The Lecturer's Formal Appointment and Group Elite Status: A Case Study of Politeknik Tuanku Sultanah Bahiyah and Politeknik Tuanku Syed Sirajuddin.

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ABSTRACT

This study, an extension of work by Jamaludin and Bahaudin (2017), examine and compare the structural relationship of lecturers' network in the institution of Technical and Vocational Education and Training (TVET) in Malaysia. This study is using social network analysis (SNA) techniques at the lecturer's level. Furthermore, this study also analyses whether TVET institution's additional task appointment practice focuses on the creation of valuable network size and pattern. By using UCINET and NetDraw software, this study shows that the lecturers in the networks are moderately connected. Thus, it suggests that there are a small group of lecturers that are well connected and well positioned. These positions enable their potential to exercise power and control of influence over the other lecturers within the network. Preliminarily, all networks' centrality indicated a positive and significant association among others. Except for lecturers in Politeknik Tuanku Syed Sirajuddin. Further analysis results identified a group of most well-connected and well-positioned TVET institutions lecturer in the Commerce Department, both in Politeknik Tuanku Sultanah Bahiyah and Politeknik Tuanku Syed Sirajuddin. The results derived suggested that lecturers with sufficient access to critical resources and information are perceived to be highly valuable to others. However, to certain extent, the closer each lecturers might weaken the network positive effects. Therefore, this study propose that there are perception for others to maintain with these well-connected and well-positioned lecturers for the best interests.

KEYWORDS: Social network, lecturer, elite.

1. INTRODUCTION

The lecturer's formal appointment in any higher education institutions, directly and indirectly, creates the lecturers' networks. The network creation is an isolated and less observed issues from the general governance perspective (Abd. Hamid, 2011). The networks created by lecturer is considered as an isolated or unobservable issues pertaining to students or academic department performance (Abd. Hamid, 2011). According to Jamaludin and Bahaudin (2017), the lecturers' network defines as a set of lecturer with a set of connections via formal appointments, which link them together. The lecturers' interconnection through shared end-points, which creates paths that indirectly link other lecturer that are not directly connected. The pattern of connections in a network forms a particular structure, which any dominant lecturers would have the opportunity to occupy favourable positions within the structure (Borgatti & Halgin, 2011; Nicholson, Alexander, & Kiel, 2004). At the organisational level, the same definition applies when the Technical and Vocational Education and Training (TVET) institutions become the focus of network analysis.

Overall, the lecturers' networks are categorised into social networks and professional networks. Networks establish through academic background, specific interests such as sports, music or hobby, and club memberships, are the example of social networks (Renneboog & Zhao, 2011). Meanwhile, professional networks, it establish through daily professional work or appointments.

Prior studies show that there are limited literature within TVET institutions in Malaysia. Therefore, it is worth to explore and pay more deliberation to the influence of lecturers' networks in TVET institutions during the decision making process and monitoring.

2. LITERATURE REVIEW

The social network approach origins from three school of thoughts which is sociology, anthropology and role theory (Tichy, Tushman, & Fombrun, 1979). In sociology perspective, the approach emphasized on patterns of interaction and communications as the key to understand social life (Simmel, 1971). As for anthropology, it emphasized the content of the relationships joining individuals, the conditions under which they would exits and eventually the evolution of these bonds over time (Galaskiewicz & Wasserman, 1993). Finally, the role theory, refine the definition of organisation by Katz and Kahn in 1966 as a 'fish nets' of interrelated offices (Tichy et al., 1979). It implies the network concepts but its only limited to one degree role sets which is an individual directly linked to the focal person. It also limited because of individual bias evidences (Wasserman & Faust, 1994).

