

## Battle of Bootcamp: Analyzing Factor Affecting Customer Satisfaction and Continuance Intention in Coding Bootcamp Industry Indonesia

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**ABSTRACT:** Indonesia should be ready to face the technological transformation to become Society 5.0. The technological expansion has fueled concerns traditional institutions will not be able to produce enough graduates with digital skills the economy demands. This has led to the emergence of Education technology (EdTech), particularly a new kind of vocational training namely Coding Bootcamps. This research is intended to explore the determinants of students' satisfaction in Coding Bootcamp platform in Indonesia. Three independent variables were being analyzed which are User Behavior on Coding Bootcamp Program (UB), User Experience (UE), and User Motivation (UM) to User Satisfaction (SAT). Then, User Satisfaction tested as mediating variable between the three independent variables to Continuance Intention (CI). Single, Multiple Regression along with Sobel test were conducted to analyze 262 questionnaire participants. Research resulted Satisfaction is significantly predicted by UB & UE. Then, Satisfaction have a significant relationship with CI. In accordance to Sobel test result, SAT significantly mediate the relationship between UB & UM to CI. Motivation is not found to be a significant variable in this research. Bootcamp models, however, have the potential to disrupt higher education and fundamentally alter the nature of education and training if they are successful in meeting the customer needs.

**KEYWORDS:** Coding Bootcamp, Continuance Intention, EdTech, User Behavior, User Motivation, User Satisfaction.

### I. INTRODUCTION

Industry 4.0 has become a major revolution in the development of human life. The technological innovation continues as Japan introduced the new era of technology: Society 5.0 [1]. Indonesia should be ready to face the technological transformation to become Society 5.0. Furthermore, Indonesia benefits demographically from the development of a resilient digital environment [2]. Generation Z and Millennials, who have a high rate of digital usage and make up the majority of Indonesia's population, range in age from eight to thirty-nine [2].

However, the Ministry of Communication and Information released the newest data that Indonesia lacks 400,000 - 500,000 digital talents per year. In the global scale, the number of digital talents in Indonesia is only 0.2% of the total workforce in 2019 that ranks ninth out of a total of 11 countries surveyed [3]. This deficiency can also be offset by the fact that only 20% of the total 4000 campuses in Indonesia have Information and Communication Technology (ICT) study programs [3]. If this digital talent gap is not immediately resolved, Indonesia could miss the potential value of the national digital economy estimated at IDR 5,718 trillion in 2030 Ministry of Trade [4].

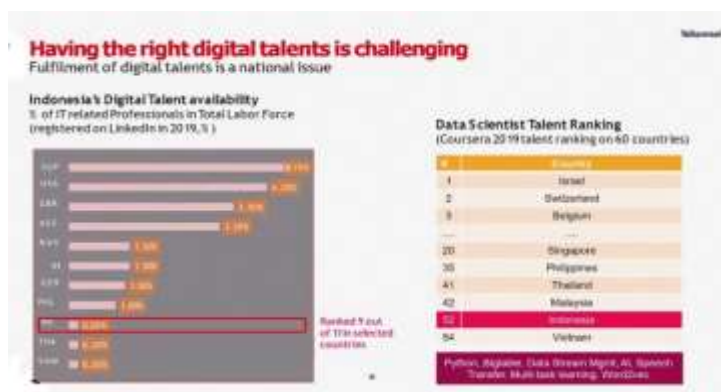


Figure I. Indonesia Digital Talent in Global Scale: [3]

The prospect of further expansion in the technology sector has fuelled concerns that traditional institutions will not be able to produce enough graduates with the skills the economy demands [5]. Thereafter, many people are looking for alternatives to fulfil this gap in knowledge. This has led to the emergence of a new kind of vocational training namely Coding Bootcamps [6]. Coding bootcamps are the newest addition to this marketplace of spaces for learning the skill in the technology sector.

Coding bootcamps refer to intensive, short-term programs that teach students programming fundamentals in order for them to start working in entry-level computer professions right away after completion. [6]. They primarily blend the traits of conventional programs for vocational training with the rigor of military boot camps to develop social-emotional skills and techniques in an intensive way that can be called a "skills accelerator". Based on the latest report titled Coding Bootcamp Market Growth Forecast 2022 - 2026 by Technavio (2022), unveil the growth trend for the industry is accelerating at Compound Annual Growth Rate (CAGR) 19,31% [7]. The market for 2022 - 2026 is projected to obtain incremental growth of \$1.20 billion [7]. In 2020, 79% of graduates were working in a position requiring the technical skills they obtained at bootcamp, earning a median raise of 56% or \$25,000 per year. and average post-bootcamp starting salary is \$69,079 [8]. The gender gap in tech industry through times has been narrowing since women make up nearly 40 per cent of the student body population [8].



Figure II. Global Coding Bootcamp Market Forecast 2022 – 2026: [7]

The notion of the effective post-bootcamp hiring rate may also come along with skepticism and critiques. The current increase in bootcamps, presenting a business model that is fairly easy to implement; providing online learning with professional teachers and a curriculum without specific accreditation, not a few doubt the quality of each boot camp presented [9]. It argue that the coding bootcamps frequently instruct on frameworks that prioritize convention over configuration. Students learn the rules for using a particular tool, but not how the foundations apply to other tools and technologies [9]. In terms of hiring rates, many bootcamp offer or promise its job connector function, but few of them reveal their real hiring percentage to the public. According to Council on Integrity in Results Reporting (CIRR), The average percentage of alumni working in the field 180 days after graduation from 29 coding bootcamps between July and December 2018 was roughly 78% [10]. However, the percentage of workers covers all employment in the industry, whether it be full- or part-time, an apprenticeship, or a temporary contract. The typical student participating in a coding bootcamp has six years of work experience and a bachelor's degree, two factors that may affect their employability [10].

There is still limited literature that discusses about the Coding Bootcamp in Indonesia. As time goes by, more Coding Bootcamp offering services are popping up on the market today. Based on a review of the job portal marketplace Ekrut [11] the renowned Coding Bootcamp including Binar Academy, Revo.U, Haktiv8, Purwadhika School, Skillacademy by Ruangguru, and Myskill.ID. After all being said, it is necessary to study whether Coding Bootcamp platforms can meet the needs of students, becomes an effective means of special period education, and teaching instructors can complete the teaching tasks with high quality. The main goal is to offer recommendations to support the growth of the coding bootcamp sector in accordance with the findings of the study, particularly in the context of Indonesia.



## II. LITERATURE REVIEW

The objective of the literature review is to provide information on factors that influence student satisfaction in Indonesia's Coding Bootcamp market. The linked research also spans the field of educational technology because there is still a limited number of researches that solely focus on bootcamps

Coding Bootcamp is described as an intensive, employment-focused educational program with a typical duration of 3 to 12 months that aims to assist students in developing marketable skills necessary for pursuing professions in technology [12]. Coding Bootcamp may vary in terms of duration, depth, curriculum, programs, and connection with employment opportunities. Mulas et al. (2017) classified Coding Bootcamp into 2 type of programs, namely Professional Tech Skills (Preparation for low entry tech Jobs) and Educational (Introduction to tech skills to potential workers or school students) [6]. In professional tech skills, it was categorized as (1) Pre Bootcamp-Model, provide basic provision to prepare students for the "Ready-to-Work" model; (2) Ready-To-Work Model (Coding Bootcamp); and (3) Bootcamp+ Model, extended training approach that integrates a coding bootcamp curriculum with practical or "on-the-job" training. In Educational group, it focuses on to pique interest in learning fundamentals of coding skill. The group differentiate its target market, for professional or community known as (1) Mini Boocamp Model and (2) Early Bootcamp Model for school students

Lopez et al (2018) identified customer satisfaction and intention to use Massive Open Online Course (MOOC) through structural equation modeling (SEM) and the neural network [13]. The data demonstrates that course quality, entertainment value, and utility all have an impact on reported satisfaction. When addressing user emotions, the latter factor is also very important..

Chen et al. (2020) examines user satisfaction on Chinese online education platforms using questionnaire survey and a web crawler [14]. It develops a system for measuring customer satisfaction by doing quantitative analysis of existing literature and emotion. In order to forecast user satisfaction, it creates a back propagation (BP) neural network model. According to the analysis, platform accessibility has the highest impact on user satisfaction, with particular consumer characteristics having no discernible influence.

Zhou (2015) this study examines the factors that influence students' decisions to use MOOCs [15]. The theory of planned behavior (TPB) and the self-determination theory (SDT) were combined as a research framework. The results indicated d that attitude toward MOOCs and perceived behavioral control (PBC) were significant determinants of intention to use. Autonomous motivation served as a predicate for each of the three main constructs of the TPB, while controlled motivation acted as an antecedent only for subjective norms.

Alraimi et al (2015) also identified elements that strengthen a person's intention to keep utilizing MOOCs [16]. Continuance expectation-confirmation model is put forth. The perceived repute, perceived openness, perceived usefulness, perceived, and user satisfaction are found to have an impact on the intention to use. The strongest determinants, perceived openness and perceived reputation, have never been examined in the context of MOOCs.

Particularly for Coding Bootcamp, Lang & Sharp (2020) identified Coding Bootcamp satisfaction from a diverse perspective, from industry, faculty, administrator, students, and curriculum [17]. The study developed a research model and survey instrument consisting of 14 satisfaction factors through data mining from 28,000 student reviews. The proposed satisfaction factors include quality of instructors, value of mentors, availability of teaching assistants, access to support staff, provision of career services, rigor of curriculum, appropriateness of pedagogy, development of peer connections, conduciveness of atmosphere, use of appropriate technology, affordability, openness of communication, quality of preparation course, and level of post-bootcamp support.

Several reports that analyze the whole ecosystem in Coding Bootcamp are being used on this current research for the whole analysis. These reports covered different regions on a global scale that were published by International Telecommunication Union (ITU) (2016) [18], Mulas et al. (2017) [6], Career Karma (2020) [12], and Course Report (2021) [8].

