



A study of leadership in educational institution using dual systems and the effects on personal behavior: A case study of Thailand private vocational system

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Abstract

The objective of this research was to find solutions involving the key issues of leadership in educational institutions (transformational leadership), its direct effects on personnel's behaviour relating to quality of relationship as well as to employees' loyalty, and its indirect impacts through the mediator variable of personnel's needs satisfaction. The definitions of relevant key terms, their practical applications and relationships among all related variables create a research conceptual framework design in the context of the dual system of private vocational education administration. This type of education system enables Thai education system to respond to the contemporary labour market. Participants were 396 officers in Thailand private vocational schools. Results from SEM revealed that transformational leadership has a direct impact on needs satisfaction, quality relationship, and leader loyalty. The study suggests fruitful insights for leaders in educational institutions and alternative ways to search for possible relevant variables which affect their employees' behaviour towards the institutions.

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Introduction

It is necessary that educational institutions are administered by leaders with vision who can be flexible while maintaining the institutions' missions. Suitable leadership will enable the leaders to effectively manage and to encourage teamwork to be fully engaged in dynamic educational contexts (Muterera, Hemsworth, Baregheh, & Garcia-Rivera, 2018). Such leadership not only emphasizes roles of administrative leaders in educational settings but

also sustains teamwork, which is considered a great success of a workplace. With this importance of leadership, there is a need to nurture necessary leadership skills for administrative leaders and their personnel in academia (Hulpi, Devos, & Van Keer, 2009).

The use of a dual system has connected learners' classroom experiences to those gained in the real world. Such connection enables learning and working motivations, labor force for contemporary labor market and economic development (Wheelahan, 2015). Learners usually seek knowledge and gain skills or work proficiency necessary for their future careers from educational settings. However, work-simulated experiences from educational institutions may not be sufficient for the learners. They should be interwoven with those experiences from professional settings in different and various contexts. So far, there have

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been studies of dual systems which have laid the foundation for skilled-labor development to meet specific standards of each occupation (Rukumnuaykit & Pholpirul, 2016).

The dual system was introduced into Thailand's vocational education system by the Notification of the Ministry of Education, Standardize of Dual Vocational System, in 2014. The concept of dual system was from Germany. The Ministry of Education in Thailand established the dual system with the purpose of professional development and necessity competency for the labor market. The pilot phase of the dual system has been trialed and tested only with private vocational education. This is because of the strict interpretation of the dual system's definition in educational institutions, government and state-enterprises. The management challenge must deal with flexibility and adaptation for internal and external environment. Any application of such dual system must be for learners of vocational certificates, of high vocational certificates, or of tertiary education focusing on real-world experiences and information technology according to vocational education guidelines from the Office of Vocational Education Commission and The Department of Skill Development.

The context of the dual system is related to a well-balanced design of an educational program. It is difficult for an educational institution and a business organization to find a balance of their need's satisfaction. This interwoven chain shows the big picture of an effect from educational personnel to learners and to entrepreneurs. The concept of human resource management in educational leadership has been studied widely, thus, needs collaboration from internal or departmental personnel in order to effectively oversee and fully support educational institutions. One possible way for this kind of collaboration to be effective is to have a leader who is knowledgeable, skillful, flexible, and who can resolve difficult issues which arise based on standard rules, regulations and strategies in an organization. The concept has been recognized under many terms, involving similar goals of leadership in which leaders are to support employees' task achievement and to view their employees as team members and not as subordinates.

This research aimed to support leadership acts which allow effective leaders to efficiently collaborate with their personnel as well as their institutions. The objectives of the study were to study the impact of transformational leadership under vocational education in dual system context that influences personnel's behavior. Moreover, the analysis will lead to educate and improve the relationship in structural equation model of transformational leadership, which has an effect on needs satisfaction, relationship quality and loyalty.

Literature Review

Transformational Leadership Implementation

Transformational leadership refers to leaders who train and equip their personnel with knowledge and skills to be ready for dynamic workplace environments and changes. Such personnel development enables the team to reach institutional goals while fully collaborating as a team (Leithwood & Jantzi, 1999). In full collaboration, the team members usually exchange knowledge and skills as well as other related information (Boer, Deinert, Homan, & Voelpel, 2016). Characteristics of transformational leadership are usually based on an educational institution's needs and personnel's behaviors which are contemporary and dynamic as well as matched with organizational goals (Podsakoff, MacKenzie, Moorman, & Fetter, 1990).

