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Improving IT Self-Efficacy, Experience and Training, and Technological Anxiety's Impact on Remote Work Quality †

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Abstract: The COVID-19 pandemic that happened in 2020 has forced people worldwide to practice remote work with little or no prior experience, working for companies and organizations that are most likely unprepared for this change. The quality of remote work then becomes an ultimate question, whether people can adapt or not, and what determinants are influencing it. Earlier, a remote work self-efficacy model was developed to accommodate such situations. However, the development was meant to assess virtual companies that have reliable ICT and enough training for the employees. The research tries to dig deeper into its antecedents' components amid unpreparedness. There were 46 respondents in the Jakarta, Central Java, and Yogyakarta provinces participating in the study conducted in May 2021, when increasing virus transmission reinforced companies to close their premises. The study illustrates how two-way conversations that generate social persuasion, physiological and emotional states, and self-efficacy affect remote job quality, which differs from previous research.

Keywords: communication; self-efficacy; remote work; social persuasion; physiological; emotion

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1. Introduction

The research topic of distant work is significant to a wide range of domains, including information systems, communication, and psychology, and it regularly contradicts findings [1]. Managing remote workers or running a virtual company is critical and needs to be well understood. Advances in information and communication technology (ICT) provide the infrastructure needed to guide the development of new organizational forms [2]. Furthermore, in 2020, COVID-19 pandemic conditions drove millions of people all over the world to practice remote work with little or no prior experience, working for firms and organizations that are most likely unprepared for this transformation [3,4]. To handle such conditions, a self-efficacy model for remote working has been developed. Firms that learn how to increase employees' self-efficacy judgments and to conduct remote working activities will have greater performance [5,6].

To be significantly implemented in a remote working environment [7], self-efficacy theory can include various aspects. However, because almost none of these studies were carried out at a time when far-flung operations were being carried out on such an unprecedented scale as they were during the pandemic, some of the previously gathered knowledge on far-flung operations may have little contextual relevance in the context of the pandemic. The study investigated workers' self-efficacy impact on remote working quality, as well as their experience, training, social relationships, and emotional and psychological states.

2. Literature Review

Among the fundamental models of technical communication, Shannon and Weaver identified the transmission model as one of the fundamental models that defines how

messages are conveyed from an encoding sender to a decoding receiver [8]. What matters is whether or not the recipient understands what was meant by the sender. The phrase two-way communication refers to a procedure in which the receiver offers feedback and engages with the sender on both sides of the conversation. The sender strives to explain what he intended and double-checks if the recipient understood what he was saying. In addition, the sender can compare different views and supply extra information, which helps to avoid misinterpretation [9]. To communicate effectively, one must be able to ask questions, receive replies, and trade information [10], among other things. It is only through cooperation and teamwork that effective communication could be accomplished between management and employees [9]. To integrate the self-efficacy theory into major remote management challenges highlighted in the literature, a research model was built. The following discussion has been broken down into three sections to make further examination of this model: (1) self-efficacy antecedents, (2) self-efficacy judgments, and (3) self-efficacy outcomes.

Most workers had little remote work experience prior to the pandemic. Almost none of the organizations were also prepared to support this practice [4,11]. Whereas, individuals can learn about their past performance accomplishments through previous experience and instruction. The research showed that the longer someone has worked remotely, the easier they deal with the situation. Relevant training will also provide knowledge regarding performance achievement to people's self-efficacy views [5]. Information and technology (IT) are a significant enabler that can be a critical responsibility for successful remote work of the remote work environment [7,12]. This accelerated shift to digital communication impelled new IT knowledge and skills. As a result, formal and informal training sessions should be held [13].

In line with those studies, Staples found that people's experience and training using remote-access technology have an impact on individual self-efficacy assessment. Self-efficacy indicates that the more training people have in terms of available IT, the more successful they should be able to use it [5]. Giving an example or modeling can increase perceived efficacy. It teaches the spectators effective methods to deal with frightening or difficult situations and allows an observer to believe that potential problems can be managed more than before [6]. Effective remote work or management practiced by managers represents a source of information modeling that can affect workers' own judgment of their ability in doing effective remote work or tasks [5]. Management should provide consistent feedback based on an evaluation of the remote worker's achievement of the goals [14]. Individuals and organizations cannot evolve in ways that meet the standards of others without evaluative feedback [15]. Prior studies found that feedback is critical because it identifies significant communication barriers such as differences in background, interpretations of words, and reactions of emotion [16].