Prior studies in social network structure concept and analysis have defined direct networks physical linkages between the actors (Baker, 1990). In addition, Bourdieu (1986) have defined direct networks more widely than just direct linkages, and include indirect networks. An indirect network is a network between two actors that occurs only through other actors and not directly also known as 'friend of a friend'. This wider conceptualisation of social network views social capital[1] as an opportunity network of potential resources that can be accessed through such networks. Therefore, the direct networks indicate lecturer network at one degree of separation which one to one direct linkage between a lecturers to another. As for indirect networks is the lecturer network at two degrees of separation, that is, indirect networks occur through a third person, for example a 'friend of a friend'. Generally, direct network considered as strong network and indirect network considered weaker network.

Additionally, Scott (1988) defined social network as a relationship of individual to one another by invisible bonds, which are knitted together into criss-cross mesh of networks. According to Tichy et al. (1979) social networks is a specific set of linkages among a defined set of persons with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behaviour of the persons involved. This approach views organisation in society as a system of objects such as people, groups and organisations, joined by a variety of relationships.

Furthermore, Streeter and Gillespie (1993) described social network as any bounded set of connected social unit. This definition highlights three important characteristics of social networks. First, networks have boundaries. The second key element of the definition is "connectedness" in social networks. The third key aspect of this definition is the social unit. Scott (1988) also describes social network as a strange but surprisingly powerful image of social reality. Every individual are connected to one another by invisible bonds, which are knitted together into a criss-cross mesh of networks. These networks maybe reflected as a fishing nets or a length of cloths is made from intertwined fabrics. In Malaysian business context, social network defined as inter-firm coordination that is characterised by organic of social systems (Abd. Hamid, 2011).

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[1] Social capital is quality created between people. Social capital predicts that return to intelligences, education and seniority depend in some part on person's location in the social structure of a market or hierarchy (Burt, 1997).

Tichy et al. (1979) describe three set of properties of network, which is transactional content, nature of the networks and structural characteristics. As for transactional content emphasized on what is the exchanged by the social objects such as two lecturers may exchange information or affect. In nature of the networks, it refers to the strength and qualitative nature of the relation between two social objects. Finally, a structural characteristic refers to the overall pattern of relationships between system's actors such as clustering, network density, and the existence of special nodes in the network.

Streeter and Gillespie (1993) come with a more extensive definition of social network. They defined social network as any bounded set of connected social units. This definition highlights three important characteristics of social networks. First, networks have boundaries. That is, some criterion exists to determine membership in the network. In some networks, such as family systems, friendship groups, and work teams, boundaries are relatively straightforward and easy to define. However, social networks are also presumed to be embedded in larger social systems. Therefore, it is sometimes difficult to distinguish between a network and its broader social context. The definition of boundaries is a critical first step toward the study of social networks.

The second key element of the definition is connectedness in social networks. To be part of a social network, each member must have either actual or potential networks to at least one other member of the network. These networks may be direct or indirect. While some members may be peripheral in the network or almost completely isolated, each one must somehow be connected to other members if it is to be considered part of the network.

The third key aspect of this definition is the social unit. Network analysis is easily applied to a wide range of social units. They can be individuals, as in the case of social support networks. However, they can also be social service agencies, social institutions in local communities, or nations in the global economy. In a diverse profession like social work, social network analysis has direct applications for the study of clinical practice, social policy analysis, community organisation, and organisational management.

Social network theory suggests that the patterns and implications of relationships demonstrate specific behavioural principles and properties where the network theories require specification in terms of patterns of relations, characterizing a group or social system as a whole (Galaskiewicz & Wasserman, 1993). The use of social network theory as a premise for predicting network behaviour, then, is expectedly lower than the application of the methodology to analyse network structure and operations. To date, two prominent network properties provide a framework for viewing network behaviour, and these properties provide the basis for articles invoking the use of social network theory (Schultz-Jones, 2009). Furthermore, Scott (Scott, 1988) simplified the social network concepts as a set of points connected by lines. From this idea, emerge the proponents of social network analysis to the mathematical theory of graphs in the hope of discovering a formal model for the representation of network structure.