Many research studies have referred to transformational leadership that addresses four characteristics of transformational leadership as follows. Firstly, 'idealized influence' refers to leaders with persuasive skills to convince employees to follow. The leaders create faith and trustworthiness among employees while persuading them to work as needed. Secondly, 'inspirational motivation' refers to leaders who enable employees to clearly see organizations' visions and empower them to work towards such visions. Thirdly, 'intellectual stimulation' refers to leaders who train employees to solve organizational problems from various aspects. Fourthly, 'individualized consideration' refers to leaders who focus on each employee's needs and tries to understand such needs (Shih, Chiang, & Chen, 2012).

Needs Satisfaction

Personnel's needs satisfaction is the variable that many studies have shown has significant relation to transformational leadership. This is because such needs satisfaction points to possible options for leaders with a clear understanding of each individual employees' needs in order to persuade employees (Hetland, Pallesen, Schou Andreassen, Hetland, & Notelaers, 2011). Theoretically speaking, this significant relationship could be explained by 'autonomy, competency and relatedness needs fulfillment' that affects employees' behavior, called self-organization. When leaders attempt to manage organizations based on personnel's needs satisfaction, the result is a good balance between such needs and personnel's behaviors (Kovjanic, Schuh, Jonas, Quaquebeke, & Dick, 2012). A closer investigation into findings of needs satisfaction of personnel sees employees' lack of work-related experiences and their needs to fulfill them (Deci & Ryan, 2000).

Perspectives on such needs satisfaction and leadership allow leaders to adjust their employees' behaviors and enables needs satisfaction as the mediator variable. The hypotheses involved with needs satisfaction are:

H1: Transformational Leadership will have a positive effect on needs satisfaction.

H2: Needs satisfaction will have a positive effect on quality relationship.

Quality Relationship

The quality relationship concept in this study focused on creating pattern of employee behavior. With such collaboration in work Santouridis and Veraki (2017) stressed that solely good relationship does not create behavior. Although behavior is based on many combined factors, it is selective disaggregated constructs from those combined elements. In exploring quality of relationship, there could be the universal model which focuses on factors from general relationship and disregards specific entities (Lee, 2016).

The various factors in quality of relationship lead to different kinds of relationship. For instance, Steward, Wu, and Hartley (2010) showed trust is based on exchanges of creditability and honesty between leaders and employees. Satisfaction is related to emotional interaction and engagement. Commitment in an organization is length of time for employees to hold such engagement. The clearer and the more accessible the leadership, the more positive changes of the employees' behaviors. Meyers, van Woerkom, Paauwe, and Dries (2020) examined principal leadership which involves transformational leaderships. Leaderships have affected behaviors of instructors and learners. The leaders in this study investigated quality relationship by clearly assigning transformational leadership to motivate instructors' progresses (Snijders, Rikers, Wijnia, & Loyens, 2018). The hypotheses involved with quality relationship are:

H3: Transformational leadership will have a positive effect on quality relationship.

H4: Trust will have a positive effect on commitment

H5: Commitment will have a positive effect on job satisfaction

H6: Job satisfaction will have a positive effect on trust

Loyalty

The notion of loyalty is based on organizational commitment of employees. With the commitment, employees dedicate themselves to working for organizations (Aldas-Manzano, Ruiz-Mafe, Sanz-Blas, & Lassala-

Navarré, 2011). They view their employees as organizations' partners allowing their policies to be clearly explained and then implemented (Sampaio, Perin, Simões, & Kleinowski, 2012). One important role of leaders is to understand their employees' individualities (Hart & Thompson, 2007). Although it seems difficult for leaders to maintain their employees' loyalty, if the leaders would like to do so, they could set an agreement or nurture role-based loyalty. This role-based loyalty will put the employees into set places (Jiang & Cheng, 2008). The hypotheses involved with loyalty are:

H7: Transformational Leadership will have a positive effect on the group of loyalty.

H8: Trust will have a positive effect on the variable group of loyalty.

H9: Commitment will have a positive effect on the variable group of loyalty.

