

Web-based Acceptance and Commitment Therapy for Optimism

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ABSTRACT

This study aims to explore and develop a Web-based Acceptance and Commitment Therapy (ACT) to enhance optimism. The sample of the study was 249 students. The research method used was the Design-based Research (DbR) method with three stages, namely analysis and exploration, design and construction, and evaluation and reflection. However, the evaluation and reflection stage are still undergoing. Data was collected using the Life Orientation Test–Revised (LOT-R) instrument and need assessment questionnaire. The web-based ACT developed was consists of nine menus, namely homepage, optimism, inspirational stories, pre-test, ACT stages, post-test, Frequently Asked Questions (FAQ), about us, and contacts. The study found that web-based ACT is feasible to enhance students' optimism. The expert judgment showed 88.6% of the web feasible to implement. Based on the focus group discussion with the students showed that 87% feasible to use by students. It was concluded that the web-based ACT is feasible to implement to enhance students' optimism. It was recommended that web-based ACT is implemented in the wider population in experiment research framework.

Keywords: *Web-based, Acceptance and Commitment Therapy, Optimism.*

1. INTRODUCTION

Optimism is considered as contributor to live a good life and cope with academic, social and career task during university life. Students expected to prepare their future optimally. Optimism is defined as a mood or attitude that expects good things in any situation, this hope is related to the social and material future [1]–[3]. Optimism and pessimism are measured and determined by two components, namely positive expectations, and negative expectations. Optimistic individuals tend to have good expectations of the future while pessimistic individuals tend to have bad expectations about the future [4].

Optimistic individuals have good adaptability skills to new environments, that make them easier to adjust to pressures when entering college, they are easily accepted in the environment, and have satisfaction with social support in first years of college life [5]. Bayrami et al. [6] found in his study on 400 Tabriz University students, optimism was the most important predictor in students' psychological adjustment. In addition, having good adaptability, optimistic individuals tend to have good resilience. Similar with Roellyana & Listiyandini's [7] study argue that optimism has a significant role of

12.3% on the resilience of final year students who are working on their thesis or final project.

Individuals who are confident and optimistic can achieve goals that lead to increased psychological well-being and life satisfaction because they can overcome the obstacles they face [8]. Based on research conducted by Wahyuni [9], there is a positive relationship between optimism and life satisfaction. This is supported by Yalçın's [10] research on Turkish students, it is stated that there is a significant positive relationship between optimism and life satisfaction.

Low level of optimism tends to have high level of stress and a lack of ability to solve problems. According to several studies, low level of optimism lead to thinking on dropping out of school or even being expelled from school. According to Eicher et al [11], stress experienced by individuals can be restrained by optimism, even to the point of reducing thoughts of dropping out of school. Less optimistic students tend to ignore problems because they focus on negative views and feelings [12]. This causes problems such as difficulty working on the thesis, motivation, and not being sure of having the strength to complete the thesis.

In the preliminary study used the Life Orientation Test-Revised (LOT-R) at one of the public universities in Jakarta to explore optimism level among students with scholarship scheme. It was found that 10% of students have a low level of optimism, 63% of students have a moderate level of optimism and 27% of students have a high level of optimism. While the average score of optimism is 16.9 out of a maximum score of 24. It can be concluded that most students with scholarship scheme have a moderate level of optimism.

Research conducted by Hutapea & Mashoedi [13] stated that the average score of optimism for low-income people in DKI Jakarta was 3.65 out of a total score of 5.00. Based on this score, it can be interpreted that the people of the low economic class in DKI Jakarta have a moderate level of optimism. A moderate level of optimism involved having a tendency of high and low optimism, meaning that individuals tend to have moderate levels of self-confidence, simply try to face the challenges they have, deal with stress quite well, and tend not to be easily depressed in solving problems [2]. However, high level of optimism enables students to find and perceived life in optimistic way, strive to pursue their goals and try to be more active in solving the problems they have. Therefore, optimism is one of potential ability of students to pursue their future.

