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The mediating effects of job satisfaction and organisational justice on the relationship between principals' management style and teachers' organisational citizenship behaviour: Turkey sample

Müslim Alanoğlu
Turkish Embassy in Podgorica, Montenegro
Songul Karