

Widodo<sup>1</sup>  
Lutfi Nurcholiz  
Marno Nugroho  
Tri Wikaningrum

## THE DEVELOPMENT MODEL OF THE INFLUENCE OF KNOWLEDGE QUALITY TOWARDS ORGANIZATIONAL PERFORMANCE BASED ON ENTREPRENEURIAL LEARNING

**Article info:**  
Received 29.07.2018  
Accepted 08.04.2019

UDC – xxxxxxxxxx  
DOI – 10.24874/IJQR.13.03-02

**Abstract:** *This study aims to examine improving the performance of SMEs organizations through the development of knowledge quality and proactive behavior models with antecedents of entrepreneurial learning (complex individualized collective learning, intuitive sensing learning) with research gaps. Respondents are leaders of Batik SMEs in Central Java Province with Structural Equation Model analysis techniques. The findings of this study indicate that entrepreneurial learning can improve the quality of knowledge, proactive behavior and organizational performance. While limited entrepreneurial learning have a low effect.*

**Keywords:** *Knowledge Quality, Organizational Performance, Entrepreneurial Learning*

### 1. Introduction

Resources Based View emphasized on resource based knowledge (Galunic & Rodan, 1998). Knowledge becomes the important component in the new economic arena (Grant, 1991). The emphasis on knowledge triggers the development of Knowledge Management (KM) concept. KM emphasizes on organization ability in using and combining various knowledge resources that can change intangible resources into innovation. The research result from Hsu (2007) shows that 80 % of the respondents state that knowledge is a strategic asset, and 78% of business opportunities are fail because it cannot explore the knowledge in the organization. While the study from Leticia Bautista-Frias (2012) explains that knowledge is the most important source of competitive advantage, but the relationship

between knowledge management and competitive advantage is weak.

Knowledge quality helps company to do a better job, develop useful products or services, reduce costs, and increase sales (Kyoon et al., 2010). Therefore, organization has to improve knowledge quality. Knowledge quality has become an important issue in creating competitive advantage and dealing with rapid changes of business environment. From the perspective of the use of knowledge, knowledge is not only obtained, but also integrates all different source of special knowledge (Malhotra & Majchrzak, 2004). Human resources will be willing to spend their time and specific if knowledge has a value and benefit for them (Davenport & Prusak, 1998). Thus, defining, explaining, and assessing knowledge quality is interesting for researchers. However literature studies show that the dominant

---

<sup>1</sup> Corresponding author: Widodo  
Email: [widodo@unissula.ac.id](mailto:widodo@unissula.ac.id)

research is the absence of consensus regarding the definition of quality for knowledge (Sabetzadeh & Tsui, 2015). (Valaei & Rezaei, 2017) explained that the quality of knowledge is a new concept and there is little research in SMEs. Entrepreneurial knowledge is also strategic in developing organizational performance. SMEs that operate informally in conditions of competition are very difficult to argue for entrepreneurial learning. Therefore there is a competency gap felt by employers needed entrepreneurial learning (Hunter & Lean, 2018). Most of the learning that occurs in the context of entrepreneurship is experiential, the most common feature of the definition of entrepreneurial learning is experience (Agbim et al., 2013). Dominant studies limited integrating concepts in learning, namely the difference between entrepreneurial learning and entrepreneurial knowledge (Krishna, 2018). Then recent theoretical developments indicate that entrepreneurs cannot always access failures with motives for problem solving; on the contrary, the main dominant motive for maintaining a positive self-image.

The problem of entrepreneurial knowledge is not only related to the learning process of entrepreneurs in exploring and exploiting entrepreneurial opportunity while creating new business or existing business management, but more importantly, the specific learning process that occurs (Wang & Chugh, 2014). In short, how the learning process occur is very important to understand the entrepreneurial process. Entrepreneurial is a learning process and entrepreneurial theory that requires learning theory.

## 2. Literature Review

### 2.1. Organizational Performance

According to Kilgore (1999), the measure or performance is growth, and according to Beal (2000), is profitability. Functionally, organizational performance is reflected to

these (Ferdinand: 2003): 1) Company with a good performance will be reflected from the good level of performance of existing human resources, such as high levels of productivity, level of creativity, and innovation in the organization they belong; 2) Organization with a good performance will be reflected from the good level of performance of production operation, such as the high level of efficiency in the internal business process, high quality of products and services they produced, high level of speed of process, high level of accuracy of process, et cetera; 3) Company with a good performance can be seen from the high level of marketing management performance, such as high volume of sales, high market share, and high marketing profitability; 4) Company with a good performance can be seen from the high level of financial management performance, such as availability of funds, the efficient and effective use of funds that appear in a variety of financial risks as in various financial ratio, such as: liquidity, solvability activity, and profitability.

The study from Menon, et al. (1999) explains that a good process of strategy will generate strategy with a good quality, which is established based on sustainable organizational learning environment will bring out excellence resource and capability. The condition will subsequently improve organizational performance (Ferdinand, 2002). One of the dimensions of organizational culture is adaptability, which is the ability to do internal change as a response toward environment that has a change to improve performance (Denison, 1996). Therefore, adaptability requires organization to develop norms and beliefs that support ability to accept and interpret various signals from the environment and describes it into cognitive and behavioral change.

Resources-based theory that resources and capabilities are the main sources for a company's profitability. By referring to functional management, it is very reasonable

to argue that the performance of the organization is in fact reflected in the performance of various functional management that function well in an organization.

Organizational performance shows the success and efficiency of organizational behavior. Jacobson & Andréosso-O'Callaghan (1996) explains that the success of an organization can be seen from 3 aspects, which include Firm level (microeconomics level), Industry level (mesoeconomic level) and Country level (macroeconomics level).

There are several approaches to measuring organizational performance. Measures of organizational success include: profitability, sales growth, size of competitiveness and market share Jacobson & Andréosso-O'Callaghan (1996). Whereas according to Ramanujam, et al. (1986) the first approach is organizational performance with financial measurement, such as return on equity and profit, product quality and market share, and the third approach is multidimensional, namely market development, profitability and new product development.

