TEACHER'S ENGAGEMENT FOR KNOWLEDGE MANAGEMENT: NEW INSIGHT FOR PROFESSIONAL DEVELOPMENT

by Moh Bahzar

TEACHER'S ENGAGEMENT FOR KNOWLEDGE MANAGEMENT: NEW INSIGHT FOR PROFESSIONAL DEVELOPMENT

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Abstract: This study has examined the effect of teacher's engagement along with shared values, teaching quality, and working condition for knowledge management in the region of Indonesia. Primary data is collected through structural questionnaire from the sample of teaching community in various educational institutes. For better understanding of developed framework, confirmatory factor analysis and structural equation modelling techniques are applied. Findings through CFA indicates that all items for teacher's engagement, shared values, teaching quality and working condition have reasonable factor loading for next level consideration in SEM. In addition, findings through SEM indicates that all exogenous factors are significantly and positively affecting the knowledge management of teachers in Indonesia. However, through teacher's engagement, highest causal effect on knowledge management is observed with standardized coefficients. These empirical facts are useful for both teachers and managerial staff in education sector of Indonesia. Yet, this study is limited to some points as well. At first, sample size could be expanded for in depth analysis and more generalization of the facts. At second, study has not conducted any cross-sectional analysis to compare the findings for the schools, colleges and universities. Future studies can be conducted through addressing these limitations for more robust findings and better generalization.

Introduction

In global economy, organizations are working under the situation of intense pressure from the market to create values and sustain over long rum. Various business firms are looking for the such practices which can increase competency of their employees through the process of improving their knowledge and competencies(Chapman, Soosay, & Kandampully, 2003; Javidan, 1998). In existing body of literature, concept of knowledge management or KM has attained significant attention as it is an ongoing phenomenon for business success in both manufacturing and service sector(Heisig, 2009; Yew Wong & Aspinwall, 2005). Similar to other industries, education sector is also working for the improvement of

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knowledge and skills of teaching communities(Khakpour, 2015; Murray & Carter, 2005).

In recent years, KM specifically in universities and similar organizations have been addressed in the present literature, covering the issues related to the employees and teacher's knowledge, mandatory for the success. However, KM is yet to be explored in various emerging economies where its implication is very important through strategic management of the resources. Additionally, for professional development, teacher's engagement provides a significant path way to the teachers who are working in different educational institutions (Grossman & McDonald, 2008; Kot, 2014). In addition, from the context of students, quality learning is directly associated to quality teaching which indicates the capability of the teachers to perform the assigned task with full of professional ethics and responsibility (Louis & Marks, 1998; Wenglinsky, 2000). Besides, factor of shared values helps the teacher to perform in an outstanding way in the classroom. In present literature various items are identified to cover the title of shared values. These are integrity, creating sense of hope for the students, self-learning along with respect for all and being responsible.

Literature Review

The factor of knowledge management reflects the way teachers in education sector are dealing with their body of knowledge. Present study has measured the factor of knowledge management through five dimensions, ranging from KM1 to KM5. KM1 measures the knowledge acquisition by the teachers while KM2 explains analysis of acquired knowledge. KM3 indicates the dissemination of acquired knowledge with the students (Burda, Abrham, & Horvathova, 2017). KM4 defines the response from the students. While KM5 reflects the discussion under positive environment. Teacher's engagement refers to the way teachers are committed and loyal towards their educational institute. Present study has considered nine items to measure TE. These are under the title of engagement enjoying the work ES7, promote the positively about the institute ES8, overall feeling happy to work with the institute ES9 (Pavlov, Pavlova, & Kupchak, 2019).

Shared values explains the sharing of positive values in the relevant institute. For present study two items like caring of value sharing by administration SVALUES1 and positive effect of prompted values on the students SVALUES2 are added in the model (Wang & Wang, 2017). The factor of working condition explains the situation under which teachers are working with their institute. This study considers two items like comfortable classrooms WCONDITION1, and safety of physical presence at school WCONDITION2 to reflect the factor of working condition. Teaching quality refers to the delivery of study materials and other ideas in a way that it promotes positive learning among the students (Chao, Kou, Peng, & Alsaadi, 2019). Two items under the title of proud of quality teaching at school TEACHINGQ1, and students are getting good education at school or scale (ES) like proud to work at relevant educational institute ES1, feeling of accomplishment

through teaching ES2, interested teaching duties ES3, motivated to contribute more ES4, not planning to leave relevant educational institute ES5, referring a good friend to the institute ES6,
TEACHINGQ2 are added in the model (Hajduova, Klimek, Daneshjo, & Prokopenko, 2019).

Research Methods

This study is based on primary data analysis. For this purpose, structural questionnaire is developed while considering teacher's engagement through nine items, shared values through two items, teaching quality through two items and working condition also through two items. The factor of knowledge management is observed through five items. After the development of questionnaire, hard copies were distributed among the teaching community. Detail of sample is below under results and discussion. Through all valid responses, descriptive statistics are applied to examine the mean trend of responses from the respondents. In the next step, confirmatory factor analysis is applied to examine the individual significance of each item in the model. Additionally, goodness of fit indices are also applied with the factor analysis. In the next step, structural equation modeling SEM approach is followed to examine the effect of all exogenous factors on knowledge management.

Results and Findings

Table 1 reflects overview of the sample rate of the study. It is observed that total 423 copies of valid questionnaire, covering 100 percent. After the distribution, total copies of 335 had been received from the respondents, covering 79.19 percent of total questionnaire being distributed. While it is observed that 122 questionnaires are found to be not fit for the analysis and dropped from the sample. By the end, 213 questionnaires are found to be good for the descriptive, confirmatory factor analysis and structural equation modelling SEM.

Table 1. Overview of Sample

Details	Number of questionnaires	Percentage
Total questionnaires distributed	423	100%
Total questionnaire received	335	79.19
Questionnaire with missing values	122	28.84
Usable questionnaire	213	50.35

Table 2 shows the reliability analysis through Cronbach alpha as calculated through total number of items for each of variable of the study. For teacher engagement, total 9 items are added in the questionnaire having CB value of 0.921. For work-related environment/ condition 02 items have shown a reliability score of 0.681. For shared values, overall score is 0.732. For quality teaching, Cronbach

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alpha is 0.691 while other two factors of adaptability of head/principal and main outcome factor (knowledge management) have demonstrated reliability score of .710 and .840.

Table 2. Reliability Analysis

Factors	Cronbach's Alpha	N of Items
Engagement of Teachers	0.921	09
Work-related Environment/ Condition	0.681	02
Shared Values	0.732	02
Quality Teaching	0.691	02
Adaptability of Head/Principal	0.710	02
Knowledge Management	0.840	05

Figure 1 explains the structural model of the study for Factor Analysis. For teacher engagement (TE) nine items ranging from ES1 to ES9 are added in the model. Working related condition WC, is represented through two items WCONDITION1 and WCONDITION2. For share values, two items like Svalues1 and Svalues2 are covered under the structural model.
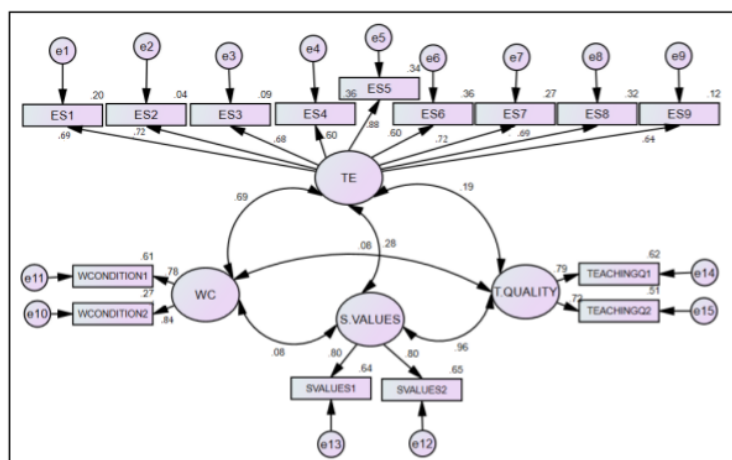

Figure 1. Standardized output/ Factor loadings for CFA Model of the Study

TEACHINGQ1 and TEACHINGQ2 respectively. For ES1 factor loading is .69, for ES2 is .72, for ES3 is .68 and for ES4 is .60. Other five factors ranging from ES5 to ES9 is above .60 and maximum loading is associated to ES6 respectively. For working condition, factor loading for both items is above .75, reflecting a good score. For shared values, factor loading for SVALUES1 is .64 and for SVALUES2 is .65. Besides, teaching quality also presents the fact that both items have their

good loading score through CFA, hence added in the model for structural equation modelling in the very next step. Table 3 is providing a comprehensive view of factor loading for each item, error variance and R-Square for the composite reliability. Table 4 indicates the fitness measures for CFA. The value of Chi-square is 184.169, significant at 5 percent, reflecting the fact that overall factor analysis are significant at 5 percent. For RMSEA value is .042, less than the stated criteria of .070. for adjusted goodness of fit AGFI, score is .890. for comparative fit index of CFI score is .847, accepted as it is near to threshold point. For tucker Lewis index of TLI, value is .921, indicating another goodness of fit for CFA.

Table 3. Factor Loadings and Error variance

No.	Items Code	Factor Loading	Error Variance
Teacher Engagement			
1	ES1	0.69	.64
2	ES2	0.72	.70
3	ES3	0.68	.71
4	ES4	0.60	.55
5	ES5	0.88	.66
6	ES6	0.60	.91
7	ES7	0.72	.12
8	ES8	0.69	.32
9	ES9	0.64	.15
Working Condition			
1	WCONDITION1	0.78	.62
2	WCONDIITON2	0.84	.42
Shared Values			
1	SVALUES1	0.80	.23
2	SVALUES2	0.80	.56
Teaching Quality			
1	TEACHINGQ1	0.79	.35
2	TEACHINGQ2	0.72	.56

Table 4. Goodness of fit indices

Indices	Result	Decision
Chi-Square	184.169	Accepted
Probability level = .000***		Accepted at 5 percent
Root mean squared error or approximation RMSEA	.042	Accepted (should be less .07 is good git as explained by (Steiger, 2007)
Adjusted goodness of fit index or AGFI	.890	Accepted (Values greater than 0.90 as explained by (Hooper, Coughlan, & Mullen, 2008)
Comparative fit index or CFI	.847	accepted

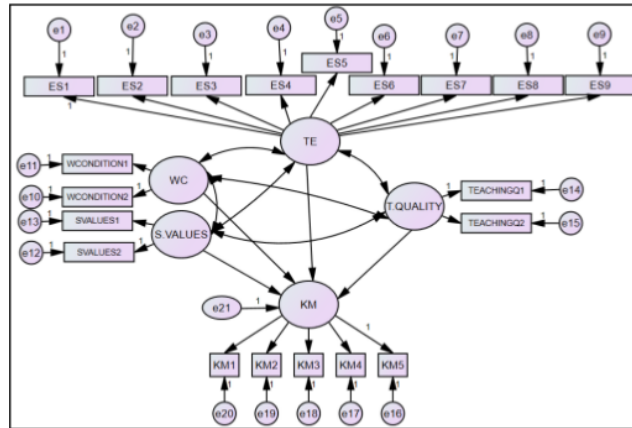| Tucker Lewis index or TLI	.921	accepted as it should be above .90 (Hooper et al., 2008)

