TEKNOKOM : Jurnal Teknologi dan Rekayasa Sistem Komputer
Vol. 6, No. 2, September 2023, pp. 69 - 77
ISSN: 2686-3219, DOI: 10.31943/teknokom.v6i2.139

IMPROVING EXAMPLE-PROBLEM-BASED-LEARNING (EPBL) WITH GROW COACHING MODEL AND DESIGN SPRINT TO OPTIMIZE PRE-INCUBATION CURRICULUM: CASE STUDY OF USER INTERFACE DESIGN

Eko Heri Susanto[1*], Ahmad Faisal Rizal[2], I Putu Indra Wijaya Suwina[2]
[1]Department of Computer Engineering, STIKOM PGRI Banyuwangi, Indonesia
[2]Department of Business Incubator, PT Tunas Inkubator Creative Startup, Indonesia

ARTICLE INFO

History of the article:
Received May 17, 2023
Revised May 25, 2023
Accepted June 15, 2023
Published July 8, 2023

Keywords:
Example-Problem-Based Learning
GROW Coaching Model
Design Sprint
Website Design Learning
Competency Iceberg Model

ABSTRACT

Learning to develop user interfaces is one of the subject matter in startup business pre-incubation activities in PT. Tunas Inkubator Creative Startup. The Example-Problem Based Learning (EPBL) learning method is proven to be able to improve students' cognitive abilities (hard skills). However, hard skill competence alone is not enough to measure one's ability. This research aims to improve the hard skill competencies, as well as the soft skills of the tenants. The contribution to this research is that researchers apply the GROW coaching model method to measure tenant motivation and insert design sprints into the Example-Problem-Based Learning method. Where the function of the design sprint is to improve the attitude of cooperation between teams. The improvisation of learning methods in this study aims to measure students' speed in mastering user interface design subjects. From the trial results it is known that tenants can complete the user interface design within 2 weeks.

Correspondece:
Eko Heri Susanto,
Department of Computer Engineering,
STIKOM PGRI Banyuwangi,
Indonesia,
Email : ekoheri@gmail.com

INTRODUCTION

In startup companies, interface design and user experience (User Interface Design/User Experience-UI/UX) are the most important things to consider in the process of determining user needs or product market fit [1]. For tenants who will set up a startup, one of the things that must be learned is user interface design. The learning process that applies the Example-Problem-Based Learning method is proven to be able to optimize cognitive resources to develop problem-solving strategies [2]. But only cognitive abilities are not enough. There are still personality attributes and a person's attitude that greatly affect a person's performance. A person's overall capacity is finally called competence [6]. The previous Example-Problem Based Learning research did not discuss how to optimize the educational process by measuring students' personalities and attitudes.

There are three components used in Example-Problem Based Learning research, namely: (i) Exposure, (ii) Comprehension, and (iii) Reinforcement. At the exposure stage, students receive brief material from the mentor. Where the purpose of this stage is for students to gain basic knowledge about the principles and concepts of topics in the domain. Furthermore, in the second stage, namely understanding, the mentor will provide the subject matter in the form of case study examples. Where from this case study example, individual students will learn each step in completing it. The final stage is reinforcement. Where at this stage, students in groups will be asked by the mentor to increase their accuracy and speed in solving a problem [2]. In conclusion, the EPBL method is proven to improve students' cognitive abilities. Where usually this cognitive ability is called hard skill. However, in that study, it was not discussed how to optimize soft skills.

The personality and attitude (soft skill) of tenants who are learning to develop startups are one of the keys to successful startup development. It's true, a startup is a new business innovation and growing rapidly. On the other hand, startup companies are in uncertain market conditions. Therefore startup companies always work under pressure [3]. The same goes for startup software. Despite the stories of successful startups, it turns out that 90% of them fail. These failures stem from financial and market factors, for

example, insufficient funding, failure to find product-market fit, and failure to build a team [4]. The failure was more influenced by the lack of interest (motivation) of the tenants, failed to optimize the social roles of each tenant, and failed to show self-image to each tenant.

