



The Effect of Knowledge Hiding on Individual Creativity: Dyadic Studies in Educational Background

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Abstract. The phenomena of knowledge hiding can occur in all areas, including in the educational background. Knowledge hiding is often viewed from one side. Knowledge hiding phenomenon that is generally only seen from a unidirectional perspective, from the perspective of someone who is doing knowledge hiding. Knowledge hiding behavior not only has an impact on the target but also on the knowledge hiding actor. This study uses the dyadic method to see the effect of knowledge hiding on individual creativity more comprehensively. This research is built on two theories, namely resource-based view, and absorptive capacity. A total of 238 respondents participated in this study. The results show that knowledge hiding has a significant effect on individual creativity dyadic.

Keywords: Knowledge Hiding · Individual Creativity · Resource Based View · Absorptive Capacity · Dyadic Study

1 Research Background

In the current era of information advancement, knowledge is an important part of everyday life. However, the emergence of the knowledge hiding phenomenon is an obstacle in its use. Knowledge hiding is defined as the intentional act of an individual to hide knowledge, information, or ideas requested by others [1]. The phenomenon of knowledge hiding can happen anywhere. This shows that the existence of knowledge hiding does not only occur in organizations but also in the educational background [2–4]. However, most of the knowledge hiding research is done in the organizational background [5].

Knowledge is a vital resource [6]. Individuals need the knowledge to improve their status and ultimately make knowledge into something they need [7]. Knowledge hiding becomes an obstacle to the transfer of knowledge between students which will affect the learning process and scientific process in the future [2]. The process to support the spread of knowledge is something that is easy to say but difficult to do [6]. Since academics are one of the generators of generating knowledge, it is important to know how they behave when their co-workers ask them for necessary and valuable information [5].

Knowledge hiding is one of the activities that has been proven to have a negative effect [8]. Research by Wang et al., (2019) shows that knowledge hiding has a negative effect on team viability, knowledge hiding causes the team's ability to grow and perform to be reduced. Therefore, it is important to pay attention to how the knowledge hiding mechanism can affect individuals, especially in this case the educational background.

Previous research has shown that knowledge hiding has a negative effect on creativity [10]. The traditional view believes that creativity is largely influenced by individual characteristics. However, recently it has begun to be understood that creativity is a social process [11]. Therefore, creativity is often a process of collaboration and knowledge sharing between individuals [10]. Creativity is the basis for individuals, groups, and organizations to achieve innovation [12]. In educational background, creativity is a goal that always wants to be achieved [13]. Furthermore, creativity is considered an important skill in the 21st century that must be supported in education [14].

Previous research has shown that knowledge-hiding behavior encourages coworkers to be uncreative, and also has negative consequences for hiding [12]. This shows that knowledge hiding behavior affects not only the target but also the actor who performs it. The process of hiding knowledge certainly does not involve one party, so it is important to look at the interpersonal interactions involved. However, the phenomenon of knowledge hiding is generally only seen from a unidirectional perspective, that is, seeing only from the perspective of someone doing knowledge hiding [15], while the perspective of the target is often neglected. Therefore, it is important to conduct further research related to the effect of knowledge hiding on individual creativity because it has a comprehensive effect.

This study intends to examine the effect of knowledge hiding on individual creativity using the dyadic method. The effect of knowledge hiding between actors and targets is explained through two theories, namely the theory of resource-based view and absorptive capacity. The resource-based view emphasizes that resources are valuable, and difficult to imitate by competitors and the capability of resources is a key to competitive advantage [16]. This shows that when an individual has a key resource, it will make them can compete better. In the context of this study, when individuals have knowledge (resources) that are not easily imitated, it will encourage better creativity than competitors or other individuals who do not have these resources (knowledge). Hence when one hides his knowledge. Then creativity will increase (actor perspective). Meanwhile, Absorptive Capacity Theory is the ability to understand new values, assimilate and apply them. If someone gets knowledge from external sources, based on this theory, the individual will be able to perform absorptive capacity which will produce creativity. So, if an individual performs knowledge hiding, then the target individual is unable to obtain knowledge resources so they were unable to perform absorptive capacity, and in the end, innovation will be disrupted.

