



# Factors Influencing the Knowledge Hiding Behavior and Assessing its Role as an Obstacle of Innovation in Education Sector

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**Abstract-** This research seeks to examine the influence of workplace ostracism, T-shaped skills and workplace incivility on knowledge hiding. Furthermore within organizations, the role of knowledge hiding as an obstacle of innovation is also investigated. Based on quantitative research method, data were gathered through questionnaire from 259 respondents working in schools and colleges located in Faisalabad and Sargodha (Pakistan). The proposed relationships were tested through regression analysis. Results revealed that workplace ostracism and incivility have significant positive association with knowledge hiding. On other hand, the relationship between T-shaped skills and knowledge hiding was statistically insignificant. Moreover, the relationship of knowledge hiding with innovation speed was negatively approved. From managerial perspective, the findings of the study are vital and as some essential components of knowledge hiding have been uncovered. The findings of this study have also highlighted some implications for theory as well.

**Keywords:** Knowledge Hiding, Innovation Speed, Education Sector, Pakistan

## I. INTRODUCTION

In the current information era, knowledge is regarded as a great source of competitiveness and it is generally used to cover up all those areas and groups that need to perform their functions in a better way. Knowledge includes official knowledge, patents, laws, programs, procedures as well as the experience of people and the way of doing business (Howell and Annansinghi 2013). Management of Knowledge is the procedure of converting the information and rational assets into long term value addition (Kidwell et al., 2000). The purpose of knowledge management is to strengthen knowledge avenues and take significant steps to avoid employee's knowledge hiding behavior. In theory, knowledge sharing and knowledge hiding are two distinct concepts. Knowledge hiding is not the lack of sharing, but it is a planned effort to reject or hide knowledge that has been demanded from other person (Butt, Shah, Noor & Ali 2020). Howell and Annansinghi (2013) identified that knowledge sharing is acceptable and needed constituent for knowledge development (Tang, & Martins, 2021) but instead of knowledge sharing, knowledge hiding is frequently practiced in organizations. Babcock (2004) accentuated that Fortune 500 organizations lose at least USD 31.5 billion per year for not being able to encourage their employees to share knowledge. Also, in a survey conducted in the United States, 76 percent of the US respondents reported that they previously hid knowledge (Connelly et al., 2012), and in China 46 percent respondents confessed that they once with hold the knowledge (Peng, 2013). Peng (2012) declared that knowledge hiding has worst impacts on organization's smooth operations. Understanding why employees involve in hiding knowledge in the place work is compulsory for the organizations that might help to improve knowledge sharing (Tang, & Martins, 2021). Considering the negative impacts of knowledge hiding on organizations, the factors influencing knowledge hiding needed to be investigated (Connelly et al., 2012). In this regard, the research at hand considered the factors influencing knowledge hiding which are workplace ostracism, T-shaped skills and workplace incivility.

Workplace ostracism is the act of being neglected by team-mates or excluded from the group. It may occur when the individuals feel ignored by their coworkers that declines employee participation (Zhao et al., 2013). If an employee in the organization is bearing ostracism he might hide knowledge from their co-workers. Civility is regarded as good manners or politeness of employees. On the other hand, incivility is the mistreatment, impoliteness and avoidance amongst other individuals. Incivility is breaking the rules, norms and ethics of a society of which one is being the part. The practice of incivility by employees in the workplace propel them to hold their knowledge (Irum, Ghosh & Pandey 2020). Workplace uncivil behavior or maltreatment have not been densely explored previously. Furthermore, workplace incivility and ostracism needed more attention to overcome this type of behavior. Thus it is required to understand why employees get involved in hiding the knowledge within their organizations.

People with T-shaped skills have both fine knowledge of discipline and ample practical knowledge therefore they know how to assist other employees at work place (Madhavan and Grover, 1998). The employees having T-shaped skills are more active to produce innovative ways of solving the problem in the organizations because they have got the abilities to merge both academic and realistic familiarity. Furthermore, they can enhance their abilities in different useful areas hence creating new useful information that will be very helpful for the organization (Lee Young-Chan, Lee Sun-Kyu 2007). Employees with this talent can enlarge their abilities and build up new knowledge and combine the old information with the new knowledge which is important for the innovative health of organization. The result of previous researches sustained the positive outcome of T-shaped skills (Zhang & Yin, 2012). This research focused on employee's behavior of concealing knowledge and also assessed the impact of T-shaped skills on employee's knowledge hiding behavior. The main concern of this study is the solution in developing a healthy organizational atmosphere for the workers that might be able to overcome knowledge hiding within the organizations.

In previous literature, the researchers described the phenomenon of knowledge hiding but least association exists between workplace ostracism, workplace incivility, T-shaped skills and knowledge hiding. Additionally this research also looked into the role of knowledge hiding as an obstacle of innovativeness in organizations. Further innovation speed is also investigated as the mitigated outcome of knowledge hiding. Thus this research intended to study the effect of knowledge hiding in education sector from the perspective of a developing country like Pakistan. Further, knowledge hiding might be drastic for organization's innovative health, but relationship has also been overlooked by previous literature. To fill this void this research tried to cover this two-folded gap.

## II. LITERATURE REVIEW

### Knowledge Hiding

Researchers defined the knowledge hiding as *"an intentional attempt by an individual to withhold or hide knowledge that has been asked by another person"* (Connelly et al., 2012, p. 66). For instance, any individual will hide or conceal the knowledge from their coworkers. So, as a result employees may not give their full attention to work that might be very harmful for the knowledge creation (Lin & Huang, 2010). Knowledge hiding can spoil the teamwork in workplace like the development of newly generated ideas or the implementation of strategies or measures, as well as it may damage the team (Butt et al. 2020). The purpose of hiding information by employees is negative that might not be good for the organization performance. It may frequently happen because the worker may not trust on their team's member or maybe the fear of losing their position. Some of the enablers of knowledge hiding are somehow discussed in the literature. Firstly, if employees observe their colleagues are involved in hiding the knowledge, they will start decreasing their dedication towards the firm. Secondly, some important information related to firm's duties may expire with some employees' retirements. If such is not been implanted in the organization, then the performance of organization would also get lowered. Thirdly, when any individual turns off from the job, his all the knowledge gone astray until or unless his knowledge is not delivered or shared with other employees of the organization (Serenko Alexander, Bontis Nick 2016). Workers may hide knowledge to defend their self-interest in the opinionated firm. In this type of surrounding, employees want to look after themselves and have lesser trust on other employees (Malik Farooq Umar et al., 2018) so they frequently hide knowledge from their co-workers.

### III. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Conservation of Resources Theory (COR) explains a resource as “*those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a mean for attainment of these objects, personal characteristics, conditions or energies*” (Hobfoll, 1989, p. 516). The theory states that problems arise when there is a breakdown of assets or resources (asset could be anything like income, property, capital or knowledge etc.). Sometimes employees are exposed to stress like tension or anxiety. In such situation employees start to collect some extra resources which can be helpful for them to overcome the pressures. But if the reputation of the employee is not secured, they feel ostracism in the workplace or might face uncivil behavior of their coworker which may force them to hide their knowledge from others. Previous research by using conservation of resources theory measured some diverse sources (like job control (Taris et al., 2001), supervisor support (Leiter and Maslach, 1988)). In this study, it is assembled by conceptualizing workplace ostracism, incivility and T-shaped skill as a resource. Workers react to defend their resources (like Knowledge) when they observe such practices in their organizations. Furthermore, when the worker feels that coworkers are ignoring him/her, he/she will not share the knowledge which is demanded by others. The decline in employee’s resources will encourage them to hide their knowledge from others. Continued experience of ostracism and incivility can decrease resources that are necessary to inspire employees. Furthermore, having high T-Shaped skills can also be regarded as individual’s personal resource. Individuals may not hide behavior because employees having T-shaped skills keep both superior awareness of regulation as well as the ability to cooperate with other employees to work. One of the basic reasons of knowledge hiding in the organizations is psychological ownership feelings among the employees from which workers learn to protect their knowledge (Koay et al. 2020). When people involve in ownership feelings, they tend to hide knowledge from their colleagues or from managers. They feel that, knowledge is their own property and they have the right to do whatever they want.