Students with financial aid from government came from the lower class. This is shown by the fact that 68.3% of parents of scholarship students have an income lower than Rp.2,914,000, which is a below-average income. Parents with lower-middle social class backgrounds have lower expectations about their children's education. According to Maunah [14] social class and education influence, each other because high and quality education requires costs and motivation, and the level of education affects the social class. Scholarship students might have academic demands from scholarship providers. Academic and non-academic demands, as well as family problems, can be a cause of stress and depression [15].

Therefore, intervention to enhance student optimism especially from lower economic class is considered as an alternative strategy to help them perceive their life from a positive sphere. There are several strategies to enhance students' optimism. Study found that online intervention on inculcating positive psychology and writing daily activities for three weeks could enhance students optimism [16]. In addition, according to Meevissen et al. [17] imagine the best version of yourself for 5 minutes per day and do it for 2 weeks. Another intervention, namely cognitive-behavioral therapy, can help to increase optimism in individuals who are depressed [18]. In this study, the researcher chose to use the Acceptance and Commitment Therapy (ACT) approach. ACT has the goal that individuals can improve their abilities towards more valuable goals by

helping individuals to become aware of hidden thoughts, feelings, and personal body sensations and behaviors [19].

Feasibility of ACT used in college student population is promising. Several studies used ACT for college student such as study by Eryananda and Oriza [20] on social anxiety symptom reduction, Marmer and Nurwianti [21] on reducing psychological distress with social media addiction and Pasaribua and Zarfielb [22] on reducing stress among college students

ACT has a significant effect on psychological well-being and optimism in patients with irritable bowel syndrome and infertile women [23], [24]. These results are obtained because of cognitive separation, building new interactions, identification of values, and commitment to act according to their values. The ACT considers six processes to help individuals achieve their general goal of achieving psychological flexibility [19]. Optimism and pessimism can significantly mediate the relationship of psychological inflexibility with psychological problems. This suggests that higher optimism and lower pessimism can reduce the negative impact of psychological inflexibility on the experience of psychological problems [25].

The development of technology and covid 19 pandemic force psychological services to adapt to online mode. The use of the internet, especially the website, allows the services provided to be accessed free of charge or at a relatively small cost, faster and easier to access, and quite efficient. Web-based intervention or web-based intervention is an online intervention program through a website that clients use to interactively seek self-help related to mental health issues. Self-intervention programs aim to create positive change or increase knowledge, awareness, and understanding through materials related to mental health [26]. Based on the above background, the researchers are interested in developing a web-based Acceptance and Commitment Therapy to increase the optimism of scholarship students at one of the public universities in Jakarta.

1.1. Optimism

Optimism is a mood or attitude related to expectations about the social and material future [3]. According to Sutherland & Seligman [27], optimistic individuals can see life from a more positive perspective and maintain hope, by facing challenges because they believe that everything will go well, and their goals will be achieved in the future. Optimism is expecting good things to happen to individuals, seeing good things, and tending to find the best in any situation [1], [2].

According to Scheier et al. [4] measurement of individual optimism is determined by two components, namely positive expectations and negative expectations.

Optimistic expectations are individual beliefs to be able to realize goals and hopes in the future. Pessimistic expectations are feelings of uncertainty that individuals have to be able to solve problems in life and realize hopes in the future.

Optimistic individuals tend to feel confident, persistent in facing challenges, hope for a good result, can cope with stress and cope well with the causes of stress, are not easily depressed and are more stable when facing problems, have a wider social network, are preferred over people who are pessimistic and form closer relationships [2]. Meanwhile, pessimistic individuals tend to give up easily, are afraid to take risks, hesitate, are easily disappointed when they fail, rarely see things positively, have difficulty finding ways to solve problems, often feel sorry for themselves, like to be discouraged, regret and hate all failures. easily find faults, have difficulty feeling happy, and often doubt the expectations they have [28].

Optimism has several impacts on individuals, namely social impacts, mental health, health, and education. The impact of optimism on social life is having greater social support, having wider relationships, having mutually reinforcing relationships, being satisfied more quickly when in relationships, having a dominant interpersonal relationship, and being preferred and supported by the environment [2], [18]. The impact of optimism on mental health is reduced suicidal ideation, has good stress coping, has good resilience in stressful situations, and has a clearer mental picture when thinking about the future [2], [18].