Therefore, this study attempts to explore whether the presence or existence of connection of lecturer would create or enhance a lecturer elite's status both in Politeknik Tuanku Sultanah Bahiyah (PTSB) and Politeknik Tuanku Syed Sirajuddin (PTSS). The proposed conceptual framework as shown by Figure 1.
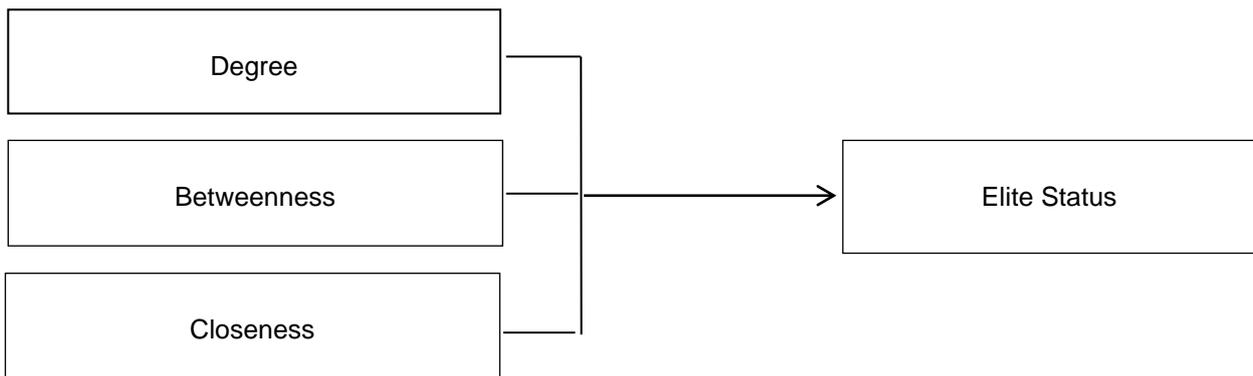
Figure 1: Conceptual Framework as proposed by Jamaludin and Bahaudin (2017).

3. DATA AND SAMPLE SELECTION

Along with the data on lecturer's profiles from Commerce Department at PTSB, (CD-PTSB) obtained from Jamaludin and Bahaudin (2017) study, this study include the similar lecturer's profile from CD at PTSS (CD-PTSS) for the same period which is December 2016 academic session. The profiles highlighted the official job description for each lecturers. As the population number is relatively small, therefore a total of 42 lecturers in CD-PTSB and 35 in CD-PTSS were collected. However, lecturer cum CD Head of Departments (HODs) at both institutions were excluded in the analysis. The HODs were excluded as this was a position which determines other lecturer additional job descriptions. The HODs were also the persons that evaluate the performance of other lecturers within CD. Table 1 describe this study population's breakdown and demographic profile of the sample.

The information provided in the CD-PTSB and CD-PTSS minute of meetings includes the name of lecturer, grades, gender, types of job descriptions and academic background. In some cases, the minute of meeting also includes additional job descriptions at organisation level. Similarly with Jamaludin and Bahaudin (2017), this study creates an undirected lecturers network formed by shared lecturers. Equivalent with study by Larcker, So, and Wang (Larcker, So, & Wang, 2013), shared lecturers are defined as any two job descriptions are linked if they shared at least one lecturer as committee member, vice versa.

In the following section, the calculation on centrality, power and prestige of lecturers in CD-PTSB and CD-PTSS will be discussed. This study focuses are social network analysis at individual level. This analysis used UCINET version 6.532, a social network analysis tools developed by Borgatti, Everett, and Freeman (Borgatti, Everett, & Freeman, 2002).