Feedback relates to a response to a person's behavior. It has an impact on whether that behavior will be continued [17]. It is, however, evaluative when it provides an assessment of behavior in relation to performance criteria [18]. Based on communication theory, evaluative feedback is a type of asymmetrical communication task, it has been proven to improve the performance of feedback receivers [19]. Technological anxiety, or well known as technostress, is defined as stress which users experience because of application multitasking, constant connectivity, information overload, frequent system upgrades, and consequent uncertainty, continual relearning and consequent job-related insecurities, and technical problems associated with the organizational use of information and technology [20]. Employee productivity can be influenced by the physical work environment [20,21]. Recent studies suggest the importance of creating a separate, suitable work environment by maintaining a clear boundary between work and home life. Physical working conditions could influence assessments of self-effectiveness. Thus, it is a serious issue for a remote worker [7].

However, it is critical to provide timely and forthright feedback in order to address potential issues before they become a source of resentment in remote workers. Advances in

data communication technology have made it possible for any employee, regardless of their location, to join a company's virtual network [17]. Further, the perceived accessibility and ease of collaboration and information sharing via the chosen communication medium has an impact on team interactions and cohesiveness. As a result, connectivity level becomes a key indicator for people when deciding whether they can perform effectively [5]. Information and communication technologies (ICTs) can be used to improve communication, as well as assist in the maintenance of positive relationships in workgroups, particularly to foster the trust and cooperation required for virtual teamwork.

The ability to use technology is a critical part of employees' ability to effectively perform in the environment of remote management [5]. Later, Marques found that remote work requires specific abilities, skills, and knowledge of IT. High levels of information and technology self-efficacy could boost remote self-efficiency and the ability of remotely managed employees to work efficiently. Prior studies found a strong link between self-efficacy and task performance [6]. In the present context, employees with a high level of remote self-effectiveness believe they can accomplish tasks that permit remote work more efficiently.

Thus, in general, they become more effective remote workers. There is a linear, positive relationship between remote work and job satisfaction, implying that employees who work remotely are more frequently satisfied [14]. Furthermore, employee satisfaction perception in a virtual environment varies depending on management support and activities, also its remote skills [7]. These results together suggested that positive assessments of the ability to execute have a positive influence on job satisfaction. Another research also discovered a significant link between self-efficacy and coping ability. It was proposed as a valuable personal resource that can help the abilities to improve. Self-efficacy is the belief in individual ability to complete difficult or novel tasks and to deal with adversity in challenging situations [16].

Feelings of isolation were found to lower an individual's organizational commitment [7]. Remote workers are more willing to be engaged when they see connections between their own values and the values of their company. Employee engagement is critical for any organization, but it is especially critical for companies with remote employees. Employee engagement can be measured at a high level by an employee's commitment to an organization and motivation to achieve better. Self-efficacy to cope with stress was defined as the belief in one's personal resources to handle stressful conditions in an effective and competent approach. Earlier, studies underlined the link between self-efficacy and stress in the workplace. An increase in self-efficacy has been negatively associated with stress.

Self-efficacy judgments themselves are influenced by four factors, described in detail above [6,20]: performance accomplishments in which previous experiences of success result in boosting self-efficacy and in failure lowering it, the vicarious experience of observing and copying others' behavior who have completed successful projects, social persuasion in which they receive coaching or evaluative assessment, and physiological and emotional states as a reaction to a certain job that causes a lack of discernment or anxiety. Self-efficacy itself is translated as people's belief in their ability to summon the cognitive, motivational, and behavioral resources required to compete in a certain situation. People can have a strong or weak belief. Therefore, people with a strong self-efficacy belief are putting more effort into their work so that they can manage the challenge, while those who have a weak one put less effort into the work and tend to give up and quit [5]. Thus, the construct of the research is shown in Figure 1, below.

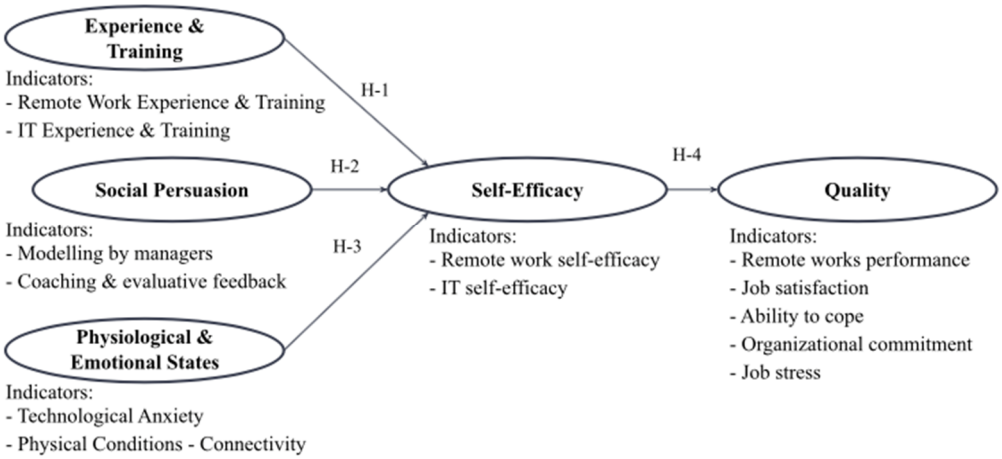

Figure 1. Construct.

