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The Impact of ICT Adaptation on The Transformation of Capacities and Capabilities: Empirical Study on Batik Craftsmen in Indonesia

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ABSTRACT
The importance of ICT adaptation in batik craftsmen must be addressed, starting from providing an understanding of philosophy and concepts and work strategies as important consequences for transforming their capacities and capabilities. This study examines the structural model of the influence of capacity and capability transformation on ICT adaptation, the effect of understanding philosophy and concepts and work strategies on capacity and capability, and the indirect effect of understanding philosophy and concepts and work strategies on ICT adaptation through the messianic role of capacity transformation and capability. The survey research was conducted on 14 batik industries involving 162 participants who are members of the micro, small, and medium batik industry. Data collection was assisted using a closed questionnaire with a five Likert scale which was then analyzed using SEM analysis through path analysis and bootstrap methods. The study's results prove that the transformation of capacity and capability can significantly influence ICT adaptation. On the other hand, besides being proven to be significant in influencing the transformation of capacities and capabilities, understanding philosophy, concepts, and strategies also indirectly affect ICT adaptation.
Keywords: *batik; capacity, capability, transformation, philosophy and concept; work strategies.*

1. INTRODUCTION

Since the world economic forum announced it in 2012, the industrial revolution 4.0 has increasingly penetrated almost all fields of work, especially in the fashion sector [1], [2].. The development of digitalization in work processes that are integrated is increasingly felt by companies, employees, and consumers [3]. Disruption of technology, which in the end, disruption of competence, is a consequence of these developments [4]. The fashion industry has adopted a lot of artificial intelligence technology in the production process (Kim and Lee 2018). As a result, fashion companies, the main producers of finished goods, are significantly affected, affecting their products' competitiveness [1], [6]. This is what is currently being felt by fashion companies engaged in the production of batik clothing in Indonesia (Shaharuddin et al., 2021). The reason is, that batik produced must maintain tradition and culture, including in the production process [8]. Batik clothing that reflects the culture in Indonesia and has been recognized by various countries has its characteristics as part of its traditional production process [9]. This is an obstacle during digital transformation that can modernize the production process. The consequence is that batik craftsmen must adapt to digital technology but still maintain culture and tradition in producing them [10]. Furthermore, the main consequence for batik craftsmen is meeting the needs of production process tools and their employees' competency needs, which are in line with current technological developments (Jin and Shin 2021; Shaharuddin et al. 2021). The main key to achieving these competencies is high adaptability to information and communication technology (ICT) [11]. Moreover, the adaptability of ICT must also be compatible with the batik production process [12]. Therefore, technological competence that reflects the adaptability of ICT must be developed by batik companies and their employees to work together to maintain the products' competitiveness without compromising the production process's essence.

The capacity transformation carried out by batik companies and balanced with the transformation of the capabilities of their employees is an important key to adapting ICT technology according to the production sector (Widiana 2021; Kim 2013). Capacity transformation is a passive change in resource strength, including facilities and infrastructure to support the production process [15]. This means

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that capacity is an important responsibility that batik companies must fulfil to support the production process [8]. A study by Mejías et al. (2019) claims that the capacity of a product-producing industry greatly determines the extent to which the industry can develop. In addition, studies from [17] and [18] also emphasize that the transformation of digital technology-based industrial capacity is an important capital to increase its competitiveness. Meanwhile, capability transformation refers to the change and development of active resources, namely humans as batik production operators [19], [20]. This aspect is a shared responsibility between the company and workers, so both must be active in building capabilities [19]. Capabilities are very important to carrying out the production process of goods, especially in planning, designing, implementing, and evaluating production processes and results [21]. These two aspects are important backgrounds in efforts to increase the competitiveness of the production process, production and marketing amid the development of digital technology.