Knowledge can motivate the individual to learn more about the innovation to adopt it sooner or later. This speeds up the diffusion of innovation in the organization. But if the employees are involved in hiding of knowledge, it creates negative impact on the speed of innovation. Individuals avoid learning new things or they do not adopt the information about the innovativeness due to their behavior of withholding knowledge. This type of employees’ behavior is very harmful for the company’s progress as well as for the employees’ learning. Furthermore, successful firms need to become more innovative for the purpose of getting new knowledge and application of this knowledge in their companies (Coad et al. 2016).

#### **Workplace Ostracism and Knowledge Hiding**

Workplace ostracism is “*ignoring and excluding individuals or groups by other individuals or groups within the workplace*” (Williams 2007, p. 427). While Ferris et al. (2008) defined the workplace ostracism as “*the stage by which an individual observed that he/she is being excluded or ignored by the other workers*” (Ferris et al. 2008: p.248). It may be explained in three ways. First, ostracism occurs in the whole firm instead of a group. Employees can be ostracized from managers, inferiors, and coworkers or maybe from customers. Second, employees’ personal opinion of being ostracized by others or not ostracized is their own thinking. Third, persons who experience that they are ostracized, can differentiate interpersonal relations like: harmful, hurting and horrible situation. Ostracism can damage the employees’ substantial and emotional strength, and also they get dissatisfied with their jobs and they may harm the organizational promise as well as reduce service performance (Kouchaki and Wareham, 2015). Within the organization and workplace setting, ostracism is frequently practiced. For example from the previous literature, 66% of employees designated that they receive the mistreatment in the organization, while 16% individuals accepted that it is a common happening on daily basis (Fox & Stallworth, 2005). From these findings, researcher can articulate that ostracism in the organization creates knowledge hiding behavior in the employees. Researchers recommended that the past of coworkers can affect the probability of a worker’s information hiding intentions. Particularly, when employees come forward with a demand for knowledge, the ostracized affected individuals do not collaborate with other colleagues and would withhold knowledge. Hence, this study predicts that:

**Hypothesis 1:** Workplace ostracism has positive effect on individual’s knowledge hiding behavior.

## **T-Shaped Skills and Knowledge Hiding Behavior**

It is explained as “*T-shaped skills describe specific attributes of desirable workers. The vertical bar of the T refers to expert knowledge area, and experience in a particular area, while the top of the T refers the ability to collaborate with other disciplines*” (Guest, 1991, p.155). Describing T-shaped skills as, it contains the straight and vertical bars of “T. The straight bar explicates the capability of how to act as a team spirit with specialist of different fields who also know that how to utilize the important knowledge which is collected from them. Whereas the deep bar explains the practiced knowledge and familiarities within a specific field. Persons having T-shaped knowledge are necessary in every organizations because individuals with these skills have adequate knowledge in different fields and they know how to facilitate other workers to manage the group work (Hamdi, Silong, Omar, & Rasdi, 2016). Employees who acquire them are very precious for their abilities of new information creation, they can incorporate various information resources, and also they can examine different fields as well as the functions of these fields (Leonard-Barton, 1995). Also T-shaped knowledge employees can generate new information which is very useful for the company. Employees who have these skills have sufficient information about management as well as they know how to cooperate with coworkers in a group to achieve their targets. These employees can enhance the skills in diverse fields, so they can improve common opinion into useful thoughts. These skills enhances the strength of the employees to realize and identify new knowledge by knowing nitty-gritty of the whole procedure to develop new information. On the other hand, individuals with such skills may not hide knowledge. Many empirical research described that T-shaped skills have optimistic effect on development pace (Abubakar et al., 2017). Therefore this research depicts that:

**Hypothesis 2:** Individual’s T-shaped skills have negative effects on knowledge hiding behavior

## **Workplace Incivility and Knowledge Hiding Behavior**

It is defined as “*acting rudely or discourteously, without regard for others, in violation of norms for respect in social interactions*” (Andersson & Pearson, 1999 p.457). Incivility is basically reputed from other acts of misbehavior at workplace. Uncivil employees breakdown the rules and values of the organization like people might insult or avoid their colleagues. Incivility is also known as bullying, emotional abuses or rudeness (Glendenning, 2001) in the organization. It has been noted to impact both individual and organizational performances. Workplace incivility refers to interpersonal maltreatment that involves insolence and ignorance between coworkers, which will force them to disengagement, violation of relations and deterioration to kindness (Pearson, et al. 2000). Researchers identified that most of the workers may leave their jobs or avoid the leader’s instructions in such cases (Cortina et al., 2001). While working in the same place or in same institute, the tradition of individual’s treating each other would manipulate the behavior of these workers. Uncivil activities in the environment of the organization encourage the workers to keep the knowledge secret. Researchers (Irum et al. 2020) augmented that incivility can take place in different forms like, checking the e-mails or messaging to create uncivil situation as well as it may involve humiliation or critical interpretation to any individual (Preason et al., 2000). Uncivil behavior of the coworkers at the workplace creates very injurious effects to the workers. A study (Irum et al. 2020) on Asian workers showed that the acts of incivility may result in the withholding of knowledge. Consequently, this study also highlighted that employees who are affected from incivility would hide the information from their coworkers when they request to share the knowledge. So, incivility in the firms have a positive relation with knowledge hiding behavior because employees who are facing uncivil behavior within the organization would start withholding the information from their colleagues as well as from the supervisor or managers. So, this study assumes that:

**Hypothesis 3:** Workplace incivility has positive effects on individual’s knowledge hiding behavior.

## **Knowledge Hiding and Innovation Speed**

Researchers suggested that socially exchange relation among individuals is very important source for creativity because it encourages employees to share their knowledge with their coworkers (Wang & Noe, 2010). However employees’ behavior of hiding knowledge reduce creativity. Thus the decrease in information or knowledge also reduce workers ability to produce creative thoughts (Bartol & Srivastava, 2002). Like-way, employees can enhance their abilities to develop creativity through exchange of knowledge. Consequently, workers prefer to withhold their knowledge form other employees in the workplace. The habit

of concealing knowledge from coworker not only damages the group based creativity but also damages the individual's innovative ideas that ultimately affect organizational innovation speed. Employees have to perform complex tasks in the workplace so they require special knowledge that could help out the firm to be innovative. Therefore, it shows that employees conceal information from the coworker as they tried to preserve their self-collected knowledge. This investigation demonstrates that knowledge hiding may be an obstacle to innovation (Labafi Somayeh, 2017). Therefore, individual's behavior of concealing their knowledge from others is negatively related to innovation speed because the higher the knowledge hiding in the firm, mean lower the innovation speed of the firm. This enabled the basis for the hypothesis that:

**Hypothesis 4:** Individual's knowledge hiding behavior has negative effects on innovation speed of organizations.

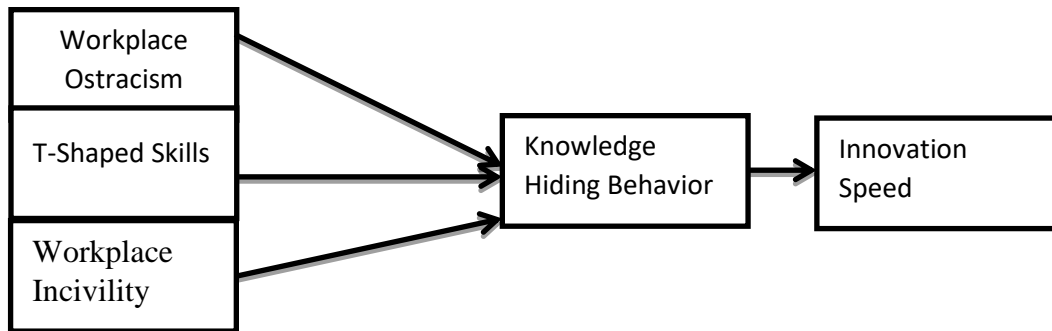


Figure 1: Proposed Research Model

#### IV. RESEARCH METHODOLOGY

This quantitative research utilized primary data collected through questionnaires to test the hypothesized relationships. The unit of analysis in current study was individual employee of the education sector working in different schools and colleges located in Faisalabad and Sargodha cities of Pakistan. Employees involved in research survey were the teachers, administrators and some other general position employees. Unfortunately, the total population of targeted education sector was unknown. According to Sekran and Bougie (2009), if the population is unknown the sample should be 384. In this study the sample size was 384 selected through convenient sampling technique. A total of 280 questionnaires were collected back from respondents. This generated the response rate 72.9%. Out of these 280 received questionnaires, 21 were incomplete which were discarded, so 259 responses were used for final data analyses.

All the variables were instrumented using standard measures adopted from earlier literature. Knowledge hiding was measured using twelve items scale developed by Connelly et al. (2012), workplace ostracism through ten items scale developed by Ferris et al. (2008), T-shaped skills through five items scale developed by Lee & Choi (2003) and incivility at workplace through ten items scale developed by Roger & Nesshoever (1987). On the other hand the outcome variable innovation speed was assessed using six items scale developed by Hamdi et al. (2016). All the respondents' replies against the items were recorded by using 5-point Likert scale (1=strongly disagree, 2= disagree, 3= neutral, 4= agree, 5=strongly agree).

The Statistical Package for Social Sciences (SPSS) version 20 was used to perform all the statistical analyses. Furthermore, the descriptive statistics, Cronbach's alpha, and correlation coefficients have been calculated through SPSS. Regression analyses were also performed for hypotheses testing.

#### V. DATA ANALYSES AND RESULTS

The demographic statistics of the respondents are depicted in table 2. The details show that majority of respondents were male and youngsters having master's degree. Further, most of the respondents occupied under 10 years' experience.



Table 2: Profile of Respondents

Variables	Frequency	Percentage%
<b>Gender</b>		
1. Male	210	81.1%
2. Female	49	18.9%
<b>Age</b>		
1. 18-25 years	61	23%
2. 26-35 years	147	56.6%
3. 36 and above	48	18.8%
<b>Qualification</b>		
1. Bachelor degree	70	27%
2. Master degree	131	50.6%
3. professional degree	27	10.4%
4. diploma/certificate	28	10.8%
<b>Experience</b>		
1. 1-5 years	100	38.6%
2. 6-10 years	88	34%
3. 11-15 years	45	17.4%
4. 16-20 years	22	45.9%

### Descriptive Statistics

The descriptive statistics of all variables are tabulated table 3. Workplace ostracism has a mean of 2.844 and S.D of 1.053. T-shaped skills have the mean of 3.686 and S.D = 1.050. Incivility has the mean of 3.0822, S.D=.8609. The dependent variable which is knowledge hiding behavior has a mean of 2.84 and the S.D of 1.053. The outcome variable that is innovation speed has a mean of 3.721 and the S.D of 1.0045.