Table 1: Population breakdown

Characteristics	Description	No of lecturer CD-PTSB	Percentage	No of lecturer CD-PTSS	Percentage
Gender	Male	8	19.05	8	22.86
	Female	34	80.95	27	77.14
Academic Background	Accounting	16	38.10	15	42.86
	Business Studies	15	35.71	16	45.71
	Marketing	11	26.19	0	0.00

	Office System	0	0.00	2	5.71
	Economic	0	0.00	1	2.86
	Diploma Science Secretarial	0	0.00	1	2.86
	DH52	3	7.14	2	5.71
	DH48	1	2.38	7	20.00
Grade	DH44	28	66.67	19	54.29
	DH41	10	23.81	6	17.14
	DH32	0	0.00	1	2.86

Using the Netdraw software, figure 2 and 3 shows the structural pattern on lecturer's networks both in CD-PTSB and in CD-PTSS. The box in both figures represent the individual lecturers, while the colour indicate the total of direct connections held for each lecturer. The bigger size of the box shows that the lecturer holds relatively higher direct connections with other lecturers within the same network. Comparing both figures, the lecturer's networks creates are distinguish regardless the department's functions and compositions relatively similar.

The lecturer's networks for CD-PTSB shows the presence of a group of lecturers with greater direct connections and positioned in the centre of the network. Whereas, the CD-PTSS lecturer's network indicate the presence of two similar groups of lecturers with relatively similar size of direct connections. This shows that both group presence in CD-PTSS indicate the presence of two dominant groups.
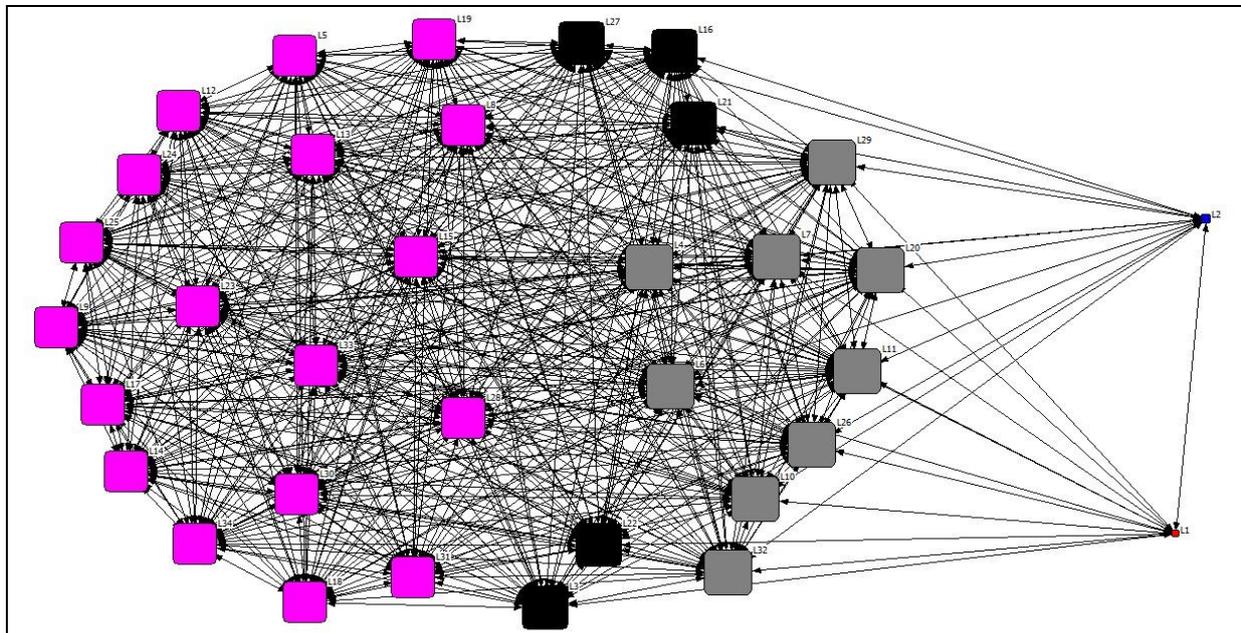