H10: Job satisfaction will have a positive effect on the variable group of loyalty.

The framework of this study was based on theories and literature reviews (Figure 1).

Methodology

Questionnaire Design

The variables in conceptual framework were constructs from literature review. Transformational leadership was assessed and nineteen items modified on educational leadership scale (Ariyabuddhiphongs & Kahn, 2017; Shih et al., 2012). Needs satisfaction was measured with nine items of the needs satisfaction scale at self-determination theory (Kovjanic et al., 2012; La Guardia, Ryan, Couchman, & Deci, 2000). The group of quality relationship constructs has three antecedents. Trust was adopted and four items modified on trust scale (Robinson, 1996). Organizational commitment was developed and ten items modified on commitment scale (Angle & Perry, 1981). Job satisfactions was adopted and ten items modified from the job descriptive index (Houtte, 2006; Vaughn & Dunn, 1974). For loyalty, there are two groups of educational loyalty constructs. Educational Leader loyalty was measured with eight items of the affect and role based loyalty measurement (Cheng, Jiang, & Riley, 2003; Jiang & Cheng, 2008) and four items from organization loyalty were adopted and modified based on teacher loyalty scale (Ting & Yeh, 2014). Teacher participants were asked to designate by measuring on a five-point Likert-type scale from 1 (absolutely disagree) to 5 (extremely agree). This study calculated all sixty-four items by using factor analysis on confirmatory analysis method and tested in structural equation model.

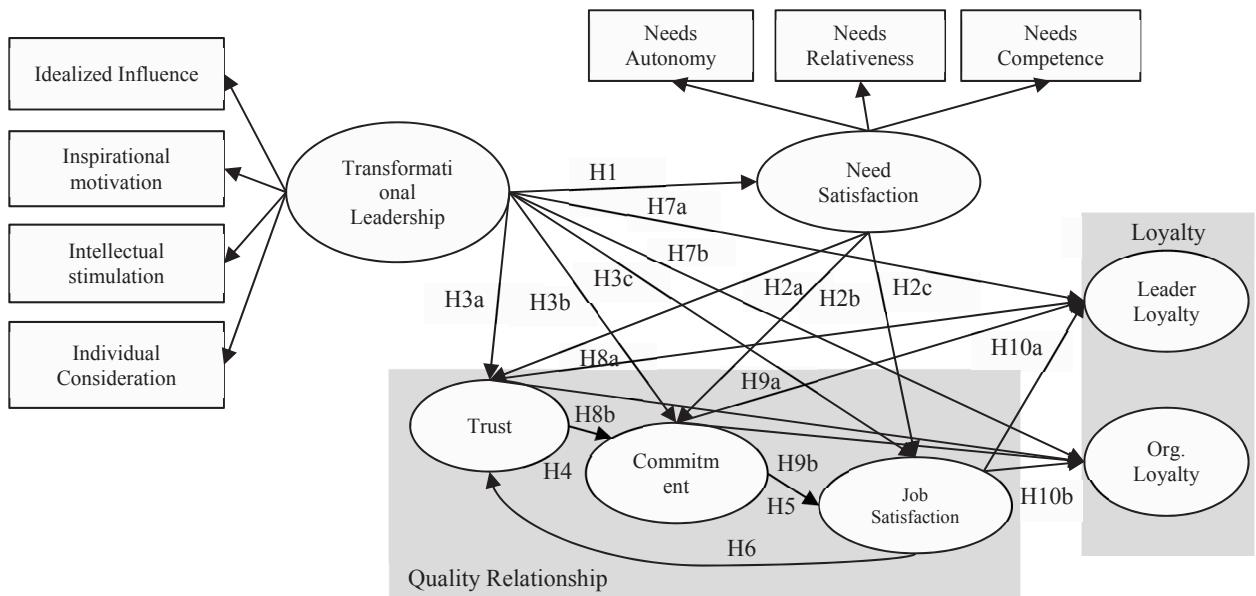


Figure 1 Conceptual framework

Data Collection

The research focused on instructors who worked under the dual system of private vocational education institute. The qualification of participants was to have a level of education above bachelor degree with teaching license certified by Teacher Council, Ministry of Education in Thailand. The educational institute had to have performed more than one year via the dual system. The sampling strategy employed the simple random sampling and purposive sampling method. To be more specific about sampling strategy, the questionnaires launched tracking code by selected officers in each institute. The researcher chose different number of informants depending on the number of instructors in the educational institute. It was decided to examine respondents using dual system criteria from The Department of Vocational Education Center (DVEC). The determinate criteria were qualifications of instructor who had taken a course on professional development from The Thailand Professional Qualification Institute (TPQI) and training program in their educational institutes. The DVEC has supported 461 private vocational colleges. Then, this study classified the educational institutes based on the dual system, the information presenting 168 educational institutes although there were 131 educational institutes which had applied the dual system for more than a year.