To minimize failure in building a business, startup company founders need to follow the business incubation stage. PT. Tunas Inkubator Creative Startup is a company engaged in business incubation. Tenants managed by this company are the founders of digital startup companies. Website design is a form of User Interface used in website-based software development. The material for the first pre-incubation activity at PT. Tunas were giving lessons about website design. Because most of the tenants at PT. Tunas do not understand the science of website design, the right learning method is needed so that tenants can be educated to develop user interface quickly.

The learning method implemented by the mentors at PT. Tunas Inkubator Creative Startup, need to consider the hard skills as well as soft skills. Therefore it is necessary to develop a learning curriculum that is adapted to adult learning styles.In the pattern of adult learning (andragogy), the condition of a person's personality and attitude greatly influences the mastery of knowledge and skills. In general, adults will be motivated to learn certain things if that knowledge is important and useful for them[5]. No matter how good his knowledge is, if he feels that it is not useful for the student concerned, then he is not interested in learning it. Therefore, before the learning activities begin, the mentor should be able to find out the intentions of the student. The initial question that must be answered by students is, what is the importance of this material for you? And what is your purpose for studying this material? If this question is able be answered by students well, then the mentor can already measure how the student's intention is in learning.

In other studies, human competence is described as an iceberg [6]. An iceberg, the volume that appears above sea level is only one-ninth of the entire volume of the iceberg. While the rest is below sea level. Likewise with human competence. 80% of the total human competence, is not visible. Where the invisible essence of competence shows human personality and attitudes, such as thinking style, motivation, job suitability, etc. While the remaining 20% is a competence that looks like knowledge, skills, work experience, etc. These invisible competencies are hereinafter referred to as soft skills. Meanwhile, the competence that appears is hard skills. So based on this description of iceberg competence [6], soft skill competence determines 80% of a person's success in completing work. Including the ability of students in learning, 80% of the success is also determined by the soft skills of the students themselves[7].

Back to User Interface Design/User Experience-UI/UX. In order for tenants to succeed in building the right UI/UX, the curriculum must be well structured so that it is easy for tenants to understand. A good curriculum must cover several aspects, namely improving the soft skills and hard skills of the tenants. Example-Problem Based Learning (EPBL) has indeed been proven to improve hard skill competence. Therefore, the EPBL method needs to be improvised so that it can also improve the hard skill competency as well as the soft skill of the tenants. To improve soft skill competency, this study used two improvised methods, namely the GROW coaching model and the design sprint.

Several Fortune organizations and companies in many countries, for example, the United States, Europe, and Australia, have used coach services. It is recorded that between 25% and 40% of companies in various countries use coach services to improve the performance of the people in them [8]. Various coaching approaches have been used successfully [9]. One coaching methodology that is very easy to apply is behavioral coaching, namely GROW which stands for Goals, Reality, Options, and Will [9]. According to research results, the application of the GROW model is proven to increase the enthusiasm and work potential of the coachees for 3 months during coaching [10].

The GROW coaching model has a positive influence on the development of individual soft skills. There is research that finds that the GROW coaching model assists individuals in developing effective communication skills, leadership skills, and the ability to manage conflict. Through a structured coaching process, individuals also develop problem-solving skills, time management skills, and increased motivation and self-confidence [11]. Other similar research also shows that the GROW coaching model has a positive impact on developing empathy and the ability to build good relationships with others [12]. Overall, the GROW coaching model is an effective approach to enhancing various soft skills needed in a professional context.

Design sprints are a collaborative method that focuses on problem solving and rapid product development. This method not only has an impact on work results and innovation, but can also have a positive influence on the development of each individual's soft skills. Through active participation

in group work sessions, design sprints can enhance communication skills, teamwork, problem solving, and creativity[13]. Design sprints are proven to strengthen critical and analytical thinking skills and increase adaptability to change [14]. Other studies have found that design sprints can improve presentation skills and self-confidence [15]. In conclusion, design sprints are an effective method for enhancing the soft skills needed in the world of teamwork and collaboration.