Slater & Olson's (2001) study of organizational performance indicators include: 1) the level of profitability compared to the industry average. 2) the level of market share is compared to the industry average. 3). Organizational efficiency compared to industry averages 4). Market position compared to industry average. Another opinion explaining indicators of organizational performance is growth. And organizational performance is profitofability.

## 2.2. Proactive Behavior

Employees are often faced with rapid changes in their work, including the need to face new innovations and technology and work in companies with decentralized management. Proactive behavior, which is usually seen as anticipatory behavior with

the aim of influencing oneself or the work environment, is beneficial to the organization because it is related to the performance of individuals and organizations, such as overall performance, career related outcomes, sales, and organizational success. The significance of the antecedent variable behavioral predictors associated with this performance is a much needed effort.

Proactive work behavior is defined as behavior that aims to change the internal organizational environment (Grant & Ashford, 2008). Proactive change-oriented behavior that emphasizes increasing the implementation of work with voluntary efforts undertaken by employees. Employees demonstrate personal initiative if the behavior is in accordance with the mission of the organization and is independent, continuous, and proactive and oriented towards long-term, future, and goal-oriented. Proactive behavior is characterized as anticipatory work behavior, future orientation or change orientation, active, independent, and carried out continuously.

Proactive behavior is driven by problems or opportunities, and it aims to increase the function of the whole job (Grant & Ashford, 2008). Most of the time in work place is spend for the main tasks activity. However, many changes in the working world have been increasing the relevance of proactive behavior so that the functions in the organization can work effectively. The dynamics of working system increasingly require people to be involved in additional types of behavior, which is proactive behavior (Murphy & Jackson, 1999). Unfortunately, individuals in general do not show proactive behavior consistently in all situations. Proactive behavior is seen as anticipatory behavior with the aim of influencing oneself or the work environment, which is beneficial to the organization. This relates to individuals and organizational performance, overall performance. Proactive work behavior is defined as behavior to change the internal environment of the

organization, the behavior of proactive work can be seen as a higher order category.

Proactive behavior consists of self-initiated actions, driven by problems or opportunities, and aims to improve overall work functions. Most of the time at work is spent on core work activities. However, many changes in the world of work have increased the relevance of proactive behavior to function effectively. Modern work systems, for example, increasingly require people to engage in additional types of behavior such as proactive behavior (Murphy & Jackson, 1999). As a result, much research has been dedicated to understanding the nature of proactive behavior.

The indicators of proactive behavior according to Belschak & Den Hartog (2010), include: (1) suggesting ideas as a solution of company's problems; (2) gaining new knowledge that will help the company; (3) optimizing the work in the organization that aims to organization future; (4) sharing knowledge with colleagues; and (5) finding new approach to execute/perform tasks that is more successful. Existing literature shows that employee proactive behavior in the workplace is influenced by commitment, personality and environmental variables (Grant & Ashford, 2008). Research links proactive behavior with positive consequences such as individuals, teams, and organizational performance and career success. Expectations about the relationship between interpersonal proactive behavior and task performance are unclear. On the one hand, interpersonal proactive behavior is more prosocial and focuses more on coworkers than achieving task performance goals. Therefore, it may be more closely related to contextual performance and divert attention from task performance. the relationship between interpersonal proactive behavior and task performance is not theoretically clear, (Belschak & Den Hartog, 2010).

The results of the study show that Alexander (2011) shows that motivation can improve

proactive behavior. While Jyoti et al. (2011) experienced human resources tend to behave proactively. The research result from Sonnentag (2003) shows that proactive behavior is seen as anticipative behavior to influence themselves or working environment, and it is useful for the company. It is related with individual and organizational performance, and also all performance. Proactive work behavior defines as a behavior to change the internal environment of the organization (Parker & Collins, 2010). Parker & Collins (2010) states that the result of proactive behavior can be seen as category of a higher service.

*H1: If proactive behavior is getting better, then the organizational performance will also increased.*

### 2.3. Knowledge Quality

It is undeniable that knowledge has increasingly been considered an important asset and is increasingly managed by several private sectors to maintain competitive advantage. Knowledge management has changed habits and routine operations, such as the educational process in thought and culture. By designing and managing knowledge management processes, tacit knowledge, knowledge and workflows can be transformed into procedures, standards, and lay the foundation for creating competency, competitive advantage and sustainable development. Knowledge management is related to the exploitation and development of knowledge assets of an organization with the aim of advancing organizational goals. Knowledge is the main resource and the main source of value for an organization.

Kulkarni et al. (2006-2007) sees knowledge quality as a valuable knowledge content that can give benefit to the organization. Soo et al. (2004) explores knowledge quality that is measured by frequency, utility, and innovation. Rao & Osei-Bryson (2007) conceptually develop the dimension of

knowledge goods quality such as accuracy, consistency, currency, interpretable data, level of context, level of detail, level of importance, sharing, and volatility. Durcikova and Gray (2009) measure knowledge quality with exactness, meeting needs, and accuracy. Knowledge is establishing multi dimensions (Nonaka, 1994) and knowledge quality cannot be measure with single dimension. Malhotra & Majchrzak (2004) also states that there are three criteria to use knowledge for innovation, which are credibility, relevance, and adaptation. In this study, knowledge quality is defined as how far awareness and understanding of ideas, logics, relationships, and circumstances are suitable for use, relevant, valuable to the context, and adaptable.