A strong foundation to be built is required to transform the capacity and capability of batik craftsmen to increase ICT adaptability. Monks et al. (2013) reported the importance of understanding the company and its employees regarding its philosophy, principles, and concepts. This refers to understanding the essence of the company being founded [23]. In addition, more specifically, is an understanding of the company's vision, mission, and goals [22], [23]. These understandings become an important basis for clarifying the company's focus on developing production processes and results in line with developments without compromising their essence [9]. In this case, batik craftsmen must instill philosophies, principles, and concepts to all elements that work in them to support the production process based on ICT technology without losing the traditions and culture that must be maintained in the batik process (Kim 2013). After knowing the philosophy, principles, and concepts, batik artisans must develop and implement strategies that can contribute significantly to their achievement [8], [21]. These strategies refer to innovations in the production process owned by batik craftsmen to achieve production targets and customer satisfaction [6]. In addition, innovations to varying batik motifs and coloring are also part of the strategy that must be owned by batik craftsmen [12], [18]. Thus, philosophies, principles, concepts, as well as development and implementation strategies are the main milestones in transforming the capacity and capability of batik craftsmen so that adaptability to ICT is an important consequence that must be had.

As reported by [3], [6], [24], the current importance of adaptability in the clothing industry such as batik is strongly influenced by the extent to which the industry can transform its capacity and capability according to the characteristics of ICT technology. Other research supported by theory also reinforces that shaping digital technology competence begins with high literacy of important industry philosophies, concepts, and goals [25]–[27]. High literacy will trigger the industry to develop and implement important strategies to fulfill the capacity to support the production process and fulfill the ICT capabilities of its workers. This study has been reviewed and reported by Prafulla (2018); Nobile et al. (2021), who concluded that literacy or understanding has a significant role for industry in adapting to using ICT technology as a consequence of the transformation of its capacity and capability. This study's main objective is to measure the significance of capacity and capability transformation in influencing the adaptability of ICT in batik craftsmen. However, tracing more deeply, we also aim to measure the significance of the factors of understanding philosophy and concepts, and work strategies in directly influencing the transformation of the capacity and capability of batik craftsmen. In addition, testing was also carried out to examine its indirect effect on the adaptability of ICT in batik craftsmen.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1 Understanding of philosophy and concepts in capacity transformation and capability transformation

An important aspect of the success of a transformation in the industry or batik craftsmen is largely determined by the extent to which human resources have a basic understanding which is an important foundation. Billett (2006) revealed that the aspect that became an important foundation for transforming industrial capacity and capability was the level of understanding of the workers on the aspects of philosophy, concept, and orientation. These aspects include a comprehensive understanding of the vision, mission, and goals so that they become provisions and guidelines for the company and its employees in developing important strategies to achieve them. Studies from dari [3], [11], [31] analyze the failure of various micro, messo, and medium-class industries in adapting to technological developments due to the lack of orientation of the company and its

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employees towards the goals to be achieved. Pozzi et al. (2021) also agrees that the successful transformation of capacity and capability is proven only by industries that have instilled an understanding of its philosophy and concepts. In the current era of digitalization, research from Sony et al., 2021 has also responded which proves that understanding philosophy and concepts is a major milestone in resource development in the industry. This should be the main focus in building new capacities and capabilities in line with the changes that occur. *H1: Understanding of philosophy and concepts has a significant effect on the transformation of the capacity of batik craftsmen. H2: Understanding of philosophy and concepts has a significant effect on the transformation of the capabilities of batik craftsmen.*

2.2 Work strategy in capacity transformation and capability transformation

The formation of a comprehensive understanding of the philosophy, concept, and orientation of batik craftsmen must also be balanced with careful implementation to achieve it [33]. This is where the work strategy plays an important role to balance this understanding so that the transformation of capacity and capability will be successful [34]. The work strategy according to Jin & Shin (2021) contains important steps that are systematic and based on ongoing technological developments to determine the implementation of work processes. Furthermore, the work strategy is a series of tactics that must be used as the main thinking base in compiling the map for the transformation of industrial capacity and capability which refers to the vision, mission, and goals along with the performance achievements of each function and organizational structure [35]. Lingard et al. (2012) through their research claim that work strategy greatly influences the success of the process of transforming the capacity and capability of an industry. More specifically, [12], [37] analyzes the role of strategic accuracy and its implementation in adapting to digitalization in the era of the industrial revolution 4.0. This indicates the importance of a work strategy that must be implemented properly for batik craftsmen to achieve the goal of transforming their capacities and capabilities in line with the development of digitalization. *H3: The work strategy has a significant effect on the transformation of the capacity of batik craftsmen. H4: The work strategy has a significant effect on the transformation of the capabilities of batik craftsmen.*