Design sprint has a significant influence on the development of soft skills. There is a study that found that design sprints encourage team collaboration, creativity, and effective communication between team members. The iterative process in the design sprint also develops adaptability and mental agility in dealing with complex challenges [16]. In addition, other studies also show that design sprints improve problem-solving skills, analytical skills, and decision-making abilities within teams [17]. In conclusion, the design sprint positively influences the development of soft skills such as collaboration, creativity, communication, adaptability, and problem-solving in the work environment.

In the previous study, namely Example-Problem-Based Learning, there were three contributions to the learning method. Namely (i) Exposure, (ii) Comprehension, and (iii) Reinforcement. The three steps were able to optimize the cognitive abilities (hard skills) of the students [2]. Meanwhile, in this research activity, the Example-Problem-Based Learning method was improved again to increase the soft skills of the tenants. There are three types of contributions to this research, namely (i) strengthening self-motivation for each tenant, (ii) building teamwork, and (iii) providing Example-Pbloem-Based-Learning (EPBL) subject matter. To strengthen motivation for tenants, the author uses the GROW Coaching Model method. Meanwhile, to build teamwork, the author uses the design sprint method. Furthermore, after the motivation and teamwork had been built, the authors carried out the process of transferring skills and knowledge using the EPBL method.

RESEARCH METHOD

In this study, the objects studied were tenants who studied at PT. Tunas Inkubator Creative Startup. The number of tenants who carry out pre-incubation activities is 15 people who are divided into 5 teams. This pre-incubation activity will be held from August 2022 to October 2022. The educational backgrounds of all the tenants are students majoring in Computer Science from several Universities in the Banyuwangi district, East Java, Indonesia.

In this study, the formulation of the problem discussed was "How is the effect of the Example Problem Based Learning (EPBL) improvised with the GROW coaching model, and the Design Sprint on increasing the ability of tenants?". Where the ability of tenants is measured by their speed in developing user interface designs. The limitation of the research problem is that the user interface is in the form of website design, in the form of Hypertext Markup Language (HTML) and Cascade Style Sheet (CSS).

The theoretical model used as a reference in this study is shown in Figure 1. The three types of methods proposed in this study, namely (i) the GROW coaching model, (ii) Example-Problem Based Learning, and (iii) Design sprint are used as independent variables. However, before the three methods were applied, the researchers conducted a pre-test first to explore the initial data on the tenants' abilities. The results of observations on the independent variables are written in the level section. Where this level section contains the results of observing the quality of soft skills and hard skills. If the soft skill and hard skill quality variables can be increased, it will affect the dependent variable, namely when the tenant is at the user interface design stage. Improving the quality of soft skills and hard skills will greatly affect the time needed to develop a user interface design.

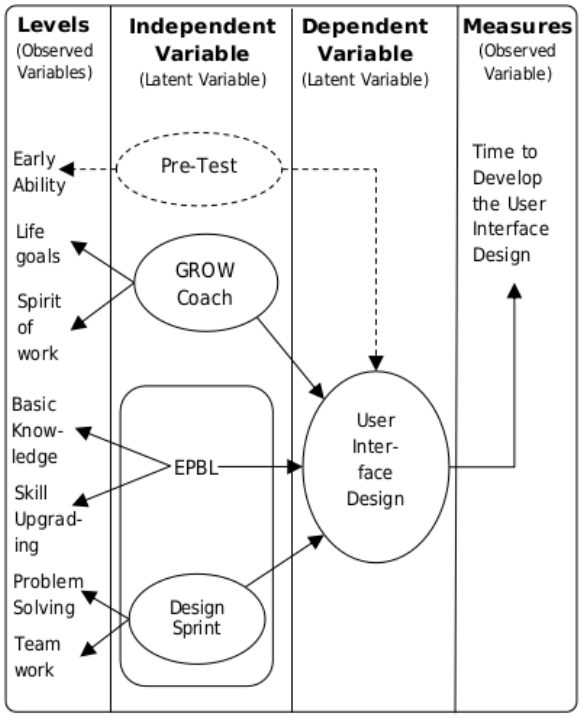

Figure 1. Theoritical Model

The approach in this research is to combine three methods, namely (i) the GROW coaching model, (ii) Design Sprint, and (iii) Example-Problem-Based Learning (EPBL). Where the three methods include mental strengthening strategies for tenants, increasing their knowledge and skills in designing user interfaces, as well as teamwork strategies to solve problems. Therefore, there are 3 independent variables in this study, namely GROW coaching, Example-Problem Based Learning (EPBL), and Design Sprints. The three independent variables will later affect the dependent variable, namely the speed of tenants in designing the user interface.