The impact of optimism on health is enable students to control life satisfaction before undergoing surgery, getting more life satisfaction after surgery, being able to survive after surgery and before surgery being able to plan for the future and the recovery process [2]. The impact of optimism on education is that it facilitates adjustment when entering college, is more accepted in the social environment, and has satisfaction with social support at the beginning of college [5].

1.2. Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT) is a therapeutic approach that uses acceptance and awareness processes, as well as commitment and behavior change processes, to produce greater psychological flexibility [29]. According to Hofmann [30] ACT is an approach to treatment that includes several useful strategies based on behavioral analysis. The main goal of ACT is to continuously improve individuals' ability to pursue more worthy goals, use strategies such as metaphors, paradoxes, and exercises to impair the literal function of language, and highlight their inability to accurately describe direct experiences [19].

ACT considers six processes to help individuals achieve their general goal of achieving psychological flexibility [19]. The six core processes of the hexaflex model are interconnected with each other. This process is divided into two, namely the mindfulness and acceptance process and the commitment process. The mindfulness and acceptance process are on the left of the hexaflex, this process consists of acceptance, diffusion, relating to the present and self as a context. While the commitment process is on the right side of the hexaflex, this process consists of values, commitments, relating to the present and self as a context.

The ACT stages are 1) acceptance, actively experiencing events as they are without changing or fighting reality [31], [32]; 2) defusion, changing the context of language into an automatic function [31]; 3) contact with the current situation, focus on increasing attention to external and internal events in the here and now [31]; 4) self as context, the process of stepping back from all definitions and stories about oneself, without disputing facts and learning to observe them [19]; 5) value, something important that is believed by individuals and is used as a benchmark in carrying out life [19]; 6) actions taken or commitments, active behavior from personal values that have been identified by clients and constructs them into a larger and wider pattern [31].

The Acceptance and Commitment Therapy is divided into three stages, namely open-up, awareness (be present), and doing important things (do what's matters). The stages of openness or open-up used in the web-based ACT are 1) identification of optimism and pessimism; 2) clouds in the sky; 3) the metaphor of the bowl of fear. The stage of awareness or being present, namely 1) body scan; 2) leaves on the stream; 3) see yourself as a context. The stage of doing important things or do what's matters, namely 1) a reunion exercise for the next 5 years; and 2) four square tools exercise.

1.3. Self-help Web

Self-help web is a website that contains psychological help and self-help guides that can be used by individuals who need psychological help for themselves [33]. A self-help web provides instructions or guidelines on the website. However, may recommend other media, such as certain books or pamphlets, pictures, videos, or audio as additional instructional resources.

The advantages of web-based intervention compared to conventional one are 1) available anytime and anywhere; 2) relevant information can be copied, retrieved, and printed easily; 3) can include additional information such as images, audio, or video that are difficult to communicate by conventional media; 4)

search for information is easier, faster and more efficient; 5) can reach people who have difficulty getting psychological assistance directly [33]. While the disadvantages of web media are 1) containing wrong information; 2) bias may occur; 3) distorted information; 4) Information that is not updated; 5) false information [33].

2. METHODS

This study aims to develop a Web-based Acceptance and Commitment Therapy (ACT) to enhance student optimism. This research was conducted at one of the public universities in Jakarta for 13 months starting from August 2020 to August 2021. The research population consisted of 657 scholarship students. The sample of this study was 249 students with the sampling method using the convenience sampling method.

The research was preliminary of Design-based Research. The Design-based Research method refers to the research procedure for the development of Educational Design Research. According to McKenney & Thomas [34] educational design research is a genre of development research as a solution to practical and complex educational problems. The following are the stages of development in this research, namely 1) analysis and exploration; 2) design and construct; 3) evaluation and reflection. The research was a preliminary study which conducted only until alpha stage.

