Effective management of teamwork and factors affecting teamwork effectiveness

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Abstract: *The main objective of the study is to measure the effects of team size, team diversity, and team building on teamwork effectiveness. The quantitative research method is employed to adjust variables and build research instruments. A questionnaire was created to collect data from 102 valid respondents from EnglishIQ. The results of the study have revealed that team diversity has strong impacts on teamwork effectiveness while team building activities have moderate impacts. The factor that have the least effect is team size. From there, suggestions and solutions are recommended to help EnglishIQ further improve teamwork effectiveness.*

Key words: *Team effectiveness, team size, team diversity, and team building*

Introduction

EnglishIQ is an English club located in Hanoi, and it was established in order to deliver English grammar education services to children. Currently, EnglishIQ has 103 collaborators and they are grouped into different teams such as administration team, teaching team, pantry team, etc.

The paper contributes to the literature on team work in the field of management, providing recommendations for EnglishIQ in particular and other educational institutions in general to improve performance through team work. To achieve those objectives, the paper answer two research questions:

What is current situation of team size, team diversity, and team building at EnglishIQ?

What are the impacts of team size, team diversity, and team building on teamwork effectiveness at EnglishIQ?

Literature reviews

Teamwork and teamwork effectiveness

The concept of teamwork has been explored by different researchers over time. For instance, Sanyal & Hisam (2018) viewed teamwork as a strong power of a group of individual members and it helps them to make decision in more efficient way. Alghamdi & Bach (2018) considered teamwork as a cooperative process of ordinary people in order to achieve extraordinary results. According to Salas et al. (2014), teamwork has three components, namely more than one individual, interdependencies, and shared goals.

The study focuses on teamwork effectiveness

as the key researched area because of the higher teamwork effectiveness, the higher achievement in innovativeness, performance, and sustainability development (Bell et al., 2018; Bianco & Venezia, 2019). The main reason of the organizations focusing on teamwork effectiveness is that it promotes employee performance since the higher teamwork effectiveness, the greater chance of team members to achieve goals and objectives (Gull et al., 2012). Gautam et al. (2018) provided an empirical evidence about the relationship between teamwork effectiveness and employee performance. They collected the data among 100 employees who were working in a team. They identified that teamwork effectiveness explained for 63% of variance of employee performance.

Factors affecting teamwork effectiveness

Team size

The effect of team size on teamwork effectiveness has been explored by different researchers. The findings from previous empirical evidences were contradicted. Some researchers indicated that increasing team size resulted in lower team performance and team productivity due to the fact that a team member might utilize the effort from other team members (Steiner, 1972; Holmstrom, 1982; Malone & Crowston, 1994). Other researchers like Mao et al. (2016) found that the effectiveness in collaboration between team members was increased along with team size. Before that, Campion et al. (1993) also concluded that there was no limit of performance improvement when team size increased.

Hoegl (2005) highlighted that the smaller team size, the better teamwork effectiveness and this researcher proposed several ways to reduce the team size such as creating multiteam project.
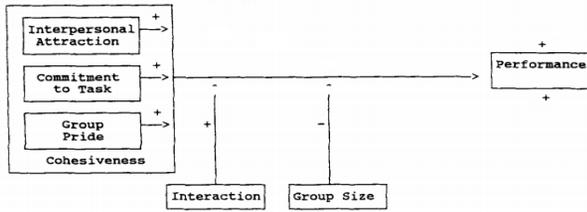
In the book by Mullen and Copper (1994), group performance is promoted by reducing group size and increasing interaction among members.

Accordingly, the following hypothesis will be tested:

Diversity represents the various differences among individuals in the organizations (Shaban, 2016). Empirical evidence provided by Pieterse et al. (2012) found that a team with members from diversified cultures was likely to achieve a greater team performance. Other empirical evidence was submitted by Todaro & Stirpe (2017) also confirmed the role of team diversity as a moderator between teamwork and organizational performance. Khawam et al. (2017) surveyed 225 employees in the United States and they confirmed that teamwork effectiveness was promoted in the workplace environment where the employees have cultural diversity. Williams and O'Reilly (1998) pointed out that age diversity brings both positive and negative effect on group performance. In a group with age diversity, members tend to divide according to age similarities, which creates inconsistencies and negatively affects group cohesion.

Accordingly, the following hypothesis will be tested:

H_2: Team diversity significantly affects teamwork effectiveness.

Team building activities

Team building is determined as the initiatives to enable the achievements of common goals through challenges identification, communication of task and goals, etc. (Fapohunda, 2013). Team building is important element to construct team effectiveness. Saraswat & Khandelwal (2015) provided an empirical evidence of the impact of team building on teamwork effectiveness. They identified that team building activities succeeded in improving teamwork effectiveness. Other empirical evidences provided by Mohanty & Mohanty (2018) and they affirmed that the effect of team building on teamwork effectiveness was explained by the fact that team building significantly improved the attitude and the knowledge of team members. Accordingly, the following hypothesis will be tested:

H_3: Team building affects significantly teamwork effectiveness.