The research result from Kyoon et al. (2010) states that the indication of knowledge quality includes: 1) the quality of intrinsic knowledge is that human resources have knowledge quality in themselves. This dimension is related with accuracy, reliability, and time accuracy of knowledge. This is the basis of knowledge quality, and it gives a rich understanding in the activity and relationship. Knowledge is defined as justified beliefs that increase the capacity of an entity for effective action (Nonaka, 1994). This means that members justify the accuracy or reliability of their observation (Erden et al., 2008). Although knowledge is described as beliefs, opinions, insight, and experience, (Nonaka, 1994; Davenport & Prusak, 1998) knowledge must contain fundamental values. 2) The knowledge quality context is a necessary condition. Knowledge that does not reflect context has no relevance. The same knowledge may have different meanings in different context. Knowledge is context-specific (Fernandez & Sabherwal, 2001; Nonaka & Takeuchi, 1995) and a different context (which is time, space, culture, role, or paradigm) assesses quality in different ways. Different context may need different knowledge management (Fernandez & Sabherwal, 2001). The quality

of contextual knowledge refers to how far knowledge is considered as tasks context. This dimension is related with relevance, suitability, and value by understanding the environment where the task is being operated. The understanding of context has to increase the efficiency of the use of knowledge. 3) The quality of knowledge follow-up is an action and it must be used for a purpose (Nonaka & Takeuchi, 1995). The quality of knowledge follow-up refers to how far knowledge is expanded, adapted, and easy to be applied to the tasks. Knowledge must be transformed into an action to realize its utility and profitability (Davenport & Prusak, 1998). Since knowledge quality depends on the real use of knowledge, knowledge quality enables the team to adapt flexibly, expendable, and apply knowledge easily, and thus it can increase effective action. This dimension helps to deal with uncertainty by adapting their knowledge for a flexible, wide, and easy situation. Knowledge belongs to the individual, but can be utilized by the organization while providing autonomy to the individual's development. In this connection learning and learning are key words in increasing knowledge capacity, therefore making individuals as learners is a necessary condition as part of efforts to improve organizational performance through integration with organizational processes. For this reason, organizations need to develop themselves into learning organizations, because only in such conditions can individuals / employees truly become human learners.

Supply of resources from outside a variety of new knowledge and understanding needed for a project. Team integration - external resources allow the team to access valuable knowledge and complement each other's skills (Kyoon et al., 2010). Thus, the team can improve the quality of their knowledge with timely integration through knowledge network. Valuable knowledge produces high returns in the market which increases the ratio of benefits to customers to costs.

The study from Chen et al. (2017) explains that a success knowledge management will create better organizational performance, and such relationship is unlimited and difficult to ascertain clearly. This means that there are so much that is still unexplored, such as in proving the direct relationship between antecedent that is related with knowledge and organizational performance, because there are many factors that can contribute toward organizational performance, and many complementary practice that needs to be considered in knowledge management activity. The complementary practices are as follows: knowledge quality, user knowledge, satisfaction, and organization creativity can be introduced as the antecedent in the causal relationship with performance.

Therefore, the hypothesis that is proposed is:

*H2: If the knowledge quality is increased, the organizational performance will also higher*

Knowledge has become something very decisive, therefore its acquisition and utilization need to be managed properly in the context of improving organizational performance. This step is seen as something very strategic in the face of global competition, so that its neglect will be a disaster for the business world, therefore a method that can integrate that knowledge within the framework of HR development in the organization is needed. Knowledge management is very important for a company. So that the company can grow rapidly. Knowledge management serves as a planned and systematic approach to guarantee the application of good organizational knowledge. At the same time increasing ideas, innovation, thinking, competence and expertise. Knowledge has become a major business asset driven by changes in technology and in global business. This change has made the orientation of HR management that focuses on tangible assets shifting to more focused attention on intangible assets. This also means that the natural resource-based

comparative advantage in the business shifts to quality-based competitive advantage in HR, and in this context knowledge becomes a very important asset in the management of HR management.

Altinay & Wang (2011) explain that expanding business can have positive effect of the level of individual education about the possibility to feel entrepreneurial opportunity. A higher level of knowledge can develop analytical ability, computing skills, and communication skills of the entrepreneurs. People who achieve higher level of knowledge is better prepared to communicate with customer, gather market intelligence, and develop proactive strategy that drive to a higher growth.

Therefore, the hypothesis that is proposed is:

*H3: If the knowledge quality is increased, the proactive behavior will also higher*

#### **2.4. Organizational Learning**

Kang et al. (2009) explain learning process as an effect of adaptation process which influences on the relation between a system and its external environment. Learning process makes people are able to act in various ways due to the environment. On the other hand, their own actions enable them to learn. Song (2008) concludes that learning process of an organization is particularly oriented on the cognitive and behavioral dimensions which exist in the context of: (1) culture, (2) strategy, (3) structure, (4) environment. Strategy is explained as attitude of organization in facing the market as well as a target and goal which give a momentum and direction for the actions of organization. Structure refers to an arrangement of organization, some elements of it are important for determining the structure examination such as in decision making, centralization/decentralization, simple/compound characteristics, formal/non-formal, etc. Then, environment is defined as having internal and external characteristics. Besides, it devotes the

intention on the tension between constancy (constant or remain unchanged) and the change as well as various stress intensity. Hence, learning process strategically focuses on insight (an attempt to discover new things) and foresight. Nonaka & Takeuchi (1995) relate knowledge invention with continual innovation and continual innovation with profitable competitive side. These researchers explain knowledge invention as a dynamic interactive process which time by time will produce 2 knowledge spirals. The first spiral includes socialization, externalization, combination, and internalization. On the other hand, the second spiral encompasses stages of individual, group, and organization. The first spiral is epistemological and the second spiral is ontological.

The problem of entrepreneurial knowledge is not only related to the learning process of entrepreneurs in exploring and exploiting entrepreneurial opportunity while creating new business or existing business management, but more importantly, the specific learning process that occurs (Wang & Chugh, 2014). In short, how the learning process occur is very important to understand the entrepreneurial process. Entrepreneurial is a learning process and entrepreneurial theory that requires learning theory.

Pitt & Kannemeyer's (2000) suggests that there are 6 important dimensions, namely organizational structure, decision-making process, cross-functional teams, reward systems, management development and corporate culture. While according to Hsu (2007) includes: information and communication technology, cultural support, measurement systems, resource support, structural design and leadership support. And according to Liao (2009) includes: commitment, sharing vision and communication. Organizational learning is not just the total amount of knowledge an individual has. Organizational learning emphasizes the pattern of interaction

between human resources to achieve meaningful goals.