This study uses an experimental method. To measure the level of success in this study, the pre-test and post-test mechanisms were used. The pre-test is used to measure the level of understanding of basic knowledge and skills of tenants in developing user interface designs based on their startup business ideas. While the post-test is used to measure the effectiveness of the tenants' learning process in developing startup businesses. For the post-test stage, the researcher directed the tenants to take part in a digital startup competition. Where the existence of this user interface is also used to measure product-market fit for digital startups developed by tenants.

Pre-Test

To measure the level of understanding of basic knowledge and skills of tenants in developing user interface designs, it is necessary to compile a list of questions used in the pre-test stage. The list of questions during the pre-test looks like in Table 1 below.

Table 1. Table Caption

No.	List of Question
1	What is your startup business idea?
2	What is your motivation for participating in this business incubation activity?
3	Do you already have an interface design according to your business idea?
4	Do you have experience in developing low-fidelity design, high-fidelity design, and slicing websites?
5	Have you ever implemented teamwork to develop an interface design?
6	Do you already know your learning style? If you don't know, please fill out the learning style questionnaire available at https://akupintar.id/tes-gaya-belajar

The answer to the 6th pre-test question is that learning styles will greatly affect how each tenant learns. If the tenant has a Visual learning style, then they must see and understand the illustrative pictures provided by the mentor. Then the tenants have to draw their version of the illustration and practice the theory they already understand. If the tenant has an auditory learning style, then he must listen to a lot of lectures from the mentor, then practice what he understands. If the tenant has a kinesthetic learning style, then he has to write a lot and practice the material provided by the mentor first. People with a kinesthetic learning style, have to practice a lot first, to understand the theory provided by the mentor.

After the pre-test, the next step is to carry out the pre-incubation process. Where the first subject matter at this pre-incubation stage is user interface design. For pre-incubation activities to run optimally, the researcher provides a framework. The framework scheme proposed in this study looks like Figure 2 below.

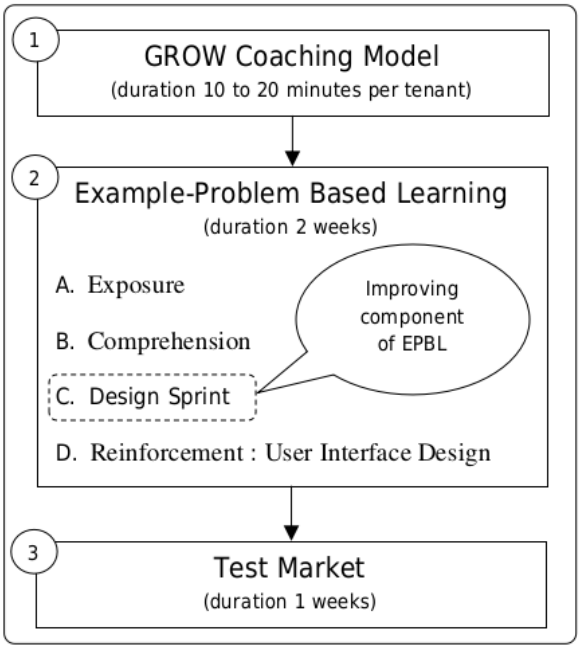

Figure 2. Improving EPBL Framework

GROW Coaching Model

The role of researchers in this research activity is as a coach. While the object of research, namely tenants, acts as a coachee. The coach's job is to ask a series of questions to the coachee. So the coach only gives questions, and may not make other statements.

GROW stands for Goals, Reality, Options, and Will. A coach will give a series of questions to the coachee in order. The purpose of this series of questions can be to influence the mentality of the tenants to discover their potential. The potential in question starts from the intention, what must be done, and up to when the tenant does something. The list of questions given by the coach to the tenants (coachees) is as follows.