Survey questionnaires attached with certified letter from the Office of Vocational Education Commission were send directly to school principals for approving. This study

applied quantitative methodologies. Data were analyzed using Amos (version 23) for mediator analysis. The critical sample size of the study utilized the maximum likelihood to evaluate multiple construct (Hair, Black, Babin, Anderson, & Tatham, 2006). A sufficient sample size to fully understand and be enough for statistic power is any number above two-hundred. Data collection was done from questionnaires of the 396 returned questionnaires from selected participants in the vocational education school, which followed the most rigid rule of a minimum 200 samples.

Data Analysis

The research followed the statistic results from the survey questionnaire. The results of reliability in multi-item measure recommended ≥ 0.07 of Cronbach's alpha (Nunnally, 1967). In order to analyze the significance, we calculated the constructs value of the descriptive statistic and Cronbach alpha that have range of reliability between 0.749 to 0.910 (Table 1).

This finding classified fit index into each measurement. The most important assessment is absolute fit in Chi-square statistic (χ^2/df) (Loo & Thorpe, 2000) where value is lower than 5.0 to evaluate fit of model. The goodness of fit value (GFI) must be closer to 1.00 to indicate relative of variance and covariance (Hair, Black, Babin, & Anderson, 2009). The root means square error of approximation (RMSEA) used value for fit model less than 0.08 (Browne & Cudeck, 1992; Hair, Anderson, Tatham, & Black, 1998). The

Table 1 Mean, standard deviations, and reliability statistic for the constructs

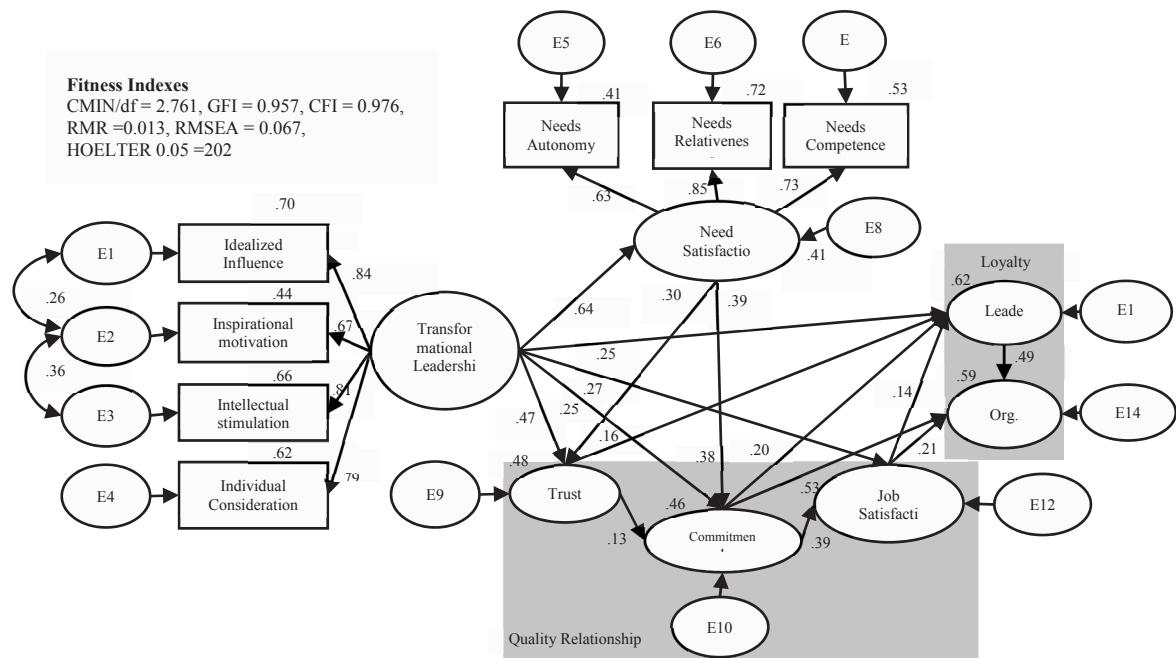
Variable	Item	Mean	SD	Cronbach alpha
Transformational Leadership	Idealized influence	4.28	0.50	0.890
	Inspirational motivation	4.22	0.55	0.806
	Intellectual stimulation	4.18	0.54	0.832
	Individual consideration	4.14	0.59	0.844
Needs Satisfaction	Need autonomy	4.04	0.68	0.799
Quality Relationship	Need competence	4.09	0.59	0.749
	Need relatedness	3.97	0.65	0.751
Loyalty	Trust	4.13	0.63	0.861
Relationship	Commitment	4.24	0.48	0.872
	Job Satisfaction	4.26	0.52	0.903
Loyalty	Leader loyalty	4.18	0.54	0.906
	Organization loyalty	4.31	0.60	0.910