There are three research gaps of entrepreneurship, especially learning style that should get deeper attention of the research. Three types of learning style help entrepreneurship learning research and also give a feedback to the entrepreneurship literature.

a) Individual and collective learning:

This is a process where individuals obtain data, information, skill, or knowledge. The next is the process of cumulative knowledge, based on a set of common rules and procedure that allows individuals to coordinate their action while looking for a solution of a problem (Wang & Chugh, 2014). In the integration of individual and collective learning, the composition focus of entrepreneurial team affects individual and organizational learning, condition of the organization that simultaneously encourages individual and collective learning, learning that occurs in entrepreneurship group, community, and network, and also learning that helps to form entrepreneurship group, community, and network. This learning process can also be explained in the definition of knowledge assimilation or accommodation. The assimilation of this context (adding new information to prior knowledge) occurs when people get additional facts about certain resources without modifying the basis structure of the cognitive concept. Accommodation, however, occurs when prior knowledge is transformed because of the understanding that a topic has achieved the quality of new knowledge (Kimmerle et al., 2010). The research result from Kilgore (1999) explains that the theory of individual learning does not adequately explain the group as a learning system and it also not prioritizing the learning process correctly between knowing and doing. In particular, the understanding of social movement is not only requiring group concept as learners and knowledge advisors, but also the understanding of the centrality of the group's

vision about social justice that encourages it to act – mostly in conflict with other groups. Collective learning is a process that occurs between two or more diverse people in which the meaning has a shared meaning that is constructed and acted upon by the groups, which consequently has a better knowledge. Thus, the hypothesis that is proposed is:

*H4: If the individual and collective learning is higher, then the knowledge quality will also be higher.*

Integrating individual and collective learning is a very challenging tasks for entrepreneurial. This process enables individual to act as a learning agent to evaluate what is possible to be done in the organization, develop a coherent and collective action plan, and gather organization resources to seek for identified opportunities.

The study from Wang & Chug (2014) shows that the integration of individual and collective learning is focused on the composition of entrepreneurship team to affect individual and organizational learning; condition of the organization that simultaneously encourages individual and collective learning; learning that occurs in entrepreneurship group, community, and network; learning that helps to form entrepreneurship group, community, and network; and also anticipative community. Therefore, the hypothesis that is proposed is:

*H5: If the individual and collective learning is higher, then the proactive behavior will also be higher.*

b) Explorative and exploitative learning:

Explorative and exploitative learning is the type of key learning to understand what and how the entrepreneurs is doing on the learning process. Although these two types of learning can occur in every organization, entrepreneurial company is more vulnerable toward the level of explorative learning than non-entrepreneurial company, because they often operate in an uncertain environment.

De Noni & Apa (2017) explains that learning effort is related with activities that have purpose to develop existing knowledge and construct new knowledge, and then distinguish these activities as exploitative and explorative learning. Exploitation refers to the efficiency of the use of cognitive asset, while exploration refers to its development. Therefore, the hypothesis that is proposed is:

*H6: If the explorative and exploitative learning is higher, then the knowledge quality will also be higher.*

Exploitative learning respects company ability to reorganize information, resources, and knowledge in the organization to support international adaptation and improve business performance. Exploitative learning is related to the application of knowledge to increase the stock of knowledge which is available in the organization. It is depends on the interactive capacity, acquisition, and company absorption, which are based on the efficiency of organization procedure such as strategic planning, practice community, and work place training. A bigger orientation of the company toward exploitative learning is expected to be able to increase business performance by supporting the improvement of competencies and organization routine, and also encouraging more effective adaptation to the foreign market (Grant, 2008). Therefore, the hypothesis that is proposed is:

*H7: If the explorative and exploitative learning is higher, then the proactive behavior will also be higher.*

c) Intuitive and sensing learning:

Intuitive learning is learning by knowing the relationship of facts and finding possibilities. Whereas, sensing learning is learning by knowing facts or detail based on external contact through sound and physical sensation (Felder and Silverman 1988). The research result shows that when there are more cognitive processing style of an individual that tend to be intuitive and away from analytical, then there will be more opportunities that is possible to be identified



by individual (Corbett, 2007). This type of learning is very important to understand how entrepreneurship opportunities work (Eckhardt & Shane 2003; Venkataraman 2019). The role of intuitive and sensing learning help to increase the understanding of how opportunities are found or created and also how rational approach and its influence work toward the increase of possessed knowledge. Thus, the hypothesis that is proposed is:

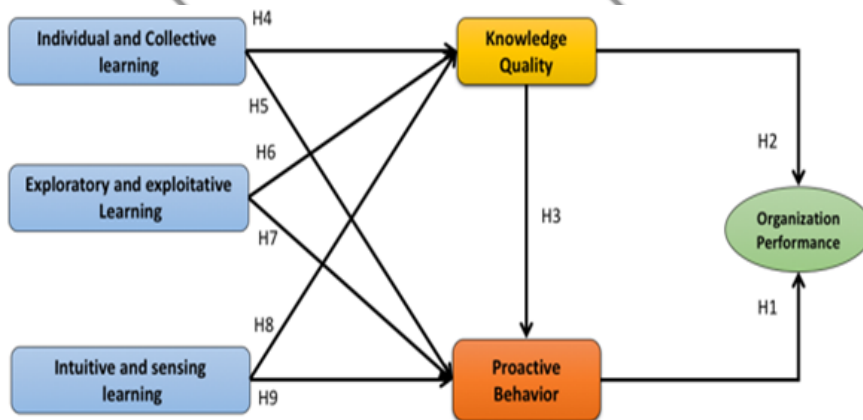
*H8 : If the intuitive and sensing learning is higher, then the knowledge quality will also be higher*

The focus of intuitive and sensing learning is the factor that plays the key role in every stages of learning cycle, entrepreneurship learning from experience (success and

failure), the process of decision making in entrepreneurship, how entrepreneurs seek and obtain external information, and understand the information in the learning process (Wang. & Chugh, 2014). Therefore, the hypothesis that is proposed is:

*H9: If the intuitive and sensing learning is higher, then the proactive behavior will also be higher.*

Based on the complete and in-depth literature review in the Figure 1, knowledge quality is constructed by entrepreneurial learning (individual and collective learning, explorative and exploitative learning, intuitive and sensing learning). The increase of knowledge quality trigger proactive behavior and organizational performance.