Table 2. List of Question GROW Model

No.	Step	List of Question
1	G-Goals	What are your obsessions or life goals? In your opinion, what are your values?
2.	R-Reality	To achieve that obsession, what have you been doing so far? What's the problem?
3	O-Options	To continue to achieve your obsession, but there are obstacles that you experience. What alternative steps can you take?
4	W-Will	From the alternative steps, what would you do first? When do you take alternative steps?

Improving Example-Problem Based Learning

In previous research, the Example-Problem Based Learning (EPBL) component was divided into 3 components, namely (i) exposure (ii) comprehension (iii) reinforcement. In this research, the researcher's contribution is to add one component, namely the design sprint between comprehension and reinforcement. Overview of the model of each component has a different function. And each component forms an EPBL model, as shown in Figure 3 below.

	Component			
Element	*Exposure*	*Comprehension*	*Design Sprint*	*Reinforcement*
Method	Short Lecture	Work Example	Problem Solving	Project Based Learning
	Short lectures that contain basic knowledge and concepts	Tenants learn from case study examples provided by mentors	Implement the design sprint stages through a series of game flows.	Develop a user interface design based on a validated prototype
Role	Facilitator	Student	Student	Student
Strategy	Teacher Centered	Student Centered (Individual)	Student Centered (Group)	Student Centered (Group)
Purpose	Disclosure of basic knowledge domain	Increase the transfer of knowledge based on examples, and reduce the cognitive load of tenants	Generate deep understanding of users, validate ideas, and increasing team collaboration	Able to work with the team to develop user interfaces in a short time

Figure 3. the Model of Improving EPBL

The description of each EPBL component is as follows:

Exposure - first, the tenant will be given a short lecture by the mentor. Where the role of the mentor here is as a facilitator. At this stage, the mentor provides basic material knowledge about user interfaces, especially user interfaces for website applications. Tenants at this stage act passively, following the material presented by the mentor. To streamline the learning process, the mentor provides video material which can be accessed at the following URL address https://bit.ly/ekoheri-web-design. For this stage of presentation, the videos provided by the mentor start from video part 1 to video part 8.

Comprehension - At this stage, tenants have been actively trained in preparing user interface designs. They were assigned to compile a high-fidelity design. The tool for compiling high-fidelity designs is Figma (https://www.figma.com). After the tenants have finished compiling the high-fidelity design, their next task is to slice the website (HTML and CSS) according to the high-fidelity design they have done previously. For addition to basic knowledge, researchers provide examples in the form of videos that can be accessed at this URL address https://bit.ly/ekoheri-web-design. The video series used at this stage is video part 9 to video part 11.

Design Sprint - At this stage, the mentor acts as a sprint facilitator, while tenants act as sprint participants. Each team already has a startup business idea. Therefore, at this stage, it is necessary to agree on how to turn the business idea into a low-fidelity design and validate which high-fidelity design is most liked by users. To compile low fidelity design to high fidelity design, each team is facilitated to conduct a series of coordination meetings which are packaged in such a way as a series of games. This series of games is called a design sprint.

The tools needed at the design sprint stage are (i) carton paper, (ii) sticky note paper, (iii) HVS paper, and (iv) stationery. Carton paper is used to draw a customer journey map. Sticky note paper is used to write down the design for the number of website pages along with the detailed components on each website page. Whereas HVS paper is used to draw sketches of each website page, or the term is low-fidelity design. For more details, the use of these tools looks like Figure 4 below.

Figure 4. Sprint Tools

The sprint stage is divided into 5 parts, namely (1) understand, (ii) diverge, (iii) decide (iv) prototype (v) validate. To carry out the five stages, the facilitator's sprint orders to the sprint participants look like in Figure 5 below.