3. Research Method

The study used a quantitative research approach, chosen to investigate planned relationships among constructs within the model. It provided a form for respondents to facilitate an assortment of knowledge from an oversized and geographically spread sample. Quantitative methods are also used to provide information for prediction, correlation, causation, and generalizability. Data were collected during May 2021 using Google Form, which has been sent through personal messages.

The respondents were selected from several locations in the Jakarta, Central Java, and Yogyakarta provinces with the random sampling method, and 46 people participated in the survey. The participants represented work function in the following sectors: Human Resources, Sales, Marketing, Operations, Inventory, Finance/Accounting/AP/AR, Administration, System/Technical Support, Creative/Design, Client Relations, Training/Teaching/Coaching, Research and Development, Legal, Health Care, and others. The questionnaires were close-ended questions containing single-choice response questions and using a five-point Likert scale, where 1 means strongly disagree, 2 means disagree, 3 indicates neutral, 4 reflects agreement, and 5 states strongly agree. All data gathered were then analyzed with SPSS Amos 23.0 (Armonk, NY, USA) using descriptive statistics.

4. Methodology

The quantitative study was carried out to Indonesian courts' users in the Greater Jakarta area, lawyers respectively. It covered all Jakarta cities and regencies, Bogor Regency and City, Depok, South Tangerang, Tangerang Regency and City, and Bekasi Regency and City. Questionnaires were collected from 30 attorneys who are able to carry out their duties with the support of e-court content management systems, which are more popularly known as e-Court. During a legal procedure, this application is a content management system (CMS) that was developed to help automate court operations and provide assistance. It provides support for case management tasks such as case planning and tracking, as well as the scheduling of hearings and other court appearances in general. In particular, CMS assists in the operation of the court through the utilization of capabilities that include calendaring and scheduling, docketing, case information management, ticklers, notes, and case linkages.

The comprehensive questionnaire was out in February 2022 in order to collect information. In addition to gathering information on user profiles and the e-court software that is being utilized, the questionnaire was designed to investigate the elements that are related with the success of e-courts. In the beginning, comments from both court users and information systems specialists were solicited. This was to undertake preliminary and pilot testing to analyze and validate the approved procedures. Using data from the IS made publicly available in the past, the questionnaire was first crafted, and after that, it

underwent testing and analysis. The components had some minor alterations so that they would function better within the e-court program. The purpose of the 15 questions in the survey was to investigate five primary components of the system. These were the quality of the system, the quality of the information, the usage of the system, the happiness of the users, and the individual impact. The ease of use of a system was used as one of the criteria for measuring system quality in the research. The scale consisted of two items. The quality of the information that is produced by e-court applications can be evaluated along three dimensions: the material's substance, its correctness, and how it is presented.

To evaluate a user's level of dependence on the information system that was available to them, a reliance measure was applied. The utilization of IS was evaluated based on a single item of this metric. User satisfaction is a measurement of how satisfied users are with a system, and it was computed by modifying a single item based on the work done by Rai and colleagues to capture the level of enjoyment provided by the system [21]. Individual impact, on the other hand, is defined as the extent to which application software has been successful in improving the quality of the user's work, making the end user's job easier, reducing the amount of time spent on the end user's job, and assisting the end user in meeting the end user's job needs and requirements. The four-item user-performance metric was modified in order to arrive at the result. On a scale from one to five, the allegations were rated, with a score of one indicating major disagreement and a score of five indicating strong agreement.

5. Results and Discussion

5.1. Demographic Profile of Respondents

Table 1 below shows that based on respondents' age, 89.1% of them are millennials with an age range of 25–40 years.

Table 1. Age of Respondent.

		Freq.	Percent	Valid Percent	Cumulative Percent
Valid	<25 years	5	10.9	10.9	10.9
	25–40 years	41	89.1	89.1	100.0
	Total	46	100.0	100.0	

5.2. Results of Research Instrument

Based on Table 2, the experience and training variable obtained a minimum value of 11, a maximum value of 45, and an average value (mean) of 29.65.