**Figure 1.** The Model of Knowledge Quality Development toward Organizational Performance Based on Entrepreneurial Learning

### 3. Research Method

#### 3.1. Sample

The sampling method is using purposive sampling, this means that it is done based on the population characteristic, which is Batik MSMEs leader in Central Java Province, based on location and minimum operating time of 10 years. The leadership is chosen because it reflects and knows deeply about the managed SMEs. And SMEs batik is a

cultural heritage of the ancestors of the Indonesian people that is still maintained today. The sampling size refers to Hair et al. (1996), which is 150 respondents.

#### 3.2. Measurement of Variables

The indicator of organizational performance refers to the research from Slater and Olson (2001), which includes: 1) level of profitability compared to the industry average; 2) level of market share compared

to the industry average; 3) Organizational efficiency compared to the industry average; and 4) market position compared to the industry average. Proactive behavior is seen as anticipative behavior that aims to affect individual or work environment, that can be useful for the organization. According to Belschak & Den Hartog (2010) the indicator of proactive behavior includes: 1) ideas for solution for company problems; 2) optimize the work of the organization for further goals of the organization; 3) share knowledge with colleagues; 4) find new approaches to execute their job more successfully. Knowledge quality is a valuable knowledge content that has usability for the organization. The indicator refers to the study from Kyoon et al. (2010): intrinsic knowledge quality, knowledge context quality, and knowledge follow-up quality.

Entrepreneurial learning according to the study from Wang & Chugh (2014) includes the variables of individual and collective learning, which integrates search behavior of individual opportunities with profit seeking behavior of the organization (Hitt et al., 2001). The indicator refers to Wang & Chugh (2014), such as: organization ability to align individual interests, work together in creating new resource combination. As for explorative and exploitative learning, the

explorative learning emphasizes discovery through enforcement and interpretation to produce the desired or outcome of internal transformation through the development of new knowledge, while exploitative learning focuses on search that is directed to plan and control achievable results or acquisition and assimilation of existing knowledge outside the company (Kreiser, 2011). The indicator (Siren et al., 2012) includes: new ideas, applying ideas on entrepreneurial process, perfecting entrepreneurial process, and efficiency. Intuitive and sensing learning mean how entrepreneur opportunity occurs, either from invention or creation. The indicator includes: transformation of experience, the process of taking, and creative skills of information understanding in the learning process (Short et al., 2010). The variables were measured with questionnaire by using likert-scale with answer scale of 1-5. The scale represented the rating from 'strongly disagree' to 'strongly agree'. Table 1 shows the results of validity and reliability test. Table 1 shows a loading factor value above 0.7 (Sekaran, 2003) and a minimum reliability value of 0.6 (Hair et al., 1992). Therefore, it can be concluded that the instrument has the validity and reliability.

**Table 1.** Validity and Reliability Test

No	Variable	Indicator	Loading Factor	Reliability
1	Organization Performance	a) The level of profitability compared to the industry average. b) The level of market share compared to the industry average. c) Organizational efficiency compared to industry averages d) Market position compared to industry average.	0.79 0.74 0.85 0.83	0.75
2	Proactive Behavior	a) Ideas for solutions to company problems b) Optimizing work organizations with further organizational goals. c) Share knowledge with colleagues. d) New approaches to execute / carry out more successful tasks	0.81 0.76 0.95 0.88	0.81

**Table 1.** Validity and Reliability Test (Continued)

No	Variable	Indicator	Loading Factor	Reliability
3	Knowledge Quality	a) The quality of intrinsic knowledge, b) The quality of the knowledge context c) Quality of follow-up knowledge	0.82 0.76 0.81	0.82
4	Individual -Collective Learning	a) The ability of the organization to harmonize individual interests, b) Cooperate in creating new combinations of resources. c) Individual synergy d) Contribution of work teams to individuals	0.81 0.74 0.92 0.79	0.71
5	Exploratory-Exploitative Learning	a) New ideas, b) Applying ideas in the entrepreneurial process, c) Improvement of the entrepreneurial process d) Efficiency.	0.85 0.80 0.81 0.72	0.75
6	Intuitive-Sensing Learning	a) Transformation of experience b) Retrieval process c) Creative understanding of information skills in the learning process	0.82 0.81 0.80	0.73

#### 4. Result and Discussion

The empirical model test is using Structural Equation Modeling. The model indicates that Chi-square= 290.235 with probability value of 0.111; GFI=0.843, AGFI=0.805 and TLI=0.982, while value of RMSEA=0.030. The result of the model is a Fit. Based on statistically analysis the results of this study, it indicates conformity with the required standard values. The result of the Full Analysis Model is shown on Table 1.

Table 2 shows that the 9 hypotheses that are proposed is supported by empirical data. The hypothesis of entrepreneur learning (individual-collective learning, exploratory-exploitative learning, intuitive-sensing learning) has a positive influence toward knowledge quality. This means that the increase of individual-collective learning, exploratory-exploitative learning, intuitive-sensing learning will trigger the increase of intrinsic knowledge quality, knowledge context quality, and knowledge follow-up quality (knowledge quality). This condition is consistent with the argument from

(Kilgore, 1999 ; De Noni & Apa, 2017; Eckhardt and Shane, 2003; Venkataraman, 1997.). The hypothesis of entrepreneurial learning (individual-collective learning, exploratory-exploitative learning, and intuitive-sensing learning) has a positive influence toward proactive behavior. This means that the increase of individual-collective learning, exploratory-exploitative learning, intuitive-sensing learning will trigger the increase of ideas for solution for organization problem, optimize the work of the organization for further goals of the organization, share knowledge with colleagues, and find new approaches to execute their job more successfully. This condition is in accordance with the research from Wang & Chugh (2014). The hypothesis of knowledge quality toward proactive behavior is also supported by empirical data. This means that the increase of knowledge quality will also increase proactive behavior. This result supports the research from Kamaşak & Bulutlar (2010).