Stage	*The Name of Game*	*Mentors Question*
Understand	Customer Journey Map	1. I will give you 15 minutes to determine what pages should be provided so that your website users get to their destination. 2. I will give each person 3 minutes to choose which website page you think best suits user needs.
Diverge	How Might We	1. I will give you 15 minutes to determine what components should be on each website page. 2. I will give each person 3 minutes to choose which component you think is most appropriate.
Decide	Crazy Eight	1. Fold your HVS paper into 8 parts. If the folded paper is opened, it means you have 8 squares. 2. For each box, I'll give you 3 minutes to sketch your website page. 3. Please choose which sketch you think is most appropriate.
Prototype	High-Fidelity Design	I give each person 1 day to draw a homepage design according to the selected sketch. Use Figma to draw that home page.
Validate	vote to potential users	Create a questionnaire form containing all the high-fidelity home pages. Distribute the questionnaire to at least 25 potential users, and ask them to choose the one that they think is the best.

Figure 5. Stage of Sprint

Reinforcement - the last stage of this research is compiling all user interfaces according to the results of the design sprint. In the design sprint validation stage, it has been found which website home page was chosen by potential users. From the home page, was chosen by potential users, it is known which color composition, layout arrangement, and type of font are of interest to users. So the selected home page can be used as a reference for compiling other high-fidelity web pages. To conclude this stage, each team member can slice the website according to the existing high-fidelity design. The next step, the results of the website slice, can be uploaded to the hosting service, and the user interface can be accessed online.

RESULTS AND DISCUSSION

This section presents results for baseline knowledge before the pre-incubation phase (pretest performance), user interface development training efforts during the pre-incubation phase, and achievement (post-test performance).

Pre-Test Phase

All 15 tenants (5 teams) already have a startup business idea that they will build. Only their motivation for participating in the incubation activity varied. Of the 5 teams, there were only 2 teams that wanted to seriously build a startup business. While the remaining 3 teams only wanted to be able to take part in the digital startup competition organized by the local government of the Banyuwangi district. As additional information, on October 10, 2022, the local government of Banyuwangi Regency is holding a digital startup competition called "Jagoan Digital Banyuwangi 2022".

The tenant's educational background is a student majoring in Computer Science from several universities in Banyuwangi Regency. However, not all tenants have sufficient ability to develop user interfaces. There is 1 team that has never developed a user interface because all members of that team is a freshman, who has just been studying for 2 months. While the remaining 4 teams have created user interfaces, but have never had experience developing user interfaces as a team. The 12 tenants (4 teams) have already taken a website design course, but their college assignments are done individually.

Coaching Phase

In this coaching activity, the coach provides time and place for face-to-face question and answer with tenants. Each tenant is given 10 to 20 minutes. Where the number of tenants is 15 people, the total time provided by the coach is 150 minutes to 300 minutes. Each of the tenants was asked questions by the coach according to the list of questions in table 2.

From this coaching activity, researchers can find data that all tenants have understood their intentions (motives). What is meant by motives is what their life goals are, what they have done to achieve their life goals, what are the obstacles, what are the alternative solutions, and when did they work on these alternative solutions. Only detailed data from the results of this coaching cannot be published, because this data is confidential and there is some data related to the dignity and self-esteem of tenants. When researchers can measure the intentions (motives) of tenants, then the soft skill competency foundation of tenants can be measured. In iceberg competence, intention (motive) is one branch of competence that must be measured.

In this coaching activity, trainers only ask questions, without ever providing any solutions to tenants. The questions asked by the coach, as shown in Table 2, have proven to be able to help coachees discover their potential. All the problems experienced by tenants so far, it turns out that a solution can be found from the results of the tenant's thinking. From a series of trial processes, it turns out that the GROW coaching model shows positive things.

Trainng Phase

Example-Problem Based Learning that has been improvised by researchers is divided into 4 components, namely (i) exposure, (ii) comprehension, (iii) design sprint, and (iv) reinforcement. From the trial results, it turned out that 5 tenant teams were able to build a user interface in just 12 days (2 weeks). Where the exposure to the comprehension process takes 6 days, the design sprint takes 2 days, and the

remaining 4 days complete the reinforcement stage.

Exposure - At the exposure stage, the entire material presented by the mentor is 8 parts. However, of the 8 sections, only 2 are the core material, namely (i) setting the layout using the grid system method, and (ii) responsive website design. From a series of video teaching materials that have been provided by the researcher at this URL address https://bit.ly/ekoheri-web-design, the main material is in videos part 3 and part 4. These two core materials are basic knowledge for developing user interfaces of website applications. If tenants understand these two core materials, it will be easy for them to develop user interfaces using a variety of framework technologies on the market. Examples of frameworks on the market are Bootstrap, Tailwind, Bulma, etc.