2.3 Work strategy, Capacity Transformation, Capability Transformation, in ICT adaptation

The success of the transformation of the capacity and capability of batik craftsmen will have an important impact on various aspects of their progress. ICT adaptation is the most important positive impact amid the rapid development of digital technology in the era of the industrial revolution 4.0 (Johar & Yajid, 2020; Tubin, 2007). ICT adaptation is an effort or power of industry adaptation carried out in response to changes in the technology sector that are able to support production efficiency [40]. In this case, the use of cyber-based digital technology tools and the ability to think creatively and critically in their use are important points in the adaptation process [41]. An important key to the adaptation process is the transformation within the industry and its operator employees [42]. The transformation of capacity and capability in line with digitalization is a transformation that leads to high ICT adaptability [39]. Capacity transformation is a passive change in resource strength, which includes facilities and infrastructure to support the production process [15]. This means that capacity is an important responsibility that must be fulfilled by batik companies to support the production process [8]. While the transformation of change capabilities and development of active resources, namely humans as batik production operators [19], [20]. This aspect is a shared responsibility between the company and workers, so both must be active in building capabilities [19]. Capabilities are very important to carry out the production process of goods, especially in planning, designing, implementing, and evaluating production processes and results [21]. These two aspects are important backgrounds in efforts to increase the competitiveness of the production process, production, and marketing in the midst of the development of digital technology. This is confirmed by several relevant studies that reveal changes in mindset, capacity, and capability in the use of digital technology that have an important effect on ICT adaptation efforts [39], [41]. *H5: Capacity transformation has a significant effect on the ICT adaptation of batik craftsmen. H6: Capability transformation has a significant impact on the ICT adaptation of batik craftsmen.*

2.4 Understanding of philosophy and concepts, work strategies, Capacity Transformation and Capability Transformation in ICT adaptation

So far, few studies have reported their studies related to the influence of understanding

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philosophy and concepts, as well as work strategies on ICT adaptation. Nevertheless, in fact, these fundamental aspects have contributed to efforts to increase the adaptability of ICT in the industry, especially those engaged in clothing production [35]. Billett (2006) that technological developments that will not stop always require basic aspects to become important guidelines for adoption. The transformation of industrial capacity and capability is an important consequence of the high level of understanding of philosophy and concepts that are supported by the accuracy and maturity of work strategies [16], [20], [22]. In the end, these consequences lead to the adaptability of the industry in using ICT [40], [41]. This statement is supported by a study conducted by Jacobsson et al. (2017); Johar & Yajid (2020) which revealed that shaping digital technology competence begins with high literacy of important philosophies, concepts, and goals in the industry [25], [27]. High literacy will trigger the industry to develop and implement important strategies in an effort to fulfill the capacity to support the production process and fulfill the ICT capabilities of its workers. Thus, the estuary is the formation of the adaptability of ICT in the industry, so that in conclusion the transformation of capacity and capability becomes a mediator of the influence of understanding philosophy and concepts, and work strategies on ICT adaptation. *H7: Capacity transformation plays a significant role in mediating the influence of understanding the philosophy and concepts of ICT adaptation. H8: Capacity transformation plays a significant role in mediating the effect of work strategies on ICT adaptation. H9: Capability transformation plays a significant role in mediating the influence of understanding the philosophy and concepts of ICT adaptation. H10: Capability transformation plays a significant role in mediating the effect of work strategies on ICT adaptation.*

3. METHODOLOGY

This research is survey research which the Department approves of Industry of Yogyakarta Province, Indonesia. Previously, we conducted a pre-survey to select several batik clothing industries in the province that fall into three class categories (micro, small, and medium). In addition, we also ensure the principles, philosophies, and goals of each batik industry which has a direction of capacity and capability development following developing technology. Participants in the survey were selected based on experience working in the related industry for a minimum of two years. Participants received written, and oral information about the study, and informed consent was obtained from them. They are free to refuse participation or withdraw from filling out the survey. Relevant scientific procedures and rules carry out all methods.