This study collected data using the Life Orientation Test-Revised (LOT-R) instrument to measure an individual's optimism and general belief in achieving the desired outcome [4]. This instrument has 10 statement items consisting of 3 positive items, 3 negative items and 4 fill-in items that do not affect the score. The answer choices use a Likert scale from 0 to 4. The categorization in this instrument consists of three, namely low (score 0-13), medium (scores 14-18), and high (scores 19-24). The LOT-R instrument has been translated by Kurniasih [35] in her research.

In order to explore the need of online intervention, the study used expert judgment on website and readability of the website by focused group discussion. The method used is an assessment using a questionnaire. The material expert test questionnaire uses an online teaching materials expert test questionnaire created by Kustandi & Sutjipto [36] which was adapted from Wetson and Mc Alpine. Media expert test questionnaire using measuring perceived website usability developed by Wang & Senecal [38]. Assessment of media expert test, material expert test, and readability test using a rating scale of 1-4. Data analysis uses percentage calculations, while the level of media validation is classified into four categories, namely less feasible (0-39%), moderately feasible (40-55%), decent (56-75%), and very feasible (76-100%) [37].

3. RESULT AND DISCUSSION

This research aimed to explore feasibility of a self-help web-based intervention using the ACT approach to enhance student optimism. The content of the website consists of information about optimism, inspirational stories, pre-test, ACT intervention, and post-test. In addition, this website is equipped with several additional features such as a home menu, Frequently Asked Questions (FAQ), about us, and contacts. The development web-based ACT used Design-based Research model with three stages, namely analysis and exploration, design and construction, evaluation, and reflection. However, this study was only carried out until the evaluation stage (alpha stage).

The stages of development of web-based ACT are following First, the analysis and exploration phase. At this stage, the researcher discusses the research topic with experts and begins to explore various ways that can be done to increase optimism. Furthermore, the researcher also conducts a literature review to strengthen the theory that will be used in media research and development. In addition, conducting several professional meetings with experts and stakeholders to discuss solutions to research problems.

Researchers conducted a preliminary study on the level of student optimism and media needs. Based on the results of the preliminary study 43 students (17%) had low levels of optimism, 135 students (54%) had moderate levels of optimism, and 71 students (29%) had high optimism. If viewed from the average optimism score, students have a moderate level of optimism with an average score of 16.6 out of a maximum score of 24. In addition, 115 students (46%) have looked for information on how to increase optimism, for example through watching motivational videos, reading books. or look for tips and tricks on the website. According to 158 students (63%) it is very necessary to have self-help web media to increase optimism so that students can increase optimism.

Students preferred informative, interactive, easily understood, easy used and accessed, detailed and clear stages, reliable sources used, use of calming colors, attractive user interface, equipped with exercises, can be used via laptop or computer. smartphone, not too many ads, and affordable prices. 64% of students like sans serif or legless letters, 53% of students prefer websites with warm-colored backgrounds. Regarding internet facilities to support students in accessing the web, 236 students or 95% of students have internet facilities and internet usage. Even 35% of students use the internet for more than 10 hours per day.

The second, the design and construction stage. At this stage the researcher discussed several ideas to increase optimism with experts, the result was the need to develop a web to increase optimism using the ACT

approach. The web was chosen as the most suitable medium based on several considerations, namely it is easy to access anywhere, anytime and can use other supporting media such as video or audio. The ACT approach was chosen due to adequacy in enhancing psychological flexibility and optimism. The stages of the ACT approach consist of six stages, namely self acceptance, diffusion, relating to the present, self as context, values, and committed actions [19]. In this study, brief ACT was used to which consists of three stages, namely open up, be present and do what's matters [39].

The planning for website development begins with designing the main features which are the homepage, material on optimism and pessimism, inspirational stories, pre-test, stages of optimism using the ACT approach, post-test, Frequently Asked Questions (FAQ), about us and contact. A web usage guide containing step recommendations is included on the web, on the home menu. The color, background, typeface, font size, spacing, and the website content was developed based on need assessment of the user and judge by experts.