incremental fit for testing is the comparative fit index (CFI), whose value should be at least 0.90 (Hair et al., 2006). Hence, the structural model was developed and modified by using the criteria to improve the model fitness.

Results and Discussion

The results showed a positive effect from transformational leadership that related to personnel behavior in vocational education. The results presented the fit indices by using structural equation modelling. The

testing presents the fit of conceptual framework that submits with empirical data: CMIN (chi-square) = 104.905, df = 38, CMIN/df = 2.761, GFI = 0.957, CFI = 0.976, RMR = 0.013, RMSEA = 0.067, and HOELTER .05 = 202. The structural equation model was preferred as in Figure 2. In order to assess, transformational leadership and trust have no direct effect on organizational loyalty ($p < .001$). The mediator model also has no direct influence of needs satisfaction and trustworthiness to job satisfaction ($p < .001$). The model was concluded to explain 61.5 percent of leader loyalty and 59.0 of organization loyalty.

**Figure 2** Result for path analyses via structural equation model of transformational leadership

The outcome was analyzed to see whether transformational leadership role can be an important construct for supporting personnel's behaviors (Table 2 and Table 3). Transformational leadership variable had four dimensions showing that idealized influence, inspirational motivation, intellectual stimulation and individual consideration had direct impact on all variables except school loyalty ($p < .001$) but had indirect effect through needs satisfaction and the group of quality relationship constructs. The result proved a significant statistic for the hypotheses H1, H3 and H7a. The term of mediator variable of needs satisfaction had three compositions. Needs satisfaction consisted of need of autonomy, competence and relatedness. The result supported hypotheses H2a and H2b because the construct of needs satisfaction had direct effect on trust and school commitment, but no direct effect on job satisfaction ($p < .001$). Finally, the group of quality relationship construct mediated the effect of transformational leadership on loyalty constructs. Quality relationship comprised three manifest variables. The constructs of trust, school commitment and job satisfaction had direct influence on leader loyalty variables ($p < .001$).

School commitment and job satisfaction had direct impact on organization loyalty ($p < .001$) but the variable of trust had no direct effect on organization loyalty and job satisfaction, supporting hypotheses H4, H5, H8a, H9 and H10.

Conclusion and Recommendation

This study realized how transformational leadership influences performance for educational institutes via instructor behavior. Usually, successful leaders are the ones who can influence employees' beliefs and learning attitudes. Significant results in the study provided both direct and indirect effect from educational leadership to various variables, which relate to nurturing positive behavior of internal or departmental personnel. That is to say, leadership in educational institutions is the combination of the various dimensions to have transformational leadership, needs satisfaction and quality of relationship. These factors were investigated under the context of the dual system of private vocational education administration in Thailand and revealed well-related results in model.