This research was conducted on 162 workers in 14 batik industries in Yogyakarta Province, Indonesia. As previously explained, we chose three classes, namely micro, small, and medium industries, that were involved in providing participants to fill out the questionnaire. Then we also set an important criterion of at least two years of work experience to consider the level of understanding and maturity in pursuing the field of batik production, according to a reference by [30]. A mature level of understanding and experience aims to produce a data survey in the form of a more comprehensive participant's circumstances to follow the research context. We ensured participant certainty in the questionnaire by eliminating six invalid answers from 168 questions, including the same questionnaire for all items, and the questionnaire was completed within 90 seconds. Our final sample consisted of 162, representing a 96% response rate. We ensure an even distribution of the characteristic diversity of all the latter classes in terms of their respective backgrounds. The test was carried out using a statistical t test using the Dunnet C Test method, resulting in equalization as expected. Statistical data on the background of the participants in this study are presented in Table 1. The background data shows gender, age range, and last education.

Table 1: Background of Participants

Dimensions	Category	Industrial Class			Difference	
		Micro	Small	Medium	t-value	Sig.
Gender	Male	24 (14.81%)	27 (16.67%)	26 (16.05%)	0.916	0.291
	Female	29 (17.90%)	28 (17.28%)	28 (17.28%)	0.764	0.328
Age range	21-24 years	12 (7.41%)	10 (6.17%)	10 (6.17%)	1.004	0.302
	25-28 years	15 (9.26%)	14 (8.64%)	17 (10.50%)	1.095	0.291
	29-32 years	14 (8.64%)	12 (7.41%)	15 (9.26%)	1.126	0.279
	33-36 years	15 (9.26%)	14 (8.64%)	14 (8.64%)	0.994	0.328
Last	Junior high school	14 (8.64%)	11 (6.79%)	10 (6.17%)	1.218	0.253

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education	Senior high school	28 (17.28%)	32 (19.75%)	26 (16.05%)	1.226	0.239
	Higher education	10 (6.17%)	14 (8.64%)	17 (10.49%)	1.304	0.227

Before collecting data, we contacted each batik clothing industry included in the research subject. We collect personal data first and provide a statement of willingness and commitment to complete the survey questionnaire cooperatively. In addition, to make it easier to fill out the questionnaire, we also adjusted the level of understanding of the use of words and language among participants so that the resulting data has a good fit. This was done considering the number of misperceptions of participants on the survey sheet they filled out. After that, the questionnaire was prepared based on the indicators and the development of existing instruments in previous research. We adopted valid and reliable indicators in previous research, then developed the statement items. All questionnaires were prepared using a five-point Likert Scale ranging from "strongly agree" to "strongly disagree". The survey item-building indicators were adapted from the scale developed and validated by previous research. Furthermore, we also re-tested the validity and reliability to ensure it.

The ICT adaptability questionnaire was prepared based on the development of the ICT adaptation and adoption assessment scale indicator by [43], [44], which consists of four statement items, which include: "*I can use digital-based batik production tools*", "*I promote using technology ICT*", "*I can expand collaboration with relevant stakeholders online*", and "*I can do batik marketing effectively online*". **Capacity transformation** was also constructed by four questions that were developed based on opinions [17], which consisted of: "*I can increase productivity in batik making*", "*The batik industry improves the quality of tools and materials in line with development trends*", "*The batik industry can improve and expand marketing*", and "*The efficiency of products produced by the batik industry increases*". **The Capability transformation** questionnaire was developed based on the opinion [19] which consists of six statement items, including: "*I have experienced an increase in skills in producing batik in the last two years*", "*I can overcome the obstacles that occur during batik production*" , "*My work motivation has increased in the last two years*", "*I have improved my work skills when producing batik*", "*I have been given increased intensity of training in batik production in the last two years*", and "*I can use new tools and materials in making batik*". **Philosophy and concept understanding** are measured based on five statement items adopted from [22], including: "*I understand the vision of the batik industry where I work*", "*I contribute to implementing the vision of the batik industry*", "*I understand the mission of the batik industry where I work", "I contribute to implementing the mission of the batik industry*", and "*I understand the purpose of the batik industry where I work*". Finally, **the Work Strategy** also adopted a scale from [22] which consists of six statement items, including: "*I innovate batik motifs*", "*I develop motifs*", "*I develop batik motifs according to customer orders*", "*I do innovation in batik coloring*", "*I analyze the trend of developing batik designs to be implemented in the production process*", "*I analyze the batik market trends that are in high demand by customers*", and "*I prioritize customer satisfaction*".

Structural Equation Modeling (SEM) analysis was used to test the hypothesis of the influence between variables through path analysis and bootstrap methods. Path analysis measures the direct effect of exogenous variables on endogenous variables. Meanwhile, the boostrap method is used to measure the role of capacity and capability transformation in mediating the indirect effect of understanding philosophy and concepts and working strategies on ICT adaptation. Bootstrap was adopted considering its accuracy, considering that this method is the most reasonable and can obtain confidence limits for certain indirect effects in most conditions [45]. Analysis of the data in this study using the support software SmartPLS 3.0. The research hypothesis was formulated based on relevant theoretical support related to the line of influence of exogenous variables on endogenous variables directly or by using mediation, as stated in the previous literature review.

4. RESULTS

4.1 Levels of Validity and Reliability

Before testing the model, the level of validity and reliability is first measured. Validity testing refers to the value of the outer loading and range of corrected item-total correlation (CITC) as presented in Table 2. Item-total correlation is the correlation of items or indicators with a combined score of all items and forms the same set. The CITC did not include a specific item score in calculating the composite score. Hence it was labeled 'corrected' [46]. Recommendations suggest that items of a certain scale exhibiting outer loading values greater than 0.700 and item-total correlations should

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exceed [47].Outer loading and CITC analysis were performed for each item. Table 2 shows that all outer loading scores are above 0.700 and the CITC is well above 0.3, so it can be concluded that all of these items have good validity. Then, statistical reliability test based on Cronbach's alpha coefficient was adopted to consider the questionnaire's consistency and reliability on five variables. The alpha coefficient provides a summary measure of the intercorrelation between items. As shown in Table 2, the Cronbach's alpha value of each measure is well above the recommended threshold of 0.7 in the high category, so it is considered adequate to confirm a high level of reliability for data collection [47].

Table 2: Levels of Validity and Reliability

Variable	Item	Outer Loading	Range of CITC	α	CR	AVE
Philosophy & concept understanding	PCU 1	0.779	0.461 to 0.627	0.868	0.905	0.657
	PCU 2	0.794	0.478 to 0.644			
	PCU 3	0.853	0.525 to 0.813			
	PCU 4	0.895	0.573 to 0.829			
	PCU 5	0.719	0.406 to 0.683			
Work strategy	WS 1	0.901	0.621 to 0.879	0.927	0.943	0.735
	WS 2	0.873	0.562 to 0.819			
	WS 3	0.913	0.647 to 0.883			
	WS 4	0.818	0.539 to 0.781			
	WS 5	0.881	0.569 to 0.834			
	WS 6	0.748	0.453 to 0.713			
Capacity transformation	CcT 1	0.776	0.458 to 0.731	0.829	0.948	0,755
	CcT 2	0.851	0.519 to 0.831			
	CcT 3	0.789	0.471 to 0.747			
	CcT 4	0.834	0.543 to 0.798			
Capability transformation	CbT 1	0.744	0.441 to 0.702	0.934	0.886	0.661
	CbT 2	0.832	0.538 to 0.784			
	CbT 3	0.920	0.660 to 0.871			
	CbT 4	0.917	0.649 to 0.876			
	CbT 5	0.866	0.533 to 0.827			
	CbT 6	0.920	0.663 to 0.885			
ICT adaptability	ICT 1	0.797	0.481 to 0.753	0.866	0.907	0.709
	ICT 2	0.867	0.540 to 0.832			
	ICT 3	0.853	0.536 to 0.836			
	ICT 4	0.849	0.509 to 0.824			

4.2 Structure Model Fit Test

The model suitability test justifies the level of conformity of the structural model used so that the model can explain the structural coefficients of the relationship between variables. The overall fit index of the research model is presented (as the baseline model) as shown in Table 3. As presented, all the overall fit indices of the baseline model performed well. The expected small chi-squared value is well realized. The high probability value (p-value 0.050) explains that there is no difference between the tested model and the data, so the model can predict its observations' value [48]. GFI, AGFI, CFI and NFI all performed above the threshold value (≥0.90). SRMR < 0.05 and RMSEA < 0.08, so it is concluded that the model has high suitability and structural model analysis can be carried out [47]. The structural analysis model used is presented in Figure 2. SEM analysis uses two methods, namely path analysis to determine the direct effect of exogenous variables on endogenous variables. While the second method is bootstrap to test the role of the mediator variable.