The Web-based ACT has nine menus, namely homepage, optimism, inspirational stories, pre-test, ACT stages, post-test, Frequently Asked Questions (FAQ), about us, and contacts. The home menu contains a welcome greeting, information about interventions using the self-help web, the purpose of using the web, processing time, and stages of using the website. The optimism menu contains definitions of optimism and pessimism, the characteristics of optimism and pessimism, and the impact of optimism. The inspirational story menu is in the form of a blog that tells of three inspirational figures, namely Jerome Polin, Gita Savitri, and Reani. The pre-test menu measures the client's level of optimism and psychological flexibility. The ACT Stages menu contains eight exercises, namely identification of optimism and pessimism, clouds in the sky, bowl of fear, awareness, and body scan, leaves on the stream, seeing oneself as a context, reunion exercises for the next five years, and strategies to realize dreams. The post-test menu measures the level of optimism, psychological flexibility, and client satisfaction with the services provided. The FAQ menu contains important questions frequently asked by clients. The about us menu contains developer profiles. The contact menu contains our contact form and testimonials.



Figure 1. Home Page Website



Figure 2. Website Stage



Figure 3. Pre-Test

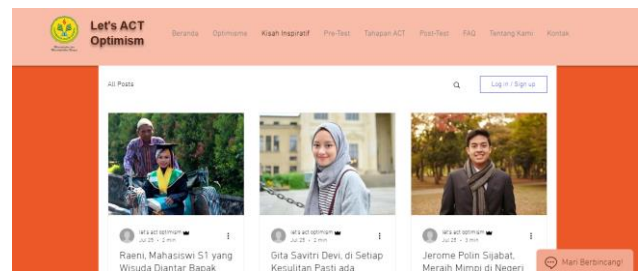


Figure 4. Inspirational Stories



Figure 5. Acceptance and Commitment Technique



Figure 6. Post-Test

Third, the evaluation stage. The ACT website was judge by two experts in psychology and guidance and counseling, as well as website development. Furthermore, the website was validated by users.

The following are the results of the web-based ACT expert judgment:

Table 1. Media Expert Judgement Result

No.	Aspect	%	Category
1.	Easy of navigation	88.6%	Very worthy
2.	Speed		
3.	Interactivity		
4.	Attitude		

The results of the media expert judgment shows that the web-based ACT is very feasible (86.6%). The website had easy of navigation, easily to use and learn, and useful for college students. Feature needs to be added was navigation buttons to continue or return to other menus. The speed of the website was good, the web-based ACT can load the information quickly. The interactivity of the website needs to improve in order to increase users' engagement on the website.

The following are the results of the ACT web-based material expert test that has been carried out:

Table 2. Content Expert Judgement Result

No.	Aspect	%	Category
1.	Material	88.6%	Very worthy
2.	Language		

The results of guidance and counseling expert shows that the material in the web-based ACT was very feasible (88.6%). The ACT web-based content was up-to-date, sufficient, and reliable. The language used in the web-based ACT was clear, easy to understand, communicative and accurate. The selection of metaphors and analogies was relevant. In addition, the ACT web-based steps and exercises used are sufficient and scientific. Several improvements to be conducted for further research was interactivity and engagement of users by providing feedback of the experiential exercises.

Table 3. Readability Test Result

No.	Aspect	%	Category
1.	Material	87%	Very feasible
2.	Language		
3.	Design		

The result of the readability test by students as users was very feasible (87%). The web-based ACT was very easy to read and understand. The web-based ACT provide useful and adequate materials, the exercises was easy and beneficial. The web-based ACT has an attractive design with excellent colors combination. The supporting audio-visual tools such as videos was helpful.

The limitations in this study were the website used free Wix feature which implicated to visibility of the progress by the users. In addition, the research is still

continuing, further evaluation and reflection need to be done to revise the website.

4. CONCLUSION

It can be concluded that the web-based ACT was very feasible to use to enhance students' optimism. However, several improvements need to be done to increase users' engagement to the website. The Web-based ACT was one alternative for university services in helping students to enhance their optimisms independently. It was recommended that further research for testing the website effectiveness.

AUTHORS' CONTRIBUTIONS

The research conducted as undergraduate final project. The first author was the supervisor, and the second author was the supervisee.

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