Table 2 Regression weight: Default model

	Variable	Standardized regression weight		Regression weight		
		Path Coefficient	Estimate	SE	C.R.	p
Transformational leadership	---- > Needs Satisfaction	0.642	0.607	0.067	9.114	***
	---- > Trust	0.468	0.623	0.087	7.422	***
	---- > Commitment	0.252	0.261	0.071	3.683	***
	---- > Job satisfaction	0.266	0.301	0.072	4.153	***
	---- > Leader loyalty	0.249	0.294	0.067	4.408	***
Need	---- > Organization loyalty	-0.002	-0.003	0.077	-0.037	.971
	---- > Trust	0.295	0.431	0.094	4.599	***
Satisfaction	---- > Commitment	0.385	0.422	0.076	5.534	***
	---- > Job satisfaction	0.097	0.116	0.076	1.522	.128
Trust	---- > Commitment	0.132	0.099	0.043	2.313	.021*
	---- > Job satisfaction	0.095	0.078	0.042	1.837	.066
	---- > Leader loyalty	0.160	0.136	0.038	3.532	***
	---- > Organization loyalty	-0.047	-0.044	0.044	-0.999	.311
Commitment	---- > Job satisfaction	0.391	0.427	0.054	7.87	***
	---- > Leader loyalty	0.379	0.43	0.051	8.43	***
	---- > Organization loyalty	0.198	0.249	0.062	4.004	***
Job satisfaction	---- > Leader loyalty	0.141	0.146	0.048	3.028	.002**
	---- > Organization loyalty	0.207	0.238	0.055	4.333	***
Leader loyalty	---- > Organization loyalty	0.489	0.542	0.058	9.301	***

Note: * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3 Square multiple correlation: default model

Variable	Estimate
Idealized Influence	0.698
Inspirational motivation	0.444
Intellectual stimulation	0.657
Individual Consideration	0.617
Trust	0.484
Commitment	0.457
Job satisfaction	0.527
Needs satisfaction	0.412
Needs autonomy	0.405
Needs relatedness	0.721
Needs competence	0.528
Leader loyalty	0.615
Organization loyalty	0.590

It has been shown that a transformational leader greatly affects personnel's behavior in educational institutions. The study shows the self-management of leaders to convince employees to follow suite. The personnel's needs satisfaction is significantly related to transformational leadership because the leaders do not think about themselves but focus on organizations as a whole. Such self-management includes leaders' understanding towards employees' levels of self-adjustment to keep up with organizational values through the concept of quality relationship as a foundation in creating a pattern of leadership in educational administration. The leaders must comprehend and realize a balance of various levels of the self-adjustment of employees for sustained behavior. This could lead to leader loyalty and organization loyalty from employees. Once employees exhibit both kinds of loyalty, leadership and individual needs recognition could also be developed. Consequently, it is better for the educational institute to maintain such asset by nurturing loyalty for a sustainable engagement.

Suggestions in improvement of the dual system are that leaders in educational institutions give their support in resolving labor issues. In order to effectively set strategic plans and manage resources, the leaders should understand the nature of work themselves. Moreover, the leaders should pay close attention to the relationship between inter-department personnel and internal or departmental employees. The leaders should act as their mentors and leave some individual space as part of democratic management processes. Most importantly, they should not ignore equality and diversity of employees and learners. The best leaders are those who can manage people while working through difficult and dynamic situations or policies. They set flexible strategic plans or management road maps that can later be appropriately adjusted. Apart

from the leaders, organizational and social contexts may affect leaders' administration.

This interwoven chain shows the big picture of an effect from educational personnel to learners and to entrepreneurs. Therefore, the three actors should collaborate to strengthen the labor market and economy as well as to set rules or regulations to be implemented in both public and private sectors. The three should also work together to design an educational program which meets the standard criteria of development plan in vocational education set by the Office of Vocational Education Commission. Clearly, leaders should not only investigate the process in realization of the needs of their personnel, but they also need to thoroughly examine interactions between individuals and their work environments, which affect their work quality. It is clear that leaders' characteristics are significantly related to employees' behavior. This relates to the concept of human resource practice with the abilities of supporting, internal development and departmental personnel's knowledge and skills that match with goals or missions in organization. The interaction between leaders and employees directly results in shared, meaningful and straightforward communication of organizations' visions between the two parties. This study has implied that educational leadership could be implemented when leaders or administrative executives of educational institutions are involved in management processes which influence the employees' expectations towards the institutions to be more positive to support sustainability of educational institutions. In the long run, the learners will benefit from this constructive cycle.

Conflict of Interest

There is no conflict of interest.

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