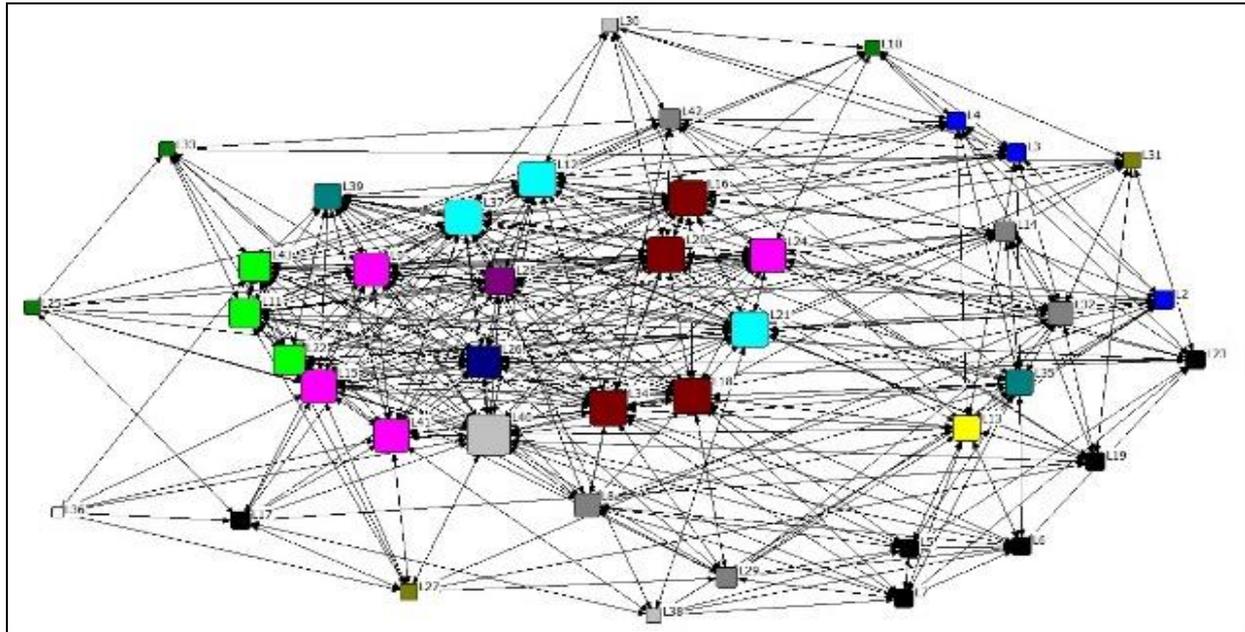Figure 2: The Visualisation of CD-PTSS Lecturers Network.

Figure 3: The Visualisation of CD-PTSB Lecturers Network.

4. RESULT AND ANALYSIS

4.1   Univariate Analysis

Table 2 and 3 show the descriptive analysis for all network centrality namely Degree, Eigenvector, Betweenness and Closeness. Similarly with Jamaludin and Bahaudin (2017), this study employ four network centralities widely used in the social network analysis (SNA) (Borgatti, Everett, & Johnson, 2013). The 'n' signify the normalised value of each network centrality when comparing more than one network. Degree and Eigenvector are measurement for direct connection among lecturer whereas Betweenness and Closeness represent indirect connection. The direct connection symbolise the power and control over resources of individual lecturer among other in the networks. The indirect represent the influence of control and information of individual lecturer.