2 Literature Review

Creativity is considered a resource for a person, group, or institution to seek innovative endeavors. Previous literature shows that creativity is the main driver in the economic development of a country, and therefore education encourages the development of creativity [17]. Creativity is the result of a collection of new points of view that are fused

from the discussion process [12]. Creativity involves generating new ideas, hence promoting knowledge sharing is important [15]. However, individuals are not always willing to share knowledge with their co-workers [10].

There are many reasons why people withhold information. Knowledge hiding is an individual's intentional act to withhold or hide information, ideas or knowledge requested by others [18]. Knowledge hiding is an important issue that needs attention because it can have a counterproductive impact. Connelly et al., (2012) suggested three dimensions of knowledge hiding, namely:

- a) playing dumb, occurs when someone pretends not to know the intent of the individual asking or acts as if he doesn't know the desired information.
- b) evasive hiding, occurs when someone withholds information requested by another individual but offers other information and buys time or promises it later.
- c) rationalized hiding, which is when the information is confidential and cannot be shared or those who are requested for information do not have the right to provide the requested information.

Previous literature found that knowledge hiding negatively affects creativity [19]. The research divides knowledge hiding based on its dimensions, namely evasive hiding, playing dumb and rationalized hiding. The results show that evasive hiding and playing dumb have a negative effect on knowledge hiding, while rationalized hiding has a positive effect on creativity. Another study by Bogilović et al., (2017) showed that knowledge hiding has a negative effect on creativity. This happens because of mutual distrust between individuals who do. Different results are shown from the study conducted by Zakariya & Bashir (2021). The results of the study reported that knowledge hiding actually increases creativity. This happens because of jealousy, someone who does not get the desired information will feel that they cannot depend on others. In the end, they try to maximize their own resources, so they will be more creative [15].

3 Dyadic Relationship

Knowledge hiding occurs through a dyadic process that involves people who hide knowledge (knowledge hidiers) and targets or people who seek knowledge (knowledge seekers). This shows that the current knowledge hiding study only tells the story from one side. Eliminating the role of knowledge seekers is dangerous because both parties may feel and experience knowledge hiding. When one shares knowledge, it is more likely to increase the creative problem-solving capacity of the individuals involved, which in turn helps improve the idea generation process of the individual involved [10].

Therefore, this study intends to analyze the mechanism of the influence of knowledge hiding on individual creativity, to provide a clearer picture through dyadic studies. The dyadic study will provide an overview of knowledge hiding not only for knowledge hidiers but also for knowledge seekers.

4 Hypothesis Development

The Research Based View Theory states that when individuals have resources that are not owned by their competitors, then the individual will be able to create a competitive advantage over competitors [20]. Knowledge hiding that is done by individuals will cause someone to have resources, which in this case is knowledge, that other individuals do not have. When facing the same or similar competition, individuals with more resources will get an advantage, which in this case can use this knowledge to carry out creativity. In addition, based on the view of absorptive capacity, limited knowledge will hinder the creative process because of the unavailability of knowledge creation. Absorptive capacity consists of two parts, namely the potential and the capacity to absorb [21]. Potential includes knowledge acquisition and assimilation abilities. Meanwhile, the capacity to absorb relates to the transformation and exploitation of knowledge. When knowledge hiding occurs, the absorptive capacity cannot run optimally. Although research related to absorptive capacity is usually used at the corporate, institutional, or larger level, previous research has shown that the concept of absorptive capacity can be applied at the individual level [22]. Therefore, the hypotheses in this study are:

H1a: Knowledge hiding of individual A has a positive effect on the creativity of individual A

H1b: Knowledge hiding of individual A has a negative effect on individual creativity B

H2a: Knowledge hiding of individual B has a negative effect on the creativity of individual B

H2b: Knowledge hiding of individual B has a negative effect on the creativity of individual A.