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Table 3: Model Fit Test Result

Goodness of fit index	Cut-off value	Result	Evaluation
Chi-square	Expected to be small	38.193	Small
Probability	>0.50	0.604	Fit
Goodness of fit index (GFI)	≥0.90	0.916	Fit
Adjusted goodness of fit index (AGFI)	≥0.90	0.901	Fit
Comparative fit index (CFI)	≥0.90	0.905	Fit
Normal fit index (NFI)	≥0.90	0.937	Fit
Standardized root mean squared residual (SRMR)	<0.05	0.047	Fit
Root mean square error of approximation (RMSEA)	<0.08	0.061	Fit

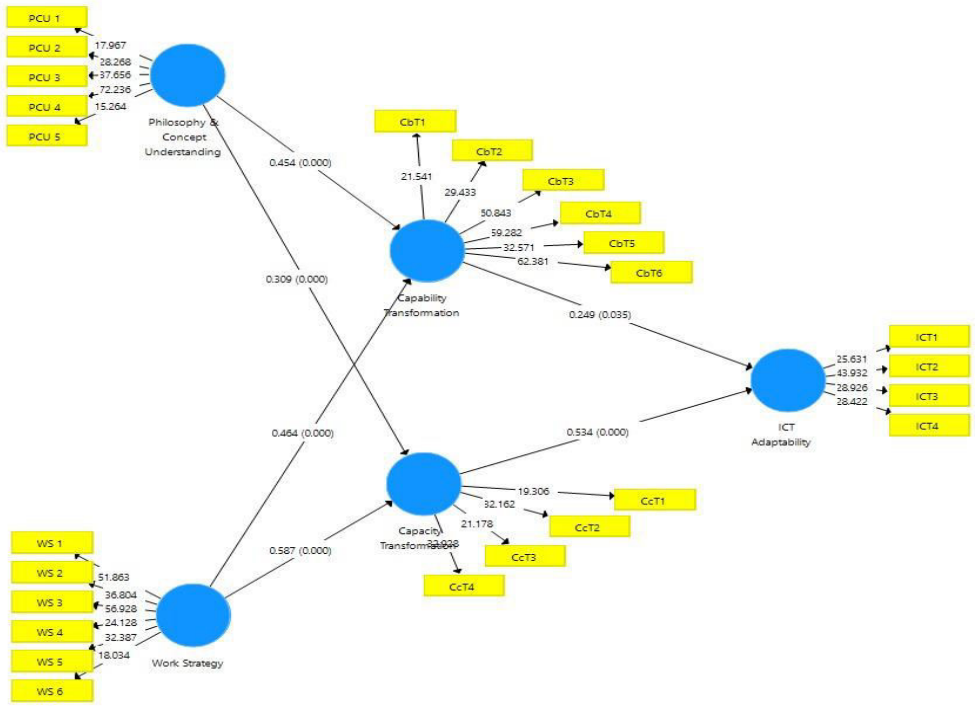

Figure 1: Structure Model

4.3 Hypothesis Test Results

The first to sixth hypothesis testing considers the support from the path analysis results. The decision of the test results is seen in the estimated value of the correlation coefficient in the original sample and the p-value with a significance level of 5%. In addition, we get confidence intervals from the analysis results obtained with a percentage of 97.5% (CI 97.5%) with an error rate of 2.5%. See Table 4 presents the results of the path analysis with the estimated value of the correlation coefficient on all paths above the minimum significant limit. In addition, the p-value is also below 0.050 on all lines. The path coefficient between understanding philosophy and concepts with capacity transformation is 0.309, and the p-value is 0.000, so H1 is supported. The second consideration is obtained from the path coefficient value between understanding philosophy and concepts with transformation capabilities of 0.454 and a p-value of 0.000, so H2 is supported. Furthermore, the coefficient value obtained is 0.587, and the p-value is 0.000 on the work strategy path with capacity transformation, so H3 is supported. Likewise, H4 is supported by considering the acquisition of a coefficient of 0.464 and a p-value of 0.000 on the work strategy path with capability transformation. Furthermore, the path coefficient between capability transformation and ICT adaptation is 0.534, and the p-value is 0.000, so H5 is supported. In line with this, the path coefficient between capability transformation and

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ICT adaptation obtained is 0.249, and a p-value of 0.035 also makes H6 supported.