Table 2. Descriptive.

	N	Min	Max	Mean	Std. Deviation
Experience and Training	46	11	45	29.65	7.109
Social Persuasion	46	18	70	50.52	12.976
Physiological and Emotional States	46	14	45	29.80	6.131
Self-efficacy	46	14	60	45.20	9.404
Quality	46	28	91	65.83	14.821
Valid N (listwise)	46				

Table 3 presents how Predictors: (Constant), Physiological and Emotional States, Experience and Training, and Social Persuasion simultaneously affect the dependent variable by 69.0%. Moreover, Table 4 below shows how the effect is statistically significant. Table 5 then provides calculations on how Social Persuasion and Physiological and Emotional States significantly affect while Experience and Training does not.

Table 3. Physiological and Emotional States.

Model	R	R Sq.	Adjst. R Sq.	Std. Error of the Estimate
1	0.843	0.710	0.690	5.237

Table 4. ANOVA.

Model		Sum of Sq.	df	Mean Sq.	F	Sig.
1	Regression	2827.146	3	942.382	34.355	0.000
	Residual	1152.093	42	27.431		
	Total	3979.239	45			

Dependent Variable: self-efficacy, Predictors: (Constant), Physiological and Emotional States, Experience and Training, Social Persuasion.

Table 5. Coefficients.

Model		Unstandardized Coefficients		Std. Coeff.	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.888	4.181		1.408	0.166
	Experience and Training	0.131	0.142	0.099	0.927	0.359
	Social Persuasion	0.332	0.085	0.458	3.920	0.000
	Physiological and Emotional States	0.626	0.165	0.408	3.802	0.000

Dependent Variable: self-efficacy, The F test results in 34,355 in its calculated F and the probability is 0.000. As sig F_{count} < 5% (0.000 < 0.05).

Figure 2, as below, shows how the regression coefficient value of experience training on quality is 0.203, while the coefficient value of experience and training on quality through self-efficacy as a mediating variable is 0.066.

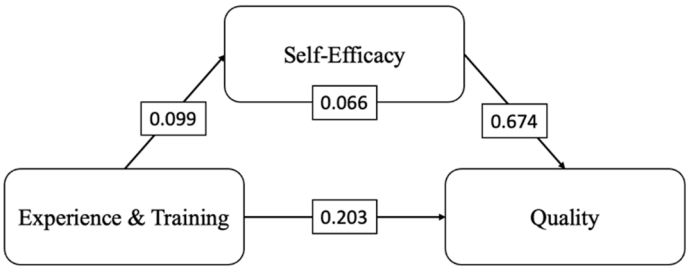

Figure 2. Path analysis of experience and training's effect on quality.

It follows that self-efficacy is unable to moderate the effects of experience and training on quality since the value coefficient is lower than the direct influence of experience and training.

Self-efficacy, on the other hand, as shown in Figure 3, can act as a mediator between the impacts of social persuasion on quality. The coefficient value is even bigger than the direct effect, as seen by the data presented above.

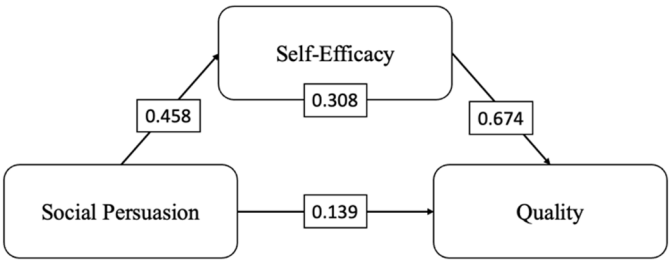

Figure 3. Path analysis of social persuasion's effect on quality.

6. Conclusions

Virtual organizations have become increasingly popular in recent years, particularly during pandemics and disasters. Employees in a virtual organization operate primarily in areas that are far from their peers and managers, posing numerous management and communication issues to the firm. The awareness of the key issues and critical drivers must be strengthened in order for firms to make effective transitions to this new method of conducting business. Using the self-efficacy theory, the current study contributes to this goal by predicting links between the remote work self-efficacy and the effects of self-efficacy. The validity of these interactions was investigated through a survey of varied individuals who worked distant from their colleagues and bosses in a variety of companies.

Overall, the findings demonstrate that remote employees' self-efficacy has a significant impact on their ability to perform well at their remote jobs. Because the independent variables of experience and training do not have an effect on remote work quality, self-efficacy plays a significant role in mediating the relationship between the two variables. As a result, the findings can also be interpreted as a positive outlook during a pandemic when people are not ready and well-prepared to deal with such a crisis, so long as there is strong two-way communication among the company members.

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