Based on prior research, certain attributes need to be chosen for this study and tailored to the Indonesian market for coding bootcamps. Initial discussions with employees serving as spokespeople and with few alumni from various Bootcamps to gain a wider perspective validated this. As a result, User Behavior on Coding Platform (UB), User Experience (UE), User Motivation (UM) were chosen as Independent Variable to User Satisfaction (SAT) and Satisfaction to Continuance Intention (CI). Satisfaction also was tested as mediator between UB, UE, UM to CI. For additional comparison, three IV were tested in its direct relationship to CI. Thus, research hypothesis included:

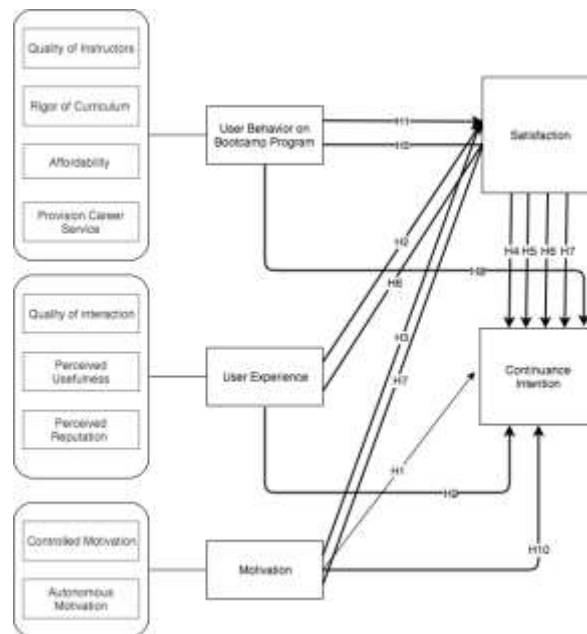


Figure 1. Research Conceptual Framework

**H1.** The user behavior on coding bootcamp programs has a significantly positive influence on user satisfaction in the coding bootcamp program.

**H2.** The user experience on coding bootcamp programs has a significantly positive influence on user satisfaction in the coding bootcamp program.

**H3.** The user motivation on coding bootcamp programs has a significantly positive influence on user satisfaction in the coding bootcamp program.

**H4.** The user satisfaction has a significantly positive influence on continuance intention in the coding bootcamp program in the coding bootcamp program.

**H5.** The user behavior on coding bootcamp programs has a significantly positive influence on continuance intention through satisfaction in the coding bootcamp program.

**H6.** The user experience on coding bootcamp programs has a significantly positive influence on continuance intention through satisfaction in the coding bootcamp program.

**H7.** The user motivation on coding bootcamp programs has a significantly positive influence on continuance intention through satisfaction in the coding bootcamp program.

**H8.** The user behavior on coding bootcamp programs has a significantly positive influence on continuance intention in the coding bootcamp program.

**H9.** The user experience on coding bootcamp programs has a significantly positive influence on continuance intention in the coding bootcamp program.

**H10.** The user motivation on coding bootcamp programs has a significantly positive influence on continuance intention in the coding bootcamp program.

### III. METHODOLOGY

#### A. Data Collection

In this research method, it will be conducted through questionnaire with total 29 items delivered with Bahasa Indonesia. It will be preceded by questions regarding demographics such as last educational background, how many times have attended Bootcamp program, type of Bootcamp program that they have experienced, how many months after joining latest Bootcamp program, etc. The scoring system was 1–5, where 5 represented strong agreement and 1 represented strong disagreement.



**Table I.** Questionnaire Content

<i>Classification of Investigation</i>	<i>Content of Investigation</i>
User Basic Information	Age, gender, Educational background, Type of Bootcamp program, etc.
User Behavior on Coding Bootcamp Platform	Quality of Instructors, Curriculum, Affordability, Provision of Career Service
User Experience	Quality of Interaction, Perceived Usefulness, Perceived Reputation
Motivation	Controlled & Autonomous motivation
Behavioral Outcome	Degree Satisfaction, Continuance Intention

The questionnaire delivered through online platform such as ITB Mailing List and Social Media. The sampling technique used in this research is a nonprobability sampling technique. The sampling technique used in this research is a nonprobability sampling technique with convenience sampling as considered to be time and cost-efficient method [19].