5 Research Method

This research is quantitative research and classified as causal associative research. The unit of analysis in this study is dyadic, which is to analyze two people at once to get one unit of analysis. The population of this study was all students in the educational environment. Sampling was done by snowballing, namely by selecting one respondent and asking the respondent to appoint his dyadic partner and other known respondents. In this case, the researcher limits the partners who are in one workgroup, so that they get a sufficient picture of the interaction process. Respondents will be asked to fill out a questionnaire that has been coded for each pair of questionnaires. Respondents were given codes A and B for one pair of questionnaires. The study was conducted on students because previous studies have shown that knowledge hiding may occur in educational background and besides that, creativity is an educational goal.

The number of samples in this study was 119 pairs of respondents ($n = 238$). The calculation is in accordance with the recommendations of Hair et al. (2010) [21] which states that the minimum research sample is 5–20 times the number of question items. The number of questions in this study were 23, consisting of 12 questions related to knowledge hiding and 11 questions related to creativity in students. Knowledge hiding in this study will be measured through three dimensions, namely playing dumb, evasive

hiding, and rationalized hiding. Knowledge hiding was measured by a research instrument developed by [4]. For example, one of the knowledge hiding variable questions is “In certain situations, I say I don’t know certain information, even though I know it”. While creativity is measured by an instrument developed by [23], with the example of the question “I have problem-solving abilities”.

The examination process begins with testing research instruments using Convergent Validity which is measured using Confirmatory Factor Analysis (CFA) with the help of SPSS and Construct validity is done by looking at the Kaiser-Meyer Olkin Measure of Sampling Adequacy (KMO MSA) value and each loading factor question items. Furthermore, the items that pass the test will be measured for reliability. Reliability measurements were carried out using the Cronbach Alpha value.

The hypothesis testing process is carried out using the APIM (Actor-Partner Interdependence Model) method developed by Cook and Kenny (2005) [24], a method that is devoted to analyzing dyadic data. Dyadic measurement describes the relationship between two individuals who are referred to as actors and partners. Dyadic divides analytical data into two types, namely distinguishable and indistinguishable [25]. This study uses indistinguishable data, namely two students who have the same degree or level. Hypothesis testing was carried out using the APIMem application developed by Stas et al., (2018), previous research showed that analyzing dyadic data could be done using this application [27].

6 Result and Discussion

6.1 Intercorrelation Testing

Knowledge hiding variables and individual creativity in each pair of respondents were analyzed dyadic to test the research hypothesis. The analyzes use structural equation modeling with maximum likelihood estimation using the lavaan program (Rosseel, 2012) using the APIMem application. The R squared is 0.055. The results of hypothesis testing are shown in Table 2.

The first hypothesis in this study examines the effect of individual A’s knowledge hiding positive effect on individual A’s creativity. The results of hypothesis testing in Table 2 and Fig. 1 show the hypothesis is supported. The results show that if student A does knowledge hiding, then his individual creativity will increase ($\beta = 0.183$, $p = 0.030$), but individual B’s creativity will decrease ($\beta = -0.268$, $p = 0.001$). The results in Table 2 and Fig. 1 also show the same thing. Thus, hypotheses 1 and 2 in this study are supported (Table 1).

6.2 Discussion

Based on the results of hypothesis testing, it indicates that knowledge hiding can affect individual creativity dyadic, in this case, students. When a student (actor) hides knowledge from his friend (partner), his creativity (actor) will increase, while the creativity of his friend (partner) will decrease. According to [28] the theory of absorptive capacity emphasizes three learning processes, namely, recognition, assimilation, and application.