The hypothesis of knowledge quality and proactive behavior has an influence toward

organizational performance, and it also supported by empirical data. This means that the increase of knowledge quality will also increase: 1) level of profitability compared to the industry average; 2) level of market

share compared to the industry average; 3) Organizational efficiency compared to the industry average; and 4) market position compared to the industry average. It also supports the study from Chen et al. (2017).

**Table 2.** Inner Path Model Coefficients and Their Significance

Exogenous variable	Endogenous variable	Standard Estimate	T-value
Knowledge Quality	Intuitive-Sensing L	0.224	2.272*
Knowledge Quality	Individual-Collective L	0.208	2.100*
Knowledge Quality	Exploratory-Exploitative L	0.202	1.985**
Proactive Behavior	Individual-Collective L	0.204	2.243*
Proactive Behavior	Intuitive-Sensing L	0.277	3.025*
Proactive Behavior	Knowledge Quality	0.199	2.039*
Proactive Behavior	Exploratory-Exploitative L	0.246	2.613*
Organization Perf.	Knowledge Quality	0.238	2.299*
Organization Perf.	Proactive Behavior	0.303	2.952*

p < 0.05; \* p < 0.10; \*\* p < 0.01; \*\*\* p < 0.001

**4.1. Direct effect, Indirect Effect and Total**

Direct, indirect and total influence analysis is intended to determine the effect of the hypothesized variables. Direct influence is the coefficient of all coefficient lines with one end arrows or often referred to as path coefficients, while indirect effects are influences caused by intermediate variables.

While the total influence is the total sum of direct and indirect influences. Testing of the direct, indirect and total effects of each variable on the knowledge quality Development Model towards Entrepreneurship Learning-Based Organizational Performance is presented in Table 3.

**Table 3.** Direct effect, Indirect Effect and Total

No.	Variable	Effect	Individual and Collective learning	Exploratory and Exploitative learning	Intuitive and Sensing learning	Knowledge Quality	Proactive Behavior
1	Quality Knowledge	Direct	0.021	0.200	0.220	0.000	0.000
		Indirect	0.000	0.000	0.000	0.000	0.000
		<b>Total</b>	<b>0.021</b>	<b>0.200</b>	<b>0.220</b>	<b>0.000</b>	<b>0.000</b>
2	Proactive Behavior	Direct	0.200	0.250	0.269	0.240	0.000
		Indirect	0.042	0.040	0.044	0.000	0.000
		<b>Total</b>	<b>0.242</b>	<b>0.290</b>	<b>0.313</b>	<b>0.240</b>	<b>0.000</b>
3	Organization Performance	Direct	0.000	0.000	0.000	0.240	0.300
		Indirect	0.050*	0.048*	0.052*	0.060	0.000
			0.060**	0.075**	0.064**	0.000	0.000
		<b>Total</b>	<b>0.050<sup>4</sup></b> <b>0.060<sup>5</sup></b>	<b>0.048<sup>4</sup></b> <b>0.075<sup>5</sup></b>	<b>0.052<sup>3</sup></b> <b>0.084<sup>3</sup></b>	<b>0.246<sup>2</sup></b> <b>0.240<sup>2</sup></b>	<b>0.300<sup>1</sup></b> <b>0.300<sup>1</sup></b>

Table 3 direct, indirect and total organizational performance models explain that the quality knowledge variable is directly

influenced by individual collective learning (0.210), exploratory exploitative learning (0.20) intuitive and sensing learning (0.22).

Intuitive-sensing learning has a dominant influence on quality knowledge, while indirect effects that affect the quality knowledge variable are not seen in this research model because the quality knowledge variable is a variable at the first level in a structured equation model.

Then the proactive behavior variable is directly influenced by individual collective learning (0.20), exploratory exploitative learning (0.25) and intuitive sensing learning (0.26). This shows that the intuitive-sensing learning variable has a dominant influence on proactive behavior. Indirect effects on proactive behavior variables do not appear in this research model because proactive behavior variables are variables at the first level in a structured equation model.

Organizational performance variables are directly influenced by knowledge quality (0.24) and proactive behavior (0.30). This shows that the proactive behavior variable has a dominant influence on organizational performance. While the indirect effect of knowledge quality on organizational performance variables through proactive behavior is 0.06.

The total effect of proactive behavior variables on organizational performance is 0.30, quality knowledge on organizational performance is 0.246, individual-collective learning 0.050, exploratory-exploitative learning 0.48 and intuitive-sensing learning 0.052. Based on the total influence, the proactive behavior variable towards organizational performance by 30%.

#### 4.2. Implications Managerial

The quality of knowledge is expanded, so that it can adapt, or be easily applied to tasks. Knowledge must be transformed into action to realize its usefulness and profitability. Unique knowledge of sources of innovative activity. Therefore, the knowledge quality possessed must be dynamic so that it can competence.

Problem solving entrepreneurship learning

focuses on how the strategy and on development facilitate facilitation in a rapidly changing environment. Can be used to analyze the learning of dynamic abilities in different environmental conditions and to better understand the nature and consequences of dynamic abilities. Therefore the managerial implications of this study are: A better understanding of entrepreneurial antecedents of knowledge quality that is about the dimensions of entrepreneurial learning, which includes individual-collective learning, exploratory exploitative learning and intuitive learning so as to increase competencies that make the gap between entrepreneurs in carrying out its business the consequences are able to improve organizational performance.