**B. Research Instruments**

**Table II.** Research Instruments

<i>Variable</i>	<i>Dimension</i>	<i>Code</i>	<i>Item Code</i>	<i>Indicator</i>	<i>Reference</i>
USER BEHAVIOR ON BOOTCAMP PROGRAM	Quality of Instructors	of QI	QI-1	Relevant industry experience	Lang & Sharp (2022) [17]
			QI-2	Knowledgeable	
			QI-3	Caring about students	
	Rigor of Curriculum	of RC	RC-1	Skills in demand	
			RC-2	Industry best practices	
			RC-3	Accelerated learning	
	Affordability	AF	AF-1	Pricing competitiveness	
			AF-2	Flexible options	
			AF-3	Tuition reimbursement options	
Provision of Career Service	Career CS	CS-1	Helps find appropriate job openings		
		CS-2	Facilitate networking		
USER EXPERIENCE	Quality of interaction	of INT	INT-1	Active participation	Chen et al. (2020) [14]
			INT-2	Complete study assignment on time	
	Perceived Usefulness	PU	PU-1	Improves learning performance.	
			PU-2	Increases learning effectiveness.	
			PU-3	Usefulness	
	Perceived Reputation	PRT	PRT-1	Offered by prestigious organization	
PRT-2			Education providers have a good reputation.		
MOTIVATION	Controlled Motivation	CM	CM-1	Other people encourage to join the program	Zhou (2016) [15]
			CM-2	Feel under pressure from surroundings to join the program	
			CM-3	Feel ashamed when I do not join the program	
	Autonomous Motivation	AM	AM-1	Make the best effort	
			AM-2	Study more specific because it's meaningful	
		AM-3	Enjoy studying		



SATISFACTION	SAT	SAT-1	Feel satisfied	Arbaugh (2000; Sun et al., 2006) [37]
		SAT-2	Served needs well	
		SAT-3	Wise choice to join the program	
CONTINUANCE INTENTION	CI	CI-1	Will continue using the Bootcamp program	Alraimi et al. (2015) [16]
		CI-2	Strongly recommend others to join	

**C. Data Analysis**

*1. Descriptive Analysis*

The descriptive statistic used is the frequency distribution of the demographic data of research participants in the form of a percentage (%).

*2. Regression*

The multiple regression processing technique aims to determine the effect of more than one independent variable (IV) on one dependent variable (DV). This technique is also used to answer the research hypothesis. In this study, multiple regression will be carried out between User behavior on the Coding Bootcamp Platform, User Experience, and User Motivation on Satisfaction, and on Continuance Intention. Then, from Satisfaction, simple regression will be carried out to Continuance Intention. Analysis with this technique is also used because the data processed is data with an interval scale.

*3. Sobel Test*

To establish the significance of the observed mediating effect of three user factors with satisfaction, a Sobel test was conducted [20]. Sobel developed a test of significance for the indirect effect of the independent variable on the dependent variable through the mediator [20]. Sobel's test is the best tool for evaluating mediation effects, according to MacKinnon et al [20]. The mediation effect can be recognized when the test results are significant, meaning that the variable succeeds in mediating between the independent and the dependent variable.

**IV. FINDINGS**

**A. Respondents**

The respondents in this study were people who have taken the coding bootcamp program. From a total 289 online questionnaires accessed, 262 of them were eligible in data processing.

**B. Descriptive Analysis**

Based on research result, most of the participants were in the age group of 25 - 29 years old (48%), followed by 20- 24 years old (39%) and 30 - 34 years old (11%). Majority of them have attained Bachelor's Degree (72%), Master's (17%) and Diploma (10%). For the Coding Bootcamp companies, many participants have taken program from Revo.U (25,6%), Skill Academy by Ruanguru (22%), Binar Academy (20%), and Myskill.ID (16,27%). The type of Coding Bootcamp program that most participants have taken apart are Digital Marketing (29,32%), UI/ UX Design (15%), Data Science & Product Management (13,28%). Social media advertisement such as Instagram/ Facebook/ Google ads was the highest source of information channel (35,38%), followed by social media profile visit (25,57%), friends (17%) and colleagues' recommendation (15,60%). More than half participants took program that lasts between 3 – 6 months (59,16%), less than three months (37,79%), and > 6 months (3%). For the last question, most participants' reveal the latest coding bootcamp program they have joined is related to their current job (77%)



Table III. Research Participants' Demographic Descriptive Analysis

<i>Characteristic</i>	<i>Category</i>	<i>n</i>	<i>%</i>
Age	25 - 29 years old	125	47,71%
	20 - 24 years old	103	39,31%
	30 - 34 years old	28	10,69%
	15 - 19 years old	5	1,91%
	35 - 40 years old	1	0,38%
	> 40 years old	0	0,00%
Educational Background	Bachelor's Degree (S1)	185	70,61%
	Master Degree (S2)	44	16,79%
	Diploma (D1 - D3)	27	10,31%
	Vocational High School (SMK)	3	1,15%
	High School Graduates (SMA)	3	1,15%
Coding Bootcamp Companies	Revo.u	85	25,60%
	Skill Academy by Ruangguru	73	21,99%
	Binar Academy	66	19,88%
	Myskill.ID	54	16,27%
	Purwadhika Digital School	17	5,12%
	Haktiv8	13	3,92%
	Others		7,23%
Type of Program	Digital Marketing	117	29,32%
	UI/UX Design	60	15,04%
	Data Science	53	13,28%
	Product Management	53	13,28%
	Website Development	24	6,02%
	Business Intelligence	20	5,01%
	Others		18,05%
Source of Info	Social Media Advertisement	161	35,38%
	Social Media Profile	130	28,57%
	Friends	77	16,92%
	Work Colleague	71	15,60%
	Family	14	3,08%
	Events	1	0,22%
Program Duration	3 - 6 months	155	59,16%
	< 3 months	99	37,79%
	> 6 months	8	3,05%
Current Job related to latest Bootcamp Program	Yes	202	77,10%
	No	60	22,90%