Table 3: Descriptive Statistics

Variables	Mean	Std. Deviation
Knowledge hiding	2.8443	1.05388
Workplace Ostracism	2.5243	1.20653
T-Shaped Skills	3.6865	1.05003
Workplace incivility	3.0822	.86059
Innovation	3.7214	1.00457
(n=259)		

## Reliability Analysis

This research examined the reliability of variables by the calculation of Cronbach's alpha ( $\alpha$ ). The table 4 represents the reliability of each variable. Knowledge hiding 12 items reliability was checked and found 0.83. Workplace ostracism having 10 items and the reliability value was .73. Furthermore, T-shaped skills with 5 items have reliability value of .77. Similarly, innovation's speed which has 6 items scale, its reliability was .75. The results of reliability analysis of all construct lies between 0.6 - 0.7 which are above the standard set by Nunnally (1978) that is 0.5-0.6.

Table 4 Reliability Analysis

Variable	Items	Cronbach's Alpha
Knowledge Hiding	12	.83
Workplace Ostracism	10	.73
T-Shaped Skills	5	.77
Workplace Incivility	10	.71
Innovation Speed	6	.75

## Correlation Analysis

The table 5 shows the correlations between the variables. The results shows that knowledge hiding is significantly positively correlated with workplace ostracism ( $\beta = .644, P = .000$ ). But knowledge hiding is not significantly correlated with T-shaped skills ( $\beta = .107, p = .081$ ). Further, knowledge hiding is positively and significantly correlated with incivility ( $\beta = .539, p = .000$ ) also, knowledge hiding is significantly correlated with innovation's speed ( $\beta = .167, p = .005$ ). Similarly, workplace ostracism is significantly and positively correlated with workplace incivility ( $\beta = .49, p = .000$ ) and knowledge hiding is negatively but significantly correlated with innovation with values ( $\beta = -.167, p = .042$ ). Moreover, T-shaped skills is positively and significantly correlated with innovation with values ( $\beta = .246, P = .000$ ) but T-shaped skills don't have significant correlations with workplace incivility ( $\beta = .165, p = .008$ ). Lastly, workplace incivility is positively and significantly correlated with innovation's speed ( $\beta = .237, p = .000$ ). On the other hand, T-shaped skills are not significantly correlated with workplace ostracism with the values ( $\beta = .193, p = 0.081$ ). Co-relation analysis only tells about the association between the variables but it is non-directional so with co-relation analysis the hypotheses of this research could not be tested. Hence for testing the hypotheses, this research undertaken regression analyses.

Table 5: Correlation Analysis

	Knowledge Hiding	Workplace Ostracism	T-shaped Skills	Workplace Incivility	Innovation Speed
K.H	1				
W.O	.644	1			
T.S	.107	.081	1		

W.I	.539	.497	.165	1	
IS	-.167	.126	.246	.237	1

Correlation is significant at the 0.01 level (2-tailed).\*\*

Correlation is significant at the 0.05 level (2-tailed).\*

N= 259, KH=knowledge hiding, WO= workplace ostracism, TS= T-shaped skills, WI= workplace Incivility, IS= innovation speed

## Regression Analysis

### Model 1

The hypothesized relationships were tested using regression statistical technique. The regression tests were carried out in two steps. In the first step, dependent variable Knowledge hiding, and independent variables workplace ostracism, workplace incivility and T-shaped skills were regressed. In the second step, the outcome Innovation speed was regressed.

The regression results (table 6) described that workplace ostracism has significant positive relationship with knowledge hiding behavior ( $\beta = .49, p = .000$ ). This relationship is high in magnitude as value of  $\beta$  is high. This explains that when the level of ostracism is high, individuals are more likely to involve in knowledge hiding. So, the Hypothesis 1 is accepted. The hypothesis 2 of the study predicted that T-shaped skills have negative effect on knowledge hiding. The results of the study are not so. T-shaped skills did not have negative effect on Knowledge hiding, further this relationship is not statistically significant ( $\beta=.021, p=.801$ ). Thus hypothesis 2 has been rejected. The results affirmed that workplace incivility has positive and significant relationship with knowledge hiding behavior ( $\beta=.28, p=0.000$ ). So Hypothesis 3 is also accepted.