The seventh to tenth hypothesis testing considers the results of testing the indirect effect of understanding philosophy and concepts and working strategies on ICT adaptation. These considerations also include the mediating role of transforming capacities and capabilities due to the formation of ICT adaptation of batik craftsmen. Analysis using the bootstrapping method obtained results that support the indirect effect hypothesis. The first consideration, see Table 5, presents the mediating role of capacity transformation in bridging indirect effects. The coefficient of the indirect effect of understanding philosophy and concepts on ICT adaptation is 0.165 with a p-value of 0.005, so H7 is supported. Likewise, capacity transformation again proves its mediating role in mediating the effect of work strategy on ICT adaptation with a coefficient of 0.314 and a p-value of 0.000, so H8 is also supported. The second consideration is that capability transformation also plays a significant role in mediating indirect effects. The coefficient obtained is 0.113, and the p-value is 0.038 on the indirect effect of understanding philosophy and concepts on ICT adaptation, so H9 is supported. Finally, the coefficient obtained is 0.116, and the p-value is 0.032 on the indirect effect of work strategies on ICT adaptation, so H10 is supported.

Table 4: Path Analysis Results

Path	Coefficient	SE	p	Evaluation
Capability transformation → ICT adaptability	0.249	0.011	0.035	Supported
Capacity transformation → ICT adaptability	0.534	0.014	0.000	Supported
Philosophy & concept understanding → capability transformation	0.454	0.006	0.000	Supported
Philosophy & concept understanding → capacity transformation	0.309	0.000	0.000	Supported
Work strategy → capability transformation	0.464	0.003	0.000	Supported
Work strategy → capacity transformation	0.587	0.001	0.000	Supported

Table 5: Indirect Effect with Mediating Roles of Capacity Transformation

Path	Standardized Analysis with Bootstrapping BC 97,5 % CI					
	Direct Effect		Indirect Effect		Total Effect	
	Estimate	Sig	Estimate	Sig	Estimate	Sig
Philosophy & concept understanding → capacity transformation	0.309	0.000	-	-	0.309	0.000
Capacity transformation → ICT adaptability	0.534	0.000	-	-	0.534	0.000
Philosophy & concept understanding → ICT adaptability	-	-	0.165	0.005	0.165	0.005
Work strategy → Capacity transformation	0.587	0.000	-	-	0.587	0.000
Work strategy → ICT Adaptability	-	-	0.314	0.000	0.659	0.000

Table 6: Indirect Effect with Mediating Roles of Capability Transformation

Path	Standardized Analysis with Bootstrapping BC 97,5 % CI					
	Direct Effect		Indirect Effect		Total Effect	
	Estimate	Sig	Estimate	Sig	Estimate	Sig
Philosophy & concept understanding → capability Transformation	0.454	0.000	-	-	0.454	0.000
Capability transformation → ICT adaptability	0.249	0.035	-	-	0.249	0.035
Philosophy & concept understanding → ICT adaptability	-	-	0.113	0.038	0.113	0.038
Work strategy → capability transformation	0.464	0.000	-	-	0.464	0.000
Work strategy → ICT adaptability	-	-	0.116	0.032	0.659	0.032

5. DISCUSSION

The results of this study indicate that the understanding of philosophy, concepts, and work strategies affect the transformation of capacities and capabilities of batik craftsmen. The transformation of capacity and capability becomes an important consequence that ultimately builds adaptability in using ICT technology. This important consequence was confirmed directly through the results of this study which obtained a significant test result of the direct effect of capacity and capability transformation on ICT adaptation. Previously, the results of our analysis also showed that the even distribution of participants across all classes (micro, small, and medium) was very good, as evidenced by the p-value above 0.050. One study shows that several factors, such as gender, age range, and level of education, must be represented equally across industry profile qualifications to obtain broadly generalizable analytical results [30], [49].