C. Main Data Analysis

Table IV. Main Data Analysis Result

Variable	$\beta$	t	p	Model Summary		ANOVA	
				R	Adjusted R <sup>2</sup>	F	Sig F
<b>Multiple Linear Regression (UB, UE, UM → SAT)</b>							
User Behavior on Coding Bootcamp Platform (UB)	0.148	8.549	0.000**				
User Experience (UE)	0.212	7.448	0.000**	0.879	0.770	291.648	0.000**
User Motivation (UM)	0.021	1.171	0.243				
<b>Simple Linear Regression (SAT → CI)</b>							
Satisfaction (SAT)	0.479	15.235	0.000**	0.687	0.470	232.090	0.000**
<b>Multiple Linear Regression (UB, UE, UM → CI)</b>							
User Behavior on Coding Bootcamp Platform (UB)	0.042	2.351	0.019**				
User Experience (UE)	0.179	6.049	0.000**	0.704	0.489	84.388	0.000**
User Motivation (UM)	0.018	0.974	0.331				

1. Simple Linear Regression

Satisfaction is found to have a positive and significant relationship with Continuance Intention (H4) ( $\beta = 0.148, p < 0.05$ )

2. Multiple Linear Regression

The empirical results significantly support all hypotheses except for User Motivation (H3, H7, H10). User behavior on Coding Bootcamp Platform have a positive and significant relationship to User Satisfaction (H1) ( $\beta = 0.148, p < 0.05$ ), as well as User Experience (H2) ( $\beta = 0.212, p < 0.05$ ).

In comparison to three aspects of user on their direct relationship to Continuance Intention, are found to have a positive and significant relationship for User Behavior (H8) ( $\beta = 0.042, p < 0.05$ ) and User Experience (H9) ( $\beta = 0.179, p < 0.05$ ). However, User Behavior, User Experience, and User motivation simultaneously explain the variance of Continuance Intention for 48.9% (adjusted R<sup>2</sup> = 0.489), compared to Satisfaction on Continuance Intention alone by 47% (adjusted R<sup>2</sup> = 0.470). It means that Satisfaction has a similar effect set by side with three independent variables simultaneously, then it'll be better to put Satisfaction as a mediating variable to see the effect on the Continuance Intention Bootcamp program.

3. Sobel Test

Table V. Sobel Test Analysis Result

	Mediating Effect (SAT)		Indirect effect (a x b)	Test Statistic	p-value
	b	SEb			
UB	a	0.476	0.156	5.13	0.000**
	SEa	0.017			
UE	a	0.424	0.139	4.91	0.000**
	SEa	0.029			
UM	a	0.037	0.012	1.91	0.055
	SEa	0.018			





An indirect influence of the independent variable on the dependent variable is examined in the analysis of mediator effect with Sobel test. The test specifically determines whether the indirect effect differs considerably from zero [20]. To perform the Sobel test, path coefficients and standard error statistics are required. From the table presented, we can see that the indirect effect is significantly different from zero for User Behavior on Coding Bootcamp Platform and User Experience.

In detailed, the relationship between User Behavior (H5) ( $t$  [indirect] = 0.156,  $t$ -statistic = 5.13,  $p < 0.05$ ) and User Experience (H6) ( $t$  [indirect] = 0.139,  $t$ -statistic = 4.91,  $p < 0.05$ ) to Continuance Intention through satisfaction is significant. Meanwhile, for User motivation is not found a significant mediating effect from satisfaction to continuance intention (H7) ( $t$  [indirect] = 0.012,  $t$ -statistic = 1.91,  $p > 0.05$ ).

#### D. Hypothesis Testing Summary

**H1.** *The user behavior on coding bootcamp programs has a significantly positive influence on user satisfaction in the coding bootcamp program.* (Accepted)

**H2.** *The user experience on coding bootcamp programs has a significantly positive influence on user satisfaction in the coding bootcamp program.* (Accepted)

**H3.** *The user motivation on coding bootcamp programs don't have a significant influence on user satisfaction in the coding bootcamp program* (Rejected)

**H4.** *The user satisfaction has a significantly positive influence on continuance intention in the coding bootcamp program in the coding bootcamp program.* (Accepted)

**H5.** *The user behavior on coding bootcamp programs has a significantly positive influence on continuance intention through satisfaction in the coding bootcamp program.* (Accepted)

**H6.** *The user experience on coding bootcamp programs has a significantly positive influence on continuance intention through satisfaction in the coding bootcamp program.* (Accepted)

**H7.** *The user motivation on coding bootcamp programs don't have a significant influence on continuance intention through satisfaction in the coding bootcamp program.* (Rejected)

**H8.** *The user behavior on coding bootcamp programs has a significantly positive influence on continuance intention in the coding bootcamp program.* (Accepted)

**H9.** *The user experience on coding bootcamp programs has a significantly positive influence on continuance intention in the coding bootcamp program.* (Accepted)