#### 4.3. Research finding

Based on direct, indirect, total and path analysis, the model for improving the performance of SME organizations is as follows: the main priorities for improving the performance of SME organizations are improved through proactive behavior, secondly by improving the quality of knowledge that includes indicators of intrinsic knowledge, knowledge context and follow-up knowledge. The three performance of SME organizations are improved through the quality of knowledge and proactive behavior that is built by improving the organizational learning intuitive and sensing learning dimensions. The four performance of SME organizations is enhanced through the quality of knowledge and proactive behavior that is built by improving organizational learning in the exploratory exploitative learning dimension. The four performance of SME organizations is improved through the quality of knowledge and proactive behavior that is built by increasing the learning of the individual collective learning dimensions of the organization. Therefore this study provides a better insight into how substantive the quality of knowledge is that

it not only improves organizational performance but also enhances proactive behavior. And entrepreneurs are more effective at increasing competency through improving the quality of knowledge that includes intrinsic knowledge, knowledge contexts and follow-up knowledge

#### Limitations and Future Research

The measurement result with AMOS software shows that the influence of entrepreneurial learning (Intuitive-Sensing Learning, Exploratory-Exploitative Learning, Individual-Collective Learning) toward knowledge quality has Multiple Correlations of 16,9%, which belongs to the low category below 20%. Based on the limitation of this research, the antecedent of knowledge quality that has a low qualification of Squared Multiple Correlations is the black bock of an interesting research area.

#### 4.4. Conclusions

Based on the hypotheses that have been

#### References:

- Agbim, K. C., Owutuamor, Z. B., & Oriarewo, G. O. (2013). Entrepreneurship development and tacit knowledge: Exploring the link between entrepreneurial learning and individual know-how. *Journal of Business Studies Quarterly*, 5(2), 112.
- Altinay, L., & Wang, C. L. (2011). The influence of an entrepreneur's socio-cultural characteristics on the entrepreneurial orientation of small firms. *Journal of Small Business and Enterprise Development*, 18(4), 673-694. <https://doi.org/10.1108/14626001111179749>
- Bautista-Frias, L., Romero-Gonzalez, R. M., & Morgan-Beltran, J. (2012). Knowledge maps in the conversion of tacit knowledge as a competitive strategy. *Journal of Competitiveness Studies*, 20(3/4), 47.
- Beal, R. M. (2000). Competing effectively: environmental scanning, competitive strategy, and organizational performance in small manufacturing firms. *Journal of small business management*, 38(1), 27.
- Belschak, F. D., & Den Hartog, D. N. (2010). Pro-self, prosocial, and pro-organizational foci of proactive behaviour: Differential antecedents and consequences. *Journal of Occupational and Organizational Psychology*, 83 (2), 475-498. <https://doi.org/10.1348/096317909X439208>

developed in this study, the research problems that have been proposed can be justified by testing Structural Equation Modeling (SEM), which has been conceptualized through this study that the relationship between variables that influence and are influenced by the sustainable competitive advantage of the 6 constructs empirically proposed and supported: individual-collective learning, exploratory exploitative learning, intuitive sensing learning, proactive behavior, knowledge quality and organization performance Then based on various significant support from hypothesis testing has answered the research problem, which produces a model for developing the knowledge quality towards the performance of entrepreneurial learning-based organizations, is the realization of organizational performance influenced by proactive behavior with indicators that include: ideas for solutions to corporate problems, optimizing organization ja with further organizational goals, sharing knowledge with colleagues and finding new approaches to execute or carry out more successful tasks.

- Chen, Y. Y., Huang, H. L., & Fang, W. H. (2017). The Effect of Knowledge management Strategy on Knowledge management Performance and Business performance. *International Journal of Social Science*, 53(1),19-24.
- Corbett, A. C. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of business venturing*, 22(1), 97-118.
- Davenport, T. H., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Harvard Business Press.
- De Noni, I., & Apa, R. (2015). The moderating effect of exploitative and exploratory learning on internationalisation–performance relationship in SMEs. *Journal of International Entrepreneurship*, 13(2), 96-117.
- Denison, D. R., & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization science*, 6(2), 204-223.
- Durcikova, A., & Gray, P. (2009). How knowledge validation processes affect knowledge contribution. *Journal of Management Information Systems*, 25(4), 81-108.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of management*, 29(3), 333-349.
- Erden, Z., Von Krogh, G., & Nonaka, I. (2008). The quality of group tacit knowledge. *The Journal of Strategic Information Systems*, 17(1), 4-18.
- Felder, R. M., & Silverman, L. K. (1988). Learning and teaching styles in engineering education. *Engineering education*, 78(7), 674-681.
- Ferdinand, A. T., (2002). Marketing Strategy Making : Process and future research “’ *Jurnal sain Pemasaran Indonesia*, 1(1), 1- 22.
- Ferdinand, A. T. (2003). Sustainable Competitive Advantage : Exploration Model concept, *Research Paper Series*
- Fernandez I. B. & Sabherwal R. (2001). Organizational knowledge management: A contingency perspective. *Journal of management information systems*, 18(1), 23-55.
- Galunic, D. C., & Rodan, S. (1998). Resource recombinations in the firm: Knowledge structures and the potential for Schumpeterian innovation. *Strategic management journal*, 19(12), 1193-1201.
- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in organizational behavior*, 28, 3-34.
- Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, 33(3), 114-135.
- Hair J. F., Anderson R. E., Tatham R. L., & Black W. C. (1994). *Multivariate data analysis with readings*. Macmillan Publishing Company.
- Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. Ireland, RD and Hoskisson, RE (2001). *Strategic management: competitiveness and globalization*, 6.
- Hsu, I. C., Yeh-Yun Lin, C., Lawler, J. J., & Wu, S. H. (2007). Toward a model of organizational human capital development: Preliminary evidence from Taiwan. *Asia Pacific Business Review*, 13(2), 251-275.
- Hunter, L., & Lean, J. (2018). Entrepreneurial learning–a social context perspective: evidence from Kenya and Tanzania. *Journal of Small Business and Enterprise Development*, 25(4), 609-627.