Table 2: Network Centrality Descriptive Statistics (CD-PTSB)

	Mean	Std Dev	Minimum	Maximum	N of Obs.
Degree	18.38	7.49	6.00	33.00	42
nDegree	14.94	6.09	4.88	26.83	42
Eigenvector	0.14	0.07	0.05	0.26	42
nEigenvector	19.28	10.22	6.66	36.06	42
Betweenness	12.69	10.13	0.31	52.30	42
nBetweenness	1.55	1.24	0.04	6.38	42
Closeness	28.60	3.32	22.50	35.00	42
nCloseness	69.74	8.09	54.88	85.37	42

Table 3: Network Centrality Descriptive Statistics (CD-PTSS)

	Mean	Std Dev	Minimum	Maximum	N of Obs.
Degree	53.60	18.01	5.00	85.00	35

nDegree	39.41	13.25	3.68	62.50	35
Eigenvector	0.16	0.06	0.02	0.26	35
nEigenvector	22.55	8.04	2.11	36.91	35
Betweenness	1.92	2.21	0.00	8.51	35
nBetweenness	0.34	0.39	0.00	1.52	35
Closeness	32.09	3.09	19.50	33.50	35
nCloseness	94.37	9.08	57.35	98.53	35

In table 2, Degree indicate that relatively a few lecturer in the network establish large network connection with an average direct connection is 18.38. Simply, it means that in average, a lecturer creates connections with approximately 18 other lecturer. The range of direct connection a lecturer creates is between six and 33. Compare to CD-PTSS in table 3, an average of 53.60 direct connections holds by the lecturers. Surprisingly, CD-PTSS total number of lecturers is relatively smaller however manage to create greater direct connections from lecturers in CD-PTSB. This is a direct effect of additional formal task assigned by their respective HOD.

The Eigenvector indicate the presence of a group of dominant lecturer whom connects with other well-connected lecturer. The Eigenvector mostly used to indicate the reputation gain by individual lecturer. In average, a lecturer establish 0.14 and 0.16 connection with other well-connected lecturer in table 2 and 3 respectively. The relatively small Eigenvector indicate that lecturer has little influence in create their network free will. This simply shows that they have little access or manipulation to create crony or favourite team thus little dominant elite group present in the network.

As for Betweenness, which indicate the frequency of individual lecturer present in between two other lecturer, relatively, it shows that there is a presence a very small number of lecturer well-position in between of other lecturer. With an average of 12.69 pairs in table 2, shows that only a moderate number of lecturers in the position to bridge between other pair of lecturer. This position has the advantage, which create opportunity for lecturer to have influence over power and control over resources. Surprisingly, in table 3, an average of 1.92 pairs indicate the possibility paths a lecturer holds in between 2 pair of lecturers in CD-PTSS.

Lastly, the Closeness, indicate how fast resources or information to reach specific lecturer. In average, individual lecturer could reach critical resources or information within 28.60 paths and 32.09 paths in table 2 and 3 respectively. This is 81.71 (95.79) percent faster compare to maximum paths exists, 35 (33.05) paths in table 2 (table 3). The larger the number of paths indicate the information or resources could reach a lecturer efficiently.

4.2   Bivariate Analysis

Table 3: Correlation (CD-PTSB)

	Degree	Eigenvector	Betweenness	Closeness
Degree	1.000			
Eigenvector	*0.329***	1.000		
Betweenness	*0.697****	*0.663****	1.000	
Closeness	**0.300***	*0.969****	*0.668****	1.000

*, ** and *** indicate significance at 0.1, 0.05 and 0.01 level.

From Table 3, this study concern with the higher correlation value which is the correlation between Closeness and Eigenvector, 0.969. However, the VIF value below five indicate that the overall research model is acceptable. Overall, the correlation shows positive relationship between all pair of variables indicate that the increment of network centrality would increase the other correlated network centrality.

Table 4: Correlation (CD-PTSS)

	Degree	Eigenvector	Betweenness	Closeness
Degree	1.000			
Eigenvector	*0.996***	1.000		
Betweenness	*0.439***	*0.438***	1.000	
Closeness	*0.727***	*0.682***	*0.298*	1.000

*, ** and *** indicate significance at 0.1, 0.05 and 0.01 level.

Similarly, in table 4, there is higher correlation between Degree and Eigenvector, 0.996. Since, the VIF value below five, thus this research model is also acceptable for further analysis. Similarly, with table 3, all correlation shows positive and significant relationships between all pair of variables. The greater the size of network, the greater the other network centrality value.

4.3   Multivariate Analysis

Table 4 shows the main regression model, this model regress three main variable namely Degree, Betweenness and Closeness with Eigenvector as an attempt to examine whether any network centrality measures would significantly affect the reputation or elite status of an lecturer. Model 1 is for CD-PTSB network centrality, whereas model 2 is for CD-PTSS. From Model 1, it is documented that Closeness is the only measure, which positively and significantly associated with Eigenvector. This indicate that the ability of lecturer to position themselves efficiently in accessing the critical resources and information would enhance their reputation among others. Eventually, it would also enhance their relationship with other well-connected lecturer. The results shows that lecturer with have access to critical resources and information is valuable person in the network thus any relation assume to enhance their elite status prestige.

Table 4: Main Regression

Variable	Model 1 (CD-PTSB)	Model 2 (CD-PTSS)
C	-0.486	0.032
	*-14.498***	*4.390***
Degree	0.167	0.003
	0.742	*66.057***
Betweenness	0.241	0.000
	0.888	-0.116
Closeness	1.335	-0.002
	*21.478***	*-5.937***
Adjusted R^2	0.967	0.996
F-statistic	*403.251***	*2541.627***
Number of Directors	42	35

*,** and *** indicate significance at 0.1, 005 and 0.01 level.

Contrary, model 2 shows that only Degree and Closeness both significantly related to Eigenvector. However, Closeness documented negative and significant relationship with Eigenvector. The result indicate that lecturers in CD-PTSS tend to increase their direct connections to position themselves in the elite status group. Nevertheless, the positive effects of elite status weakens when these lecturers become closer among themselves. Closeness that should provide critical resources and information to the well-position lecturers in an efficient manner seems demote the elite status as well. Thus, these critical resources and information have less value as compare to elite status.

5. DISCUSSION

From the small population case study, this paper provides an insight into a complex network structure among lecturer. Both lecturer's networks in CD-PTSB and CD-PTSS clearly shows unalike structural network patterns. Grosser, Lopez-Kidwell, and Labianca (2010) study provide an evidence that the greater closer value might have negative effects. The negative effects are the sharing of worthless resources and information such as grapevine. Yet, this study need to further analyse the negative effects.

Both department with relatively similar size but very distinguish network patterns provide evidence that lecturer's network is designed based on specified characteristics. These characteristics are determine by the HODs as the key person, which will appoint each lecturer with specified additional formal tasks. Obviously, the characteristics are not equal in both department. The HODs have the prerogative to determine the additional tasks, size of team for each tasks, lecturer's profiles thus cause the difference of the lecturer's networks. While lecturers in CD-PTSB creates elite status by becoming closer to among them, lecturers in CD-PTSS decide the opposite.

Regardless the SNA may provide a sign of the any investment opportunities accessible, whether the relationship being fully utilised yet to be confirmed. For instance, in CD-PTSB, this study disclose that lecturer's closeness centrality indicate the influenced- position of the lecturer in the entire set of social network. The lecturer perceived to be strategically position if the lecturer path to access critical resources and information is higher than other lecturer. This means that the lecturer is the key lecturer where every other would like to connect with for strategic reasons. While the lecturer does have connections, it is uncertain whether the connections fully exploited or it may imply a negative effects as resemble by CD-PTSS lecturer's networks.

Furthermore, the lecturers' network could not be compromised, as lecturer are relatively likely to be inspired or influenced by other lecturer, whether during social or formal events. The more social connections form incorporated, the complex the network will be hence further analysis could be complicated (Khanna & Yafeh, 2007). Westphal and Stern (Westphal & Stern, 2006), study point out that organisation tend to nominate and appoint lecturer with high social or formal credentials. There is shortcoming of the organisation approach. Therefore, individual lacks of these credentials rely on their social connections as alternative manner to access the elite group status. This group of individual would commonly have less formal job appointment as compare to credentials lecturer.