While in table 7,  $R^2$  value is also provided. The  $R^2$  explains the explanatory power which is an indication that how much of the total variations in the dependent variable is explained by the independent variable(s). The  $R^2$  in this regression case is .48. It means that all independent variables explained 48% variations in dependent variable (knowledge hiding). The rest variations lie in some other factors that may have effect on knowledge hiding. Furthermore, F value shows the overall model fitness, that how much the independent variables are fitted with dependent variable, table 7 shows F value is 58.7 that is high so the model is good fitted.

Table 6: Regression Analysis Model 1

	$\beta$	t	p
<b>Step1</b>			
WO	.499	9.582	.000
TS	.012	.253	.801
WI	.281	5.256	.000

dependent variable: KH

Table 7: Model Summary

Model	R	R <sup>2</sup>	F change
1	.693 <sup>a</sup>	.480	58.708



Predictors: (Constant), WI, TS, WO

## Model 2

This research has two steps model, 1<sup>st</sup> step shows the relation of dependent and independent variables while the 2<sup>nd</sup> step described the outcome of the model (as innovation's speed is the outcome of the model). In table 8 it is shown that innovation's speed is negatively and significantly related to knowledge hiding behavior ( $\beta = -.167$ ,  $p = .005$ ). The effect is negative which indicated innovation speed lowers with the individual's knowledge hiding behavior. It mean that if knowledge hiding within a certain organization increases, its innovation's speed would decrease but if knowledge hiding is low, innovation speed would be high. So, it can be concluded that innovation is negatively related to knowledge hiding. Hence it supports the 4<sup>th</sup> hypothesis of this research.

Table 9 explicates the values of  $R^2$  and F change. The  $R^2$  is .028 that predict Knowledge hiding explain 2.8 % variation to innovation's speed. F value shows the fitness of the model that is 2.97 hence this model is also good fitted.

Table 8: Regression Analysis Model 2

	$\beta$	$tp$	
<b>Step2</b>			
KH	-.169	2.712	.005

dependent variable: IS

Table 9: Model Summery

Model	R	$R^2$	F change
2	.167 <sup>a</sup>	.028	2.97

Predictors: (Constant), KH

## VI. DISCUSSION

This study investigated the factors influencing knowledge hiding (i.e., workplace ostracism, workplace incivility and T-shaped skills) and also discussed the innovative performance of organizations as a mitigated outcome of knowledge hiding. The study proposed that Workplace Ostracism is the basic reason of hiding knowledge among the employees working in same organization. As the findings of this study verified that there is a positive and significant relation between the individual's knowledge hiding behavior and the workplace ostracism (Hongdan et al. 2016). When employees start the feeling of being ostracized they found themselves misfit in the organization as a result they (employees) reduce taking part in productive activities like knowledge sharing (Chung 2015) and their behavior of concealing knowledge is accelerated more progressively. Uncivil behavior is also the reason of hiding knowledge from co-workers working in the same environment. As this study corroborated that workplace incivility has a strong positive effect on knowledge hiding behavior of employees. Employees tried to hide their knowledge from their coworkers due to uncivil behavior. This finding approved that incivility in the firm creates distrust among the employees as a result people start hiding knowledge from their coworkers (Irum et al. 2020). In this study, earlier it was hypothesized that 'Individual's T-shaped skills have negative effects on knowledge hiding behavior' has been rejected. Individuals with T-shaped skills are exceptionally valuable for creating the knowledge since these employees can incorporate different knowledge resources (Mahmud 2020). Consequently, people can enhance their capabilities crosswise like different practical areas as a result they can generate innovative knowledge. Hence, an inverse relationship is between these variables. If the T-shaped skills of employees in