Comprehension - At the comprehension stage, the researcher only provided 3 materials, namely (i) high-fidelity design, (ii) slice websites without a framework, and (iii) slice websites using the Bootstrap framework. From the test results, it turns out that the abilities of the tenants vary. 1 tenant team successfully built a user interface using the Tailwind framework. 1 other team uses the Bulma framework. While the remaining 3 teams continue to use the Bootstrap framework. In conclusion, their mindset can develop. They can develop a user interface that is different from that exemplified by the mentor. In addition, it turns out that the tenants can create user interfaces in a relatively short time. At this comprehension stage, the time they need is only 2 to 3 days. Even if they attend lectures on campus, they need 5 months to build a user interface.

Design Sprint - The design sprint stage turned out to be very helpful for tenants to solve user interface development problems. If tenants don't use a design sprint, to make sketches or low-fidelity designs, it usually takes a long time. Usually, the tenants spend their time just arguing with each other team members. However, when applying the design sprint method, it only takes 1 hour to produce a low-fidelity design. For the next 6 to 7 hours they complete the high-fidelity design, and the next 1 day they wait for the voting results from potential users. So the entire design sprint phase only takes 2 days. In conclusion, the design sprint proved to be very effective in increasing teamwork and in the end managed to solve the problem in a short time, which was only 2 days.

Reinforcement - The final stage of this training series is reinforcement. At this stage, the tenants complete all high-fidelity designs according to the results of the design sprint and develop the user interface. The role of the mentor at this stage is only to supervise the work of the tenants, and provide consultation if the tenants find it difficult. The time needed by the tenants to complete all their work is 4 days. After the tenants have finished compiling the interface, the next step is for all teams to prepare business pitch deck materials that will be rated by the board of jury in the Jagoan Digital Banyuwangi 2022 startup competition.

Post-Test

On October 10, 2022, the Regional Government of Banyuwangi Regency, East Java, Indonesia held a Jagoan Digital startup competition. This competition is used by researchers to measure the effectiveness of the learning process of tenants in developing startup businesses. Where one of the digital startup product market-fits is measured from the user interface. This competition activity is also used to measure the level of market acceptance of the startup business of the tenants. All teams (5 teams) that followed the pre-incubation process participated in the competition. The results of the competition were 2 teams won the top 5 best winners, and the remaining 3 teams only qualified until the round of the top 30.

The results of the post-test in order to measure the level of market acceptance, can be seen in table 3 below.

Table 3. List of Tenats

No	Name	URL	Description
1	Nano si Tukang	https://nanositukang1.netlify.app	Won the top 5 best winners
2.	Rumah Sampah	http://146.190.102.157:3000	Won the top 5 best winners
3	Meraki.id	https://meraki-id.netlify.app	Qualified the round of the top 30
4	Wlijo	https://seller.wlijo.com/	Qualified the round of the top 30
5	Trisae	https://websouvenir2.netlify.app	Qualified the round of the top 30

Documentary evidence of the activities of the Jagoan Digital Banyuwangi 2022 startup competition, as well as documentation of the awarding of awards to the winners of the competition, can be seen in Figure 6 below.

Figure 6. Jagoan Digital 2022 Competition

The level of public trust in startup business ideas begins with the availability of user interface applications. Speed in developing the user interface has a significant effect on market response. In this study, all startup teams were able to implement their business ideas into user interfaces in just 2 weeks. One of the judging criteria for startup business ideas is the application's user interface. Potential investors in this case are represented by the board of jury, not care of the sophistication of the software technology. However, what they evaluated first was the availability of a user interface that represented how that startup business idea worked.

CONCLUSION

The conclusion that can be drawn from this research is that the Example-Problem Based Learning (EPBL) learning method improvised with the GROW coaching model and sprint design has proven to be effective for improving tenant hard skills and soft skills. The GROW method has proven to be effective in exploring the potential of tenants. Meanwhile, the EPBL which was inserted with the design sprint proved to be effective in increasing the cognition of tenants by combining work-example with problem-solving. Not only that, but the design sprint method has also proven to be effective in creating a teamwork atmosphere to solve problems in a relatively short time. If using the EPBL method, the time used to develop the user interface is 4 weeks or even more. But after being fixed with this method, it was evident that the tenants were able to build a user interface within 2 weeks. So the level of efficiency can be increased by 50% or more.

However, in this study, the quality of the interface design has not been tested whether it meets certain standards or not. The standards in question are alignment, readability, consistency, and user engagement. For this reason, further research is needed to improve the quality of interface design using certain methods such as heuristic design or other methods.

ACKNOWLEDGMENT

This research is supported by PT. Tunas Inkubator Creative Startup. The author would like to thank colleagues from PT. Tunas Inkubator Creative Startup who have provided insight and expertise that helped this research so that the research process ran smoothly.

REFERENCES

[1] Yordan Patra Savira at al, “Analisis User Experience pada Pendekatan User Centered Design dalam rancangan Aplikasi Placeplus”, Department of Informatics, Islamic University of Indonesia, 2020, Automata Vol 4 No 2

[2] Noor Hisham Jalania, at al, “Efficiency Comparisons between Example-Problem-Based Learning and Teacher-Centered Learning in the Teaching of Circuit Theory”, Elsevier LTD, Social and Behavioral Sciences 204, (2015) 153– 163.

[3] Jullia Saad at al, “UX work in software startups: A thematic analysis of the literature", Information and Software Technology, Elsevier, 2021.

[4] Vebjørn Berg at al, “Software Startup Engineering: A Systematic Mapping Study”, The Journal of Systems & Software (2018), doi: 10.1016/j.jss.2018.06.043.

[5] Ashutosh Muduli at al, “Pedagogy or andragogy? Views of Indian postgraduate business students”, Elsevier, II MB Management Review, 2018, 30, 168–178

[6] Senhadji Hassane at al, “Competency Ice-Berg Model - A quality view to the university”, Revue Organisation & Travail, (2021), Volume 10, N°4.

[7] Subramaniam Kolandan at al, “Measuring the Competency of Teachers in Business Studies towards Students' Academic Achievement”, Universal Journal of Educational Research 8(8): 3475-3483, 2020, DOI: 10.13189/ujer.2020.080822.

[8] Saul W. Brown at all, “From GROW to GROUP: Theoretical issues and a practical model for group coaching in organisations”, Coaching: An International Journal of Theory, Grant Research and Practice Vol. 3, No. 1, March 2010, 30-40

[9] Mary Devine at all, “How can coaching make a positive impact within educational settings?”, Elsevier LTD, Social and Behavioral Sciences 93 (2013) 1382 – 1389

[10] C.O. Okorie et all, “Zoom-based GROW coaching intervention for improving subjective well-being in a sample of school administrators: A randomized control trial”, Elsevier, 2022, doi.org/10.1016/j.invent.2022.100549.
[11] Stevens, M.at all, “The Impact of GROW Coaching Model on Soft Skills Development. International Journal of Coaching Psychology”, 2020, 8(2), 87-103.
[12] Lee, J., at all, “Enhancing Soft Skills through GROW Coaching Model: An Empirical Study”, Journal of Applied Coaching Psychology, 2021, 7(1), 35-49.
[13] Knapp, J. at all, Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days, Simon & Schuster, 2016.
[14] Reddy, B., & Ravikumar, S. “The Impact of Design Sprint on Soft Skills of Design Students”, International Journal of Advanced Science and Technology, (2021), 30(4), 1888-1897.
[15] Smith, J., at all, “The Influence of Design Sprint on Soft Skills Development: A Case Study”, Journal of Design Education, 2020, 15(2), 45-58
[16] Brown, A., at all, “The Impact of Design Sprint on Team Soft Skills”, Journal of Innovation and Design, 2022, 10(2), 45-62.
[17] Johnson, M., at all, “Enhancing Soft Skills through Design Sprint: A Case Study”, International Journal of Design Thinking and Innovation, 2021, 7(1), 18-32