Methodology

In this research, quantitative research strategy is employed and a questionnaire with two sections is designed to collect data. The first section targets to collect demographic variables of the respondents like their gender, age, status, and time of working for EnglishIQ. The second section targets collecting the respondents' assessment of team size, team diversity, team building, and their viewpoint of teamwork effectiveness. In this section, each factor is measured by multiple items and each item is evaluated by a 5-point Likert scale.

FINDINGS

Reliability test

Reliability test is conducted for all factors and their belonged items. Cronbach's alpha of all variable scales are higher than 0.7, indicating acceptable internal consistency.

Exploratory factor analysis

After reliability test is conducted, the author continues to adopt the validity analysis which is done through the Exploratory Factor Analysis (EFA). It is denoted that two EFA schemes are run with one is for four items of teamwork effectiveness and other is for all other items of team size, team diversity, and team building.

Table 4: First EFA scheme

Kaiser-Meyer-Olkin = 0.703; Bartlett's test = 233.699; P-value = 0.000			
Items	Initial eigenvalues	% of Variance	Factor loadings
TE4	2.868	71.695%	0.954
TE2			0.819
TE1			0.803
TE3			0.802

Table above shows that both KMP and the Bartlett's test satisfy the requirements of EFA as minimum KMO is 0.5 and p-value of the Bartlett's test must be smaller than 0.05. Only one component is generated with "Initial Eigenvalue" of 2.868 and this component explains for more than 71% of total variance. All items of teamwork effectiveness also have "factor loadings" higher than 0.5.

Table 5: Second EFA scheme

Kaiser-Meyer-Olkin = 0.642; Bartlett's test = 391.77; P-value = 0.000			
Items	Initial eigenvalues	% of Variance	Factor loadings
TS3	2.530	28.112%	0.936
TS2			0.863
TS1			0.847
TB1	2.292	25.472%	0.879
TB2			0.849
TB3			0.830
TD3	1.960	21.779%	0.867
TD2			0.862
TD1			0.786

The second EFA scheme also qualifies the requirements related the KMO and the Bartlett's test. KMO value is 0.642 which is greater than 0.5 and p-value of the Bartlett's test is smaller than 0.05. After the second EFA scheme, it is confirmed that 9 items of team size, team diversity, and team building are reduced to 3 components.

Multiple linear regression

Table 6: Correlation matrix

	1	2	3	4
(1) Teamwork effectiveness	1			
(2) Team size	0.224 (0.023)	1		
(3) Team diversity	0.606 (0.000)	0.113 (0.257)	1	
(4) Team building	0.407 (0.000)	0.028 (0.783)	0.015 (0.881)	1

Table above shows that teamwork effectiveness has significant and positive correlation with team size, team diversity, and team building. The highest correlation is between teamwork effectiveness and team diversity (Pearson's coefficient = 0.606) while the least correlation is between teamwork effectiveness and team size (Pearson's coefficient = 0.224). The correlation between team diversity and teamwork effectiveness is moderate at 0.407 as Pearson's coefficient. Between team size, team diversity, and team building, the correlations among these items are small and also not statistically significant.

Then, multiple linear regression result is achieved as below:

Table 7: Multiple linear regression

Adjusted R-square = 0.534; F-test = 39.535; P-value = 0.000				
Variables	Unstandardized coefficient	Standardized coefficient	T-test	P-value
Constant	1.022		4.456	0.000
Team size	0.075	0.147	2.155	0.034
Team diversity	0.324	0.584	8.534	0.000
Team building	0.234	0.394	5.802	0.000

Table above shows that 53.4% of total variance of teamwork effectiveness is statistically and significantly explained by team size, team diversity, and team building (F-test statistics = 39.535 and p-value < 0.05).

Discussion and conclusions

The main research objective is to measure the effects of team size, team diversity, and team building on teamwork effectiveness at EnglishIQ. Using mean values, the author is able to answer the research questions. In fact, the respondents agreed that adequate number of members ensured the achievement of goals in both time and quality manner. It means each team at EnglishIQ must have adequate team size. In addition, the respondents also agreed that higher team diversity resulted better outcomes as well as it reduced the stress to team member. The respondents also agreed that team building was important activity at EnglishIQ since it brought a chance of resolving conflicts as well as helping team members to understand each other.

Limitations

Two limitations are identified in this study. First limitation is recognized from the choice of quantitative method. Although this method brings less biased findings, it does not bring in-depth information when comparing to qualitative method with in-depth interviews. Second limitation is identified through the choice of questionnaire and the data quality is heavily depended on the respondents' attitude. If the respondents do not really understand the questionnaire's content and purpose, they may provide incorrect answers and it impacts on the quality of the data.

References

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