on making flash map animations for the Banda Aceh City and Sabang City were then run on each participant's web browser. Making a flash map takes samples of two cities in Aceh Province which are favorite tourist attraction icons in Aceh Province. The flash map animation that was practiced involved many leading tourist objects by prioritizing the creativity of each participant.



Figure 4. Results of Making Web and Flash Map Animations

Conclusion

This activity is expected to be a model in order to increase human resources who have competence in the field of web developers and flash animators. In the method of implementing the training, it follows a process that occurs gradually which consists of knowledge exchange, demonstrations, exercises/practices, work instruction exercises, and case studies. The results that have been achieved in the activities carried out are; 1) Participants are well acquainted with the tools available in Adobe Flash software and the HTML programming language and are familiar with making web-flash designs, 2) Participants are able to master Web Design and animation and create flash-map animation works for the City of Banda Aceh and the City of Sabang, 3) Participants are able to use their time, and 4) Participants are also able to master the knowledge gained as additional skills and create their own job opportunities.

After participating in the training and competency test, it is expected that students will be creative, innovative, visionary, solutive and independent so they can design and utilize animation applications as well as become web developers and flash animators. If I have further opportunities, I want to compete for each participant to ensure and ensure that the knowledge provided during the training is actually applied and useful to add to the participants' skills.

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