Figure 2. Structural Equation Model (SEM) of the study

After CFA, figure 2 indicates the structural equation model of the study, covering teaching engagement, working condition, shared values, teaching quality as main independent variables. While knowledge management KM as covered through five items KM1 to KM5 indicates the main outcome factor. For the better understanding of correlation between explanatory variables, covariance is generated through double headed arrow, covering all regressors. In addition, error terms ranging from e1 to e21 are also presented for each item of all independent variables, except e21 which is observed for KM under stated figure. For each error term separate regression weight of 1 is defined to cover the theoretical assumption of model. Findings of the structural equation model are presented under table 5. Through overall effect of T.QUALITY on KM, coefficient of 1.058 indicates its direct and positive influence with the standard error of .194. It means that increasing teaching quality can positively lead towards knowledge management in the field of education for teachers. In addition, working condition explains a significant and positive influence on knowledge management of teachers with the coefficient of .052 and standard error of .0296. The factor of teacher engagement shows highest impact on knowledge management with the coefficient of 2.017. It means that more engagement of the teachers in educational institute can lead towards more management of teacher knowledge. This effect is highly significant at 1 percent level of significance. The rest of the individual indicators for SEM shows their positive and significant influence as presented under table 5. Figure 4 reflects the model of the study with the regression coefficients (unstandardized) of each item as extracted through structural equation modelling.

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Table 5. Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P
ES2	<---	TE	.395	.170	2.324	.020**
ES3	<---	TE	.764	.224	3.408	***
ES4	<---	TE	1.382	.267	5.184	***
ES5	<---	TE	1.347	.262	5.137	***
ES6	<---	TE	1.341	.259	5.185	***
ES7	<---	TE	1.222	.253	4.836	***
WCONDITION2	<---	WC	1.000			
WCONDITION1	<---	WC	1.554	.325	4.777	***
SVALUES2	<---	S.VALUES	1.000			
SVALUES1	<---	S.VALUES	1.012	.083	12.244	***
TEACHINGQ1	<---	T.QUALITY	1.000			
TEACHINGQ2	<---	T.QUALITY	.867	.080	10.823	***
ES1	<---	TE	1.000			
KM5	<---	KM	1.000			
KM4	<---	KM	.905	.084	10.753	***
KM3	<---	KM	.932	.085	11.011	***
KM2	<---	KM	.712	.097	7.360	***
KM1	<---	KM	.929	.084	11.004	***

The results of the study shows that all the predictors of the study has positive and significant nexus with the main variable of the study because the beta values have positive sign p values are less than 0.05 and t values are greater than 1.64. Figure 3 presents standardized regression coefficients for teacher engagement, working condition, teaching quality and shared values.
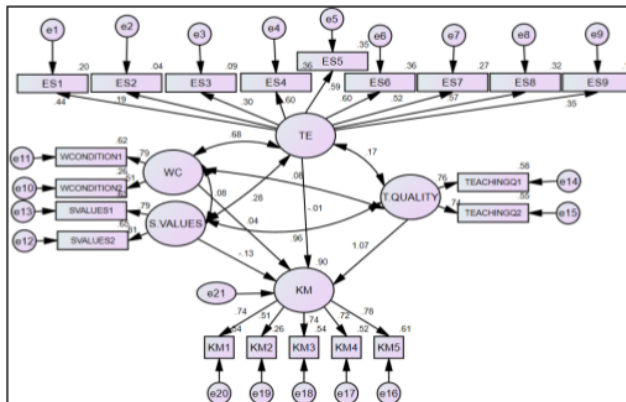

Figure 3. Regression Coefficients (standardized) for structural model

Conclusion

This study has examined the effect of teacher's engagement along with shared values, teaching quality and working condition for knowledge management in Indonesian educational sector. A structural questionnaire is developed among the teaching community for their valuable responses. In the very first step, confirmatory factor analysis are conducted to analyze the individual significance of each item through their relevant factor loading. It is observed that all items explains reasonable factor score for the further consideration of structural equation model for knowledge management and exogenous variable.

Findings through structural model indicate the fact that teacher engagement has the highest explanatory variation in terms of regression coefficient with the direct and significant influence on knowledge management. This is in favor for the assumption that more engagement of teachers in their class and academic institute is leading towards more knowledge management. This factor is providing reasonable documentary evidence for the teaching faculty who want to investigate the association between their engagement to the institute for better management of knowledge. Additionally, this direct association between TE and KM can be beneficial for the head of institute, working for the better knowledge management of their faculty members. Secondly, the factor of shared values by the faculty members in education field also indicates their direct and significant influence on knowledge management in education sector of Indonesia. It reveals that value sharing is positively helping the teachers for the management of knowledge. Besides, the other two factors of working condition and teaching quality also provides their justification for direct influence on knowledge management.