Table 1. Descriptive Statistic

Effect	Estimate	Lower	Upper	p value	Beta	r
Intercept	3.845	3.450 to	4.241	<.001		
Actor	0.183	0.018 to	0.348	.030	0.163	0.151
Partner	-0.268	-0.433 to	-0.103	.001	-0.239	-0.222

Table 2. Lavaan Output

Variable		Estimate	Std.Err	z-value	P(> z)
KH_A->IC_A	(a)	0.183	0.084	2.171	0.030
KH_B->IC_B	(a)	0.183	0.084	2.171	0.030
KH_A->IC_B	(p)	-0.268	0.084	-3.176	0.001
KH_B->IC_A	(p)	-0.268	0.084	-3.176	0.001
KH_A->KH_B	(c)	0.330	0.088	3.736	0.000

- (a): actor
- (b): partner
- (c): covariance

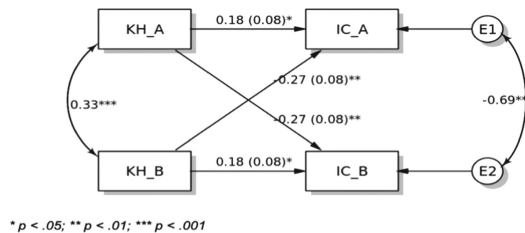


Fig. 1. Research Result

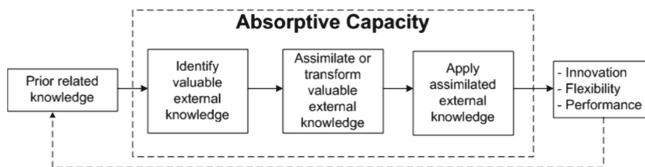


Fig. 2. Absorptive Capacity Process [30]

Knowledge hiding will disrupt the recognition process where individuals need to obtain sources of information that will be used as capital in the assimilation and application of knowledge in order to increase individual creativity.

Absorptive capacity is defined as the individual’s ability to identify, assimilate, change, and apply knowledge obtained from external sources [29]. Figure 2 explains

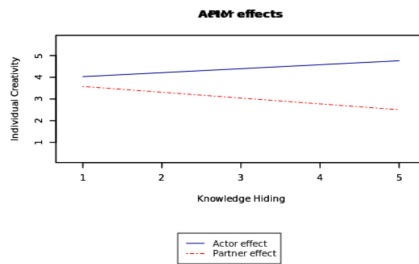


Fig. 3. Actor-Partner Effect

how absorptive capacity can create innovation [30]. The results of this study generally support the absorptive capacity model as outlined in Fig. 2. Absorptive capacity consists of three steps, namely identify, assimilate, and apply external knowledge. Based on this framework, the output of absorptive capacity in the form of innovation can occur when individuals acquire external knowledge and carry out the process of absorptive capacity.

This study confirms the theory of absorptive capacity. The results show that when individuals have difficulty in obtaining external knowledge, the process of absorptive capacity will be disrupted so innovation will be difficult. This study supports Enkel et al., (2017) opinion that personal interaction with various parties that support the acquisition of knowledge externally will provide benefits for the individual's knowledge base.

Figure 3 shows the direction of the influence of the variables in this study. When the actor's knowledge hiding increases, the actor's individual creativity increases but his individual creativity decreases. The results of this study also strengthen the previous findings by Wang et al., (2019), who found that knowledge hiding had a positive effect on knowledge seekers and a negative effect on team viability. The knowledge seeker in this study is the actor, while the team viability in this study is seen as the target.

7 Conclusion

Creativity is the root of innovation. Although many studies show that individuals are at the forefront of open innovation, most of the research literature focuses on organizations [31]. To support creativity, resources are needed, which in this case is knowledge. Knowledge is a crucial resource in today's digital era.

The results of this study indicate that individuals who hide knowledge or do knowledge hiding to their colleagues, will experience an increase in innovation, while the impact on their colleagues is a decrease in innovation. The results of this study confirm the concept of resource-based view and absorptive capacity in the application of resources to creativity.

This research provides new insights in the study of knowledge hiding. Previous studies looked at knowledge hiding from one side, this study captures knowledge hiding on actors and partners simultaneously. The results of the study explain that high knowledge hiding inhibits creativity through an inhibited absorptive capacity mechanism.

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