the organization increases, the knowledge hiding behavior of employees would be low. But this hypothesis is rejected due to insignificant relation with knowledge hiding ( $p = .801$ ), which is not approved statistically. This study also enhanced the previous literature regarding organizational innovation. Organizations can break more innovativeness in their work and also they can enjoy improved performance if they engage in a way of getting new knowledge. But if employees got engaged in hiding information from their colleagues and superiors, it would reduce the innovation's speed of the organizations. This study proved both theoretically and statistically that knowledge hiding is acting a major obstacle to innovative performance of the organizations. The research at hand also provided the support to Conservation of Resources (COR) theory that a worker who is being ostracized and treated with uncivil behavior by other employees is more prone to stress. It eventually reduces their mental assets. When this type of circumstances occurred, it becomes very tough to deal with such dreadful conditions and to perform daily job duties. This results in knowledge hiding from their co-workers and this act doubtlessly ends up reducing the innovation speed of the organization.

This study might help the policy makers of education sector of a developing country like Pakistan. It is noticed that knowledge hiding is commonly practiced in organizations nowadays but very minor attention was paid to this issue in previous literature. This study highlighted that knowledge hiding reduces innovation's speed. Also, in this research it is affirmed that workplace ostracism and incivility are the main reasons of hiding knowledge within the workplace. It is suggested that educational authorities should deeply examine the environment of their educational institutes that nobody should be ostracized or may not act in an uncivil manner at the workplace. They should keep the organizational environment friendly so that teaching staff can easily share their experience with their colleagues as well as with their superiors. Top level management should work on the environment of the institutes as well as to create a smooth surrounding for the teaching staff and make a healthy environment so that individuals may not hide their knowledge from others. If teaching staff start avoiding knowledge hiding, innovation output of their firms ultimately increases. Hence, the enablers of knowledge hiding (i.e., workplace ostracism and workplace incivility) should be reduced to mitigate the knowledge hiding and speed up the innovation process in organizations.

## VII. CONCLUSION

The purpose of this current study was to investigate the relationship of the enablers (workplace ostracism, workplace incivility, T-shaped skills) of knowledge hiding. Moreover, to evaluate the function of knowledge hiding as an obstacle of innovation. The current study was conducted to evaluate the reasons of employee's knowledge hiding and effects of knowledge hiding on innovation speed in Pakistan's education sector. Recent research assessed the employee's behavior of knowledge hiding due to incivility in organizations as well as the ostracism at the workplace. The results illustrated that ostracism and incivility are the major causes of knowledge hiding of workers. Further, this work also showed that T-shaped skilled people doesn't affect knowledge hiding of individuals as there was insignificant relationship between them. Consequently, this study found that when people face ostracism and incivility at the workplace, they got involved in concealing the knowledge from their coworker as well as from their superiors. Hence, knowledge hiding behavior of individuals reduces the innovation speed of the organizations.

## VIII. RESEARCH LIMITATIONS AND FUTURE DIRECTIONS

The present study attempted to abolish all the problems, but still there are some limitations that should necessarily be avoided in the future research. In this research, the sample size was small so it may not represent the entire population of education sector in Pakistan. As the sample size was shrunk, the results may change if the sample size got enlarged. So it is suggested that future research should incorporate large samples in their studies. The sample and data were collected in cross sectional research settings due to limitation of resources and time constraints. In future, longitudinal research would be feasible to test the proposed model. As of time shortage and limited resources, data sampling technique used was convenient sampling. Only those respondents were preferred which were easily available. Therefore, future researchers should consider any other feasible sampling technique. In this study only few independent variables (workplace ostracism, workplace incivility, T-shaped skills) effects were tested that only explained 48 % variations in knowledge hiding. To increment the explanatory power of the model other factors and reasons

of knowledge hiding should also be included in the suggested model. As there would be many other factors that may promote the habit of knowledge hiding behavior of individuals in the organizations so some other factors should also be taken into account in future studies.

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