**H10.** *The user motivation on coding bootcamp programs don't have a significant influence on user satisfaction in the coding bootcamp program.* (Rejected)

## IV. DISCUSSION

### A. User Behavior on Coding Bootcamp Platform

User behavior on Coding Bootcamp Program found to have a positive and significant impact on Satisfaction level. This supports the previous research by Lang & Sharp (2022) on 14 satisfaction factors on Coding Bootcamp that derived through content analysis of 28,000 student reviews [17]. On this research, only four satisfaction factors that being included as this is supported by the initial interviews to few people who have experienced Coding Bootcamp. First, from the rigor of the curriculum, based on this research shows the curriculum materials play one of the most prominent roles to deliver content that teaches skills that are in demand, teaches industry best practices, and provides an accelerated learning to a discipline. These findings are similar to Lopez et al. (2019) that found satisfaction is largely affected by course quality in the MOOC program [13], also in Harsasi & Sutawijaya (2018) [21], Nortvig et al. (2018) [22], and Alqurashi (2018) [23]. The curriculum should include technically sound and structured learning materials, as well as opportunities for students to practice or assess themselves and work with other students especially in distance learning or online systems [21]. It's important for the companies to show their syllabus with a timeline in their marketing platform to have their potential customers' expectations match with the curriculum material that will be delivered.

In the quality of instructors, it's important that instructors that are involved in the Bootcamp have the competency that are relevant with industry experience, are knowledgeable, and caring. This has similar results with Pham et al. (2019) [24], Mtebe & Raphael (2018) [25], Gopal et al. (2021) [26] whose research findings indicated that instructors' quality plays a significant role that affects the student's satisfaction as they are content experts and facilitators of course. Instructors need to show the sight of passion about



their profession and striving for growth in their students [24]. This means the instructor needs to be very efficient during the lectures. The enthusiasm of the teacher leads to a better quality of student's satisfaction and performance [26]. They may also encourage students to interact continuously, between the student-student interactions, student-organization interactions, and student-materials interactions in order to achieve a better learning outcome [24].

Affordability plays an important role in attracting students as well. Competitive pricing that's fair with the benefit the Bootcamp offers and flexible tuition payment options are the things that take into consideration. Coding Bootcamp students particularly who are employed must manage their cash flow wisely since they already have their own financial responsibilities. As discussed earlier, some Coding Bootcamps have various payment options such as credit card installment options with bank partners, Income Share Agreement, Study Now Pay Later especially for Coding Bootcamps whose prices are quite premium. The Income Share Agreement payment method has gained massive popularity since it acts as a sales and marketing tool: if a prospective student knows they will only pay if they succeed, they may be more likely to enroll in a coding bootcamp [12].

The last dimension on User behavior is the Provision on Career Service. This dimension discussed the support provided by Coding Bootcamp companies in helping their students achieve the career they want. This includes whether the Bootcamp program helps find job vacancies that match with the career aspirations and facilitate networking with industry professionals. Career support remains as one of the key elements since the objectives of Coding Bootcamp tend to train practical skills to be able to immediately enter the work field, as well as career switching. This is evidenced by 77% of the participants in this study having jobs that match the Coding Bootcamp program they last participated in.

The career support comes in various forms such as career support training, 1-on-1 career coaching that will give insight on the interview tips and identify "blind spots" on the hiring process, and posting the job vacancy on the alumni network. Bootcamp companies can highlight alumni who have graduated from their programs and have been successfully accepted to work at reputable companies, sharing what hard skills and soft skills are needed in certain career positions, and discuss realities in the world of work in order for students to have career expectation that is in accordance with the career reality.

## ***B. User Experience***

User experience can be defined as the entirety of the interactions a customer has with a company and its products. Customers can evaluate their experiences based on the emotions they perceive, whether a company can generate strong positive emotions and memories that exceed expectations and being different "to the average" [27]. In this research, this variable is measured with three dimensions, quality of interaction (INT), perceived usefulness (PU), perceived reputation (PRT). Each dimension is found to have a positive & significant correlation with Satisfaction and Continuance Intention.

Perceived usefulness is the degree of improvement in learning effects due to the adoption of a given education system [28]. Joining the Bootcamp program has shown to effectively improve students' learning performance, increasing learning effectiveness and is considered to be useful for them. Users will highly value the benefits derived when they're enjoying this particular learning experience. This finding is in line with similar results from I.Pozon-Lopez et al. (2019) [28], Chen et al. (2020) [14], Lwoga (2014) [29], Mtebe & Raphael (2018) [25] that one of the key drives of learning satisfaction was determined by the user's perception of the usefulness.

Perceived Reputation is second highest in correlation with User Experience that leads to Satisfaction. Reputation is defined as collective representation of a firm's past actions and results that describes the firm's ability to deliver valued outcomes to multiple stakeholders [16]. This study explores the preference of participants to choose courses that are offered by prestigious companies and to choose programs from reputable companies. Similar results are found in Alraimi et al., (2015) [16] and Shehzadi et al. (2020) [30]. If reviews are positive, they positively affect the company's reputation, which favors customers' loyalty and affects positively on brand equity [27]. In practical terms, no matter how much investment a company makes in its products, marketing campaigns, and discount, any of these elements can be distorted or have little credibility if the Bootcamp companies fail to make customers generate positive comments either in digital networks, word of mouth, or recommendation to friends, family, and relatives.