The results of this study imply that the transformation of capacity and capability is the main key for batik craftsmen in shaping the adaptation of ICT technology. Industrial capacity, which refers to improving tools, materials, storage, and relevant facilities, is needed [50].This capacity will be an important facility for employees in producing batik clothes. The increased capacity in line with the development of digital technology will introduce craftsmen, especially workers, to the technology that is becoming a current trend [51], [52]. In addition, the development of technological literacy in batik craftsmen will also be an important foundation in forming technological capabilities so that the adaptability to the technology is high [15], [52]. Relevant research confirms that an industry's capacity determines its employees' level of adaptation in responding to technological developments [53]. Other studies also agree and provide in-depth arguments regarding the growth of employee literacy influenced by changes in capacity in line with recent developments [54]. A good capacity transformation must be balanced with a capable capability transformation to increase the ICT adaptability of batik craftsmen. Capability transformation, which refers to increasing the ability to increase the productivity of batik craftsmen, is very important [30]. Capacity building includes providing problem-solving and competency training facilities [21]. Research from [4] and [7] provides confidence that employee capabilities are the key to industry adaptability in adopting digital technology. Both capacity and capability must be an important concern for the batik industry to respond to the development of ICT technology, which can maintain product competitiveness and expand marketing [8], [33].

The emergence of the transformation of the capacity and capability of batik craftsmen to adapt to ICT is influenced by important factors that form the foundation. This research proves that understanding philosophy and concepts supported by the accuracy of work strategies significantly affects the transformation of capacities and capabilities. This indicates that batik craftsmen, especially employees, need an orientation that is the goal and direction of the industry to be achieved. Industry employees will better map their competencies by the vision and mission of the industry in which they work [23]. They know what to do to achieve the industry's vision, mission, and goals included in the concept and philosophy [55]. This research is consistent with research from [22], [55] and proves the significant influence of understanding philosophy and concepts on increasing industrial capacity and capability in responding to developments. Then, the accuracy of the strategy must also be placed in line with the understanding of philosophy, considering that both are a common foundation. A very important strategy is owned by the batik industry and its employees [56]. The accuracy of the strategy used will determine the extent to which the vision, mission, and goals can be achieved optimally (Shaharuddin et al. 2021). Furthermore, capacity and capability transformation can be carried out if the industry can implement its work strategy appropriately (Shaharuddin et al. 2021). As Borshalina (2015) reported, the accuracy in implementing the strategy will determine the extent to which the industry can develop in facing the challenges and market opportunities.

Based on the important findings of this study, we suggest that the fashion industry, especially those engaged in batik production, should consider responding to the challenges of ICT technology adoption. The transformation of capacity and capability, an important consequence of increasing ICT's adaptability, must be followed by important aspects. The most important aspect of the batik industry is embedding the vision, mission, and goals which become the philosophy and important concepts so that employees can understand what must be achieved. In addition, work strategies are also important to be formulated together by considering the latest technological developments to support the production process. In addition, concerning work strategies, it is also necessary to analyze changes in the marketing process that lead to the digital market.

6. CONCUSSION

This study proves the importance of capacity and capability transformation as an important consequence of the adaptiveness of batik craftsmen in using ICT technology. ICT adaptation for batik craftsmen starts with a basic understanding of the philosophy and concepts that contain a good industry's vision, mission, and important goals. In addition, the strategy at work is a foundation that is no less important always to be implemented correctly by batik craftsmen. The two foundations have been proven to be significant in influencing ICT adaptation by being bridged by transforming capacities and capabilities. This fundamental thing implies that the higher the understanding of philosophy and concepts supported by the accuracy of the implementation of work strategies, the higher the ICT adaptability of batik craftsmen will also indirectly. This important finding indicates the importance of transforming the capacity and capability of the batik industry, starting from understanding the vision, mission, and goals that become its important philosophy and concept. In addition, work strategies are also important to be formulated together by considering the latest technological developments to support production and marketing processes. These aspects must be met proportionally to increase the adaptability of ICT, especially for batik craftsmen.

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