- Jacobson, D., & Andréosso-O'Callaghan, B. (1996). *Industrial economics and organization: A European perspective*. McGraw-Hill Book Company Limited.
- Jyoti, J., Gupta, P., & Kotwal, S. (2011). Impact of knowledge management practices on innovative capacity: a study of telecommunication sector. *Vision*, 15(4), 315-330.
- Kamaşak, R., & Bulutlar, F. (2010). The influence of knowledge sharing on innovation. *European Business Review*, 22(3), 306-317.
- Kang, Y. J., Kim, S. E., & Chang, G. W. (2008). The impact of knowledge sharing on work performance: An empirical analysis of the public employees' perceptions in South Korea. *Intl Journal of Public Administration*, 31(14), 1548-1568.
- Kilgore, D. W. (1999). Understanding learning in social movements: A theory of collective learning. *International journal of lifelong education*, 18(3), 191-202.
- Kimmerle, J., Cress, U., & Held, C. (2010). The interplay between individual and collective knowledge: technologies for organisational learning and knowledge building. *Knowledge Management Research & Practice*, 8(1), 33-44.
- Kreiser, P. M. (2011). Entrepreneurial orientation and organizational learning: The impact of network range and network closure. *Entrepreneurship Theory and Practice*, 35(5), 1025-1050.
- Krishna, H. S. (2018). Entrepreneurial Learning and Indian Tech Startup Survival: An Empirical Investigation. *Asian Journal of Innovation & Policy*, 7(1).
- Kulkarni, U. R., Ravindran, S., & Freeze, R. (2006). A knowledge management success model: Theoretical development and empirical validation. *Journal of management information systems*, 23(3), 309-347.
- Kyoon Yoo, D., Vonderembse, M. A., & Ragu-Nathan, T. S. (2011). Knowledge quality: antecedents and consequence in project teams. *Journal of Knowledge Management*, 15(2), 329-343.
- Liao, L. F. (2006). A learning organization perspective on knowledge-sharing behavior and firm innovation. *Human Systems Management*, 25(4), 227-236.
- Malhotra, A., & Majchrzak, A. (2004). Enabling knowledge creation in far-flung teams: best practices for IT support and knowledge sharing. *Journal of Knowledge Management*, 8(4), 75-88.
- Menon, A., Bharadwaj, S. G., Adidam, P. T., & Edison, S. W. (1999). Antecedents and consequences of marketing strategy making: a model and a test. *Journal of marketing*, 63(2), 18-40.
- Murphy, P. R., & Jackson, S. E. (1999). Managing work role performance: Challenges for twenty-first century organizations and their employees. *Pulakos (Eds.), The changing nature of performance: Implications for staffing, motivation, and development*, 325-365.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1), 14-37.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford university press.
- Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, 36(3), 633-662.
- Pitt, L. F., & Kannemeyer, R. (2000). The role of adaptation in microenterprise development: A marketing perspective. *Journal of Developmental Entrepreneurship*, 5(2), 137.



- Ramanujam, V., Venkatraman, N., & Camillus, J. C. (1986). Multi-objective assessment of effectiveness of strategic planning: a discriminant analysis approach. *Academy of management Journal*, 29(2), 347-372.
- Rao, L., & Osei-Bryson, K. M. (2007). Towards defining dimensions of knowledge systems quality. *Expert systems with applications*, 33(2), 368-378.
- Sabetzadeh, F., & Tsui, E. (2015). An effective knowledge quality framework based on knowledge resources interdependencies. *VINE*, 45(3), 360-375.
- Sekaran, U. (1992). *Research Methods For Business: A Skill Building Approach*, Second Edition, John Willey & Sons. Inc. New York.
- Short, J. C., Ketchen Jr, D. J., Shook, C. L., & Ireland, R. D. (2010). The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of management*, 36(1), 40-65.
- Sinkula, J. M., Baker, W. E., & Noordewier, T. (1997). A framework for market-based organizational learning: Linking values, knowledge, and behavior. *Journal of the academy of Marketing Science*, 25(4), 305.
- Siren, C. A., Kohtamäki, M., & Kuckertz, A. (2012). Exploration and exploitation strategies, profit performance, and the mediating role of strategic learning: Escaping the exploitation trap. *Strategic Entrepreneurship Journal*, 6(1), 18-41.
- Slater, S. F., & Olson, E. M. (2001). Marketing's contribution to the implementation of business strategy: An empirical analysis. *Strategic Management Journal*, 22(11), 1055-1067.
- Song, J. H. (2008). The effects of learning organization culture on the practices of human knowledge-creation: an empirical research study in Korea. *International Journal of Training and Development*, 12(4), 265-281.
- Sonnentag, S., & Spsychala, A. (2012). Job control and job stressors as predictors of proactive work behavior: Is role breadth self-efficacy the link?. *Human Performance*, 25(5), 412-431.
- Soo, C. W., Devinney, T. M., & Midgley, D. F. (2004). The role of knowledge quality in firm performance. In *Organizations as knowledge systems* (pp. 252-275). Palgrave Macmillan, London.
- Valaei, N., & Rezaei, S. (2017). Does Web 2.0 utilisation lead to knowledge quality, improvisational creativity, compositional creativity, and innovation in small and medium-sized enterprises? A sense-making perspective. *Technology Analysis & Strategic Management*, 29(4), 381-394.
- Venkataraman, S. (2019). The distinctive domain of entrepreneurship research. In *Seminal Ideas for the Next Twenty-Five Years of Advances* (pp. 5-20). Emerald Publishing Limited.
- Wang, C.L and Chugh, H (2014). Entrepreneurial Learning: Past Research and Future Challenges. *International Journal of Management Reviews*, 16, 24–61.

**Widodo**

Universitas Islam Sultan Agung  
(Unissula), Faculty of  
Management Economics,  
Semarang,  
Indonesia  
[widodo@unissula.ac.id](mailto:widodo@unissula.ac.id)

**Lutfi Nurcholis**

Universitas Islam Sultan Agung  
(Unissula), Faculty of  
Management Economics,  
Semarang,  
Indonesia  
[lutfinurcholis@unissula.ac.id](mailto:lutfinurcholis@unissula.ac.id)

**Marno Nugroho**

Universitas Islam Sultan Agung  
(Unissula), Faculty of  
Management Economics,  
Semarang,  
Indonesia  
[marnugroho@unissula.ac.id](mailto:marnugroho@unissula.ac.id)

**Tri Wikaningrum**

Universitas Islam Sultan Agung  
(Unissula), Faculty of  
Management Economics,  
Semarang,  
Indonesia  
[wika@unissula.ac.id](mailto:wika@unissula.ac.id)

---