To improve the reputation of a company, they can raise positive testimonials on social media, benefits felt by alumni, and effective evidence that Coding Bootcamp can improve their skills and careers. In addition, the Coding Bootcamp program can encourage students who have just graduated to post evaluations and feedback on Google reviews as it will be considered as more organic and honest reviews from social media accounts. This can also apply vice versa if there is a negative review, the Bootcamp companies can evaluate its quality service.



Last dimension is the Quality of Interaction (INT) that have two indicators which are learner participation and practice feedback. The learner participation measured students' involvement level in actively answering questions and participating in the classroom, while the second one indicates students completed the assignment on time. This finding is similar to Sebastianelli (2015) [31] who found out that interaction had a significant positive impact on satisfaction, particularly between professors–students in online MBA students and perceptions of quality were influenced significantly by student–student interaction and mentoring–support.

This research result indicated that when students enjoy learning on the Coding Bootcamp program, they will voluntarily participate actively with answering questions, try to understand the materials very well, and do their best effort on assignments. In a traditional classroom setting, students have the chance to interact with professors and peers in ways that are more interpersonal and social than in an online environment [31]. Given that the majority of Coding Bootcamp firms and programs are now conducted through online learning, online education devotes considerable attention to this issue. In order to build trust between faculty and students in an online environment, it is recommended that feedback be prompt, meaningful, consistent, especially with respect to grading [31]. The connection between instructors and students naturally extends beyond giving feedback on academic achievement and also includes conversations that are not directly relevant to the course itself. By providing support and guidance to students, instructors can assume a broader mentoring role. The instructor's role can range from being the “sage on the stage” to the “guide on the side” [31].

### C. User Motivation

Last variable that is involved in this research is User Motivation (UM). This variable was found to not significantly affect the User Satisfaction and Continuance Intention on Coding Bootcamp program. UM consists of Autonomous & Controlled Motivation that each has a positive and significant correlation with the variable. This implies that the dimensions have been able to represent variables but the variable itself has no effect on the level of student satisfaction. Research related to motivation on learner satisfaction is still relatively scarce and results are often hard to compare. In comparison to previous studies reviewed, although on relationships that were not precisely the same, they revealed similar results. Lopez et al. (2019) [28] who analyzed direct relationship between Motivation and Intention to Use, found Controlled Motivation was not found to be significant predictive factors, while Autonomous Motivation has significant results.

Autonomous motivation highlights the situation in which the actor is free of coercion, demand, or persuasion to engage in, or not engage in, a behavior, while the Controlled motivation is defined as when significant others play a critical role in determining one's motivation and decision making [15]. In this study, the level of one's satisfaction with the Coding Bootcamp experience is more inclined to be based on the Coding Bootcamp elements that emerged into User Behavior on Coding Platform and User Experience. Whether the motivation comes from oneself or external factors does not really affect the satisfaction level of Coding Bootcamp. The analysis on motivation further should have seen its impact on Satisfaction not through a direct relationship, but there may be other influencing variables in-between such as Perceived Behavioral Control (PBC) (Hagger, Chatzisarantis, & Biddle, 2002; Zhou, 2016) [15], Attitude [15], learning performance, and Self-regulated learning (Kim & Joo, 2021) [32].

### D. User Satisfaction & Continuance Intention

In this research, Satisfaction (SAT) serves as a mediating role to Continuance Intention (CI). This study reveals that satisfaction is a key driver of intention to continue to join the Coding Bootcamp program that has equivalent findings with Alraimi et al. (2015) [16], Cheng (2020) in Cloud-based e-learning system [33] and Puriwat & Tripopsakul (2021) that specifically research satisfaction to be significantly a mediating role between e-learning quality to satisfaction in university students [34].

Satisfaction is measured with elements such as feeling of fulfilment within the course and considered the choice to join the Bootcamp program was a wise one. The continuance intention is considered using the tendency to continue using the program in the future and to recommend the program to other people. Learning satisfaction is decisive to continuance intention. Although learners have positive perceptions of learning experience, they may not continue to use it without satisfaction. Therefore, the Coding Bootcamp companies should consider the satisfaction of students. Particularly, in online learning systems, it's found to be prone with "high dropout rate" and "low completion rate" [33]. Improving learners' continuance intention has always been the focus of researchers.

### E. Customer Acquisition Framework

In this study, it can be concluded that it is very important to make students satisfied with the Coding Bootcamp program in order for them to continue joining the Coding Bootcamp program. In order for students to have the intention to continue the program or

recommend it to their relatives, besides focusing on User Behavior and User experience as has been proven in this research, a strategy that focuses on customer acquisition is needed altogether. Every touchpoint and stakeholder that students interact with will affect the students' experience, therefore it's necessary to understand this strategy through the whole customer journey process. In Fundamentals of Customer Acquisition, customer acquisition is being measured using a framework that help to decide in which sequence to focus the marketing activities, what metrics to track the acquisition efforts, how to spend the marketing budget [35]. The most popular approach is the AARRR funnel [35]. Venture capitalist Dave McClure coined the acronym AARRR: Acquisition, Activation, Retention, Revenue, Referral [36]. It's a simplified model that helps users understand what metrics and channels to look at at each stage of their journey from customer to brand recommendation.