This study recommended to the regulators that they must develop the suitable policies regarding the engagement of the teachers at workplace that they spend more time at workplace and improve their performance as well as the performance of the institution. Findings under this study concluded that both teaching faculty and management staff of educational institutions can attain benefits through practical implications. However, this study is limited to some points as well. At first, sample size could be expanded for in depth analysis and more generalization of the facts. At second, study has not conducted any cross-sectional analysis to compare the findings for the schools, college and at university level. Future studies can be conducted through addressing these limitations for more robust findings and better generalization.

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ZAANGAŻOWANIE NAUCZYCIELA W ZARZĄDZANIE WIEDZĄ: NOWE SPOJRZENIE NA ROZWÓJ ZAWODOWY

Streszczenie: W artykule przedstawiono wpływ zaangażowania nauczyciela wraz z wartościami, które ono niesie, jakością nauczania i warunkami pracy w zakresie zarządzania wiedzą w Indonezji. Dane pierwotne zgromadzono za pomocą kwestionariusza strukturalnego z próby społeczności dydaktycznej w różnych instytucjach edukacyjnych.

Aby lepiej zrozumieć opracowane ramy, zastosowano potwierdzające analizy czynnikowe i techniki modelowania równań strukturalnych. Ustalenia dokonane za pośrednictwem CFA wskazują, że wszystkie elementy dotyczące zaangażowania nauczyciela, wspólnych wartości, jakości nauczania i warunków pracy mają uzasadnione obciążenie czynnikowe do rozważenia na kolejnym poziomie w SEM. Ponadto ustalenia dokonane za pomocą SEM wskazują, że wszystkie czynniki egzogenne mają znaczący i pozytywny wpływ na zarządzanie wiedzą nauczycieli w Indonezji. Jednak dzięki zaangażowaniu nauczyciela najwyższy wpływ przyczynowy na zarządzanie wiedzą obserwuje się przy standardowych współczynnikach. Te fakty wynikające z badań empirycznych są przydatne zarówno dla nauczycieli, jak i kadry kierowniczej w sektorze edukacji w Indonezji. Jednakże badanie ogranicza się również tylko do niektórych punktów. Początkową wielkość próby można rozszerzyć w celu dogłębnej analizy i większego uogólnienia faktów. Po drugie, nie przeprowadzono żadnej analizy przekrojowej w celu porównania wyników dla szkół, szkół wyższych i uniwersytetów. Przyszłe badania można przeprowadzić przez wyeliminowanie tych ograniczeń, aby uzyskać bardziej wiarygodne ustalenia i uogólnienia.

Słowa kluczowe: zaangażowanie nauczyciela, jakość nauczania, wspólne wartości, zarządzanie wiedzą, Indonezja.

教师对知识管理的参与：专业发展的新视角

摘要：本研究研究了教师参与度以及共享价值，教学质量和印度尼西亚地区知识管理工作条件的影响。通过结构性问卷调查从各教育机构的教学社区样本中收集原始数据。为了更好地理解已开发的框架，应用了验证性因子分析和结构方程建模技术。通过CFA的调查结果表明，所有与教师敬业度，共同价值观，教学质量和工作条件有关的项目都有合理的因素负载，可供SEM下一级考虑。此外，通过SEM的调查结果表明，所有外在因素都对印尼教师的知识管理产生了显着积极的影响。但是，通过教师的参与，使用标准化系数可以观察到对知识管理的最大因果关系。这些经验事实对于印度尼西亚教育部门的教师和管理人员都是有用的。然而，这项研究也仅限于某些点。首先，可以扩展样本数量以进行深入分析和事实的更一般化。第二，研究没有进行任何横断面分析以比较学校，学院和大学的发现。可以通过解决这些局限性来进行未来的研究，以获得更可靠的发现和更好的概括性

关键字：教师的参与度，教学质量，共享价值，知识管理，印度尼西亚。

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