The result also suggested there are opportunities for lecturer with lesser formal job appointment, provided they able to exploit their own connections. The lecturer ability to fully utilise their own connection could increase the chances to be appointed at other job appointment. The multiple appointment could be seen as a proxy for lecturer's reputation. These lecturer can be seen to have certain advantages over other such as resource exchange, control and influence over

organisation's management (Renneboog & Zhao, 2011). Therefore, organisation tend to appoint lecturer with well-connection to other position (Barnea & Guedj, 2007).

6. CONCLUSION

This study has explored first, lecturer's network measures for access to more opportunities, alternative or exchange resources as compare to others. Second, whether there are any lecturers strategically well-positioned in the network for gain greater level of influential among other lecturers. Finally, whether there are any lecturers sufficiently acquire the power and prestige image compare to other lecturers. The same motive may applies at organisation level.

Measure of degree, betweenness and eigenvector centrality used to examine the lecturer's network for the capability of power exertion. The eigenvector centrality value revealed that were a group of lecturers acquiring access to the network flow through their indirect connections without the need to maintain directly the indirect connections.

The SNA used in this study only deliberate on one social connections namely lecturers' formal appointment as committee member. Further analyses on other form of social connections such as co-membership in any social organisations, alumni or other professional bodies' memberships are suggested. These forms of social connections also connect the lecturer, even to the unconnected lecturer from the formal networks.

The results of analysis provide evidence that relatively moderate numbers of lecturers in CD-PTSB have the opportunity to employ certain amount of power and influence. Additional tests are suggested to examine whether these group of lecturers in fact do apply the exercises. In addition, this study identified a relatively important attribute that the lecturers who are well-connected and well-positioned to exert power generally noticeable to other in the same network. The lecturer who has multiple job descriptions has social group in the same department, may be one of the possible justifications. Consequently, there is likeliness that the lecturers with multiple job descriptions are also having multiple connections with other lecturers in other committee.

This study also provide reasonable justification relates to the need of restriction number job descriptions enforce for lecturers appointed by Jabatan Pendidikan Politeknik and Kolej Komuniti (JPPKK), Malaysia. In average, 4 and 7 additional tasks appointment to each lecturer in CD-PTSB and CD-PTSS respectively. The imbalance additional task appointment could create a 'busy lecturer' syndrome where their focus to each task might be disoriented. Disoriented focus due to many additional tasks might lead to performance downgrade either in term of lecturer's or student's performance.

These common practice emphasised the importance of lecturers to perform their duties and obligation for the interest of institution's stakeholder especially the for student's academic performance. The lecturers are believed to fulfil effectively their duties and obligations by providing better teaching practice to their students as well as good governance of the institution. Therefore, JPPKK as well as key person within the institutions such as top management and HODs really need to design and implement the institution strategic job scope appropriately. They need to emphasise on the lecturer's selection for each task in order to fully utilise their potential and at the same time hinder the negative effects of elite group creation especially related to grapevine.

For future research, it is an essential to explore whether there are possibilities of exercise of power exertion by the lecturers in fact actually take place. In addition, the social network in form of informal relationships should be further explored including the impact of the informal connections as part of contribution to social network studies. Additional study could also be conducted cross department within the same TVET institutions. Additional value to the lecturer's network could be captured by including TVET institutions as a lecturer may hold multiple job descriptions at different departments.

This study also subject to a number of limitations. First, it is limited to Malaysia TVET institutions for one semester period. While the sample encapsulates the minority of Malaysian TVET lecturer, other TVET institutions were excluded. Second, the study has not explore the role the lecturers assign either executive or non-executive, and related committee member within the TVET institutions that also may influence the lecturer connections.

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