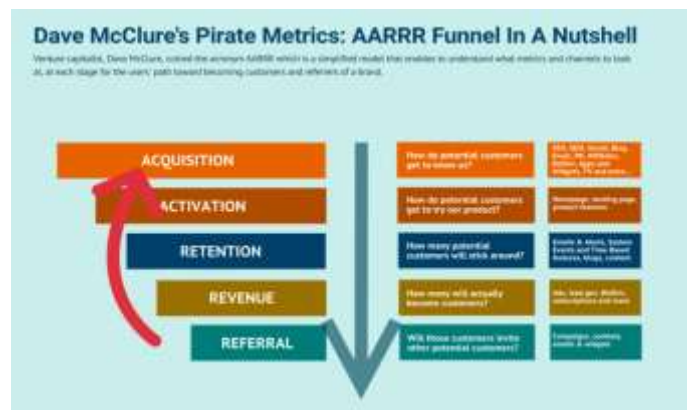


Figure III. AARRR Framework [36]

1. Acquisition

The first step of the whole sequence is the acquisition of potential customers. The major idea of this step is *how do potential customers get to know us?* This channel can be maximized through Search Engine Optimization (SEO) and Search Engine Marketing (SEM), Social Networks, Blogs, Public Relation Activities, Affiliates, Apps and Widgets, TV, and more.

2. Activation

After customers are coming to the Coding Bootcamp company's marketing channel, it's the best part to enable users to start playing around with the product and services. It's essentials for company to build a homepage that converts. The company can feature the products, services, and benefit of the Coding Bootcamp program in the homepage with easy-to-read sequence and attractive layout so that potential customers can fully understand and attracted to the the program.

3. Retention

This step is similar to acquisition step by enrich the potential customers but with more personalized offers. It can be delivered through Emails & Alerts, Occasional events, and Time-based features. It to enable users to help them benefit from the product with more specific offerings, such as inviting potential customers to short classes and webinar to feel the “mini simulation” of the Bootcamp program.

4. Revenue

At this stage, it is essential to focus on how to make the potential customer or the users that are already engaging with companies' content, social media, or app to become a paying customer by joining the Bootcamp program. Lead generation and a continuous stream of qualified prospects are critical to keeping the business going. It's important to reach out through Sales Specialist to dig up the customer's concern related to their consideration joining the Bootcamp program. Along to persuade customer with promotional discounts with a time limit, that's intended to customers can register immediately to the program

5. Referral

At this last step, after customers graduated from the Coding Bootcamp, it's crucial to ask for feedback and keep them close and even recommend them to their relatives. Several strategies can be implemented such as incentives program for graduates who successfully invite their relatives, contest or showcase for example showing graduates final project to public as a proof what can be expected from this program, and emails & widgets for continue update about program, events, and discount particularly specific for alumni.



## V. CONCLUSION & RECOMMENDATION

Due to the significant supply-demand imbalances in the market for workers with coding and computer science abilities, bootcamps have been increasingly popular over the past years. The bootcamp model, which teaches technical and soft skills that are relevant to the profession in brief, affordable courses, has shown signs of growing beyond entry-level capabilities and beyond the technology industry. The rising Bootcamp in Indonesia market today have the potential to disrupt higher education and fundamentally alter the nature of education and training if they are successful in meeting that innovation challenge.

Based on the research result, some suggestions that can be given to Coding Bootcamp. First, Coding bootcamp providers can focus on providing the finest products and services in response to platform user behavior. This is useful for assuaging doubts that potential clients may have regarding the caliber of the curriculum that is on level with traditional schooling, the employment rates, and affordability. Second initiative emphasize on designing program that can accommodate the needs and expectations of students in order to maximize the students learning experiences. Then, maintaining user satisfaction is important in delivering the program and its implementation. Instructors, mentors, and employees need to create designs and systems that can evaluate student satisfaction and be responsive when receiving feedback. Fourth strategies include, companies should be agile in delivering social media content that is engaging and relevant to current trends since the majority of coding Bootcamp promotions prioritize digital mediums, particularly social media. Additionally, in order to reach a wider audience of consumers, companies must optimize all digital marketing platforms and assess their traffic and coverage. Final strategy include as industry competition increases, it is envisaged that each company will introduce distinctive initiatives that will set them apart from rivals and give them a competitive advantage.

## AUTHORS' ACCORD

All authors have read and approved the version of the paper that has been published.

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## INFORMED CONSENT STATEMENT

All participants in the study gave their consent after being fully informed.

## DATA AVAILABILITY STATEMENT

The data described in this study are accessible from the author upon request.

## CONFLICTS OF INTEREST

There are no conflicts of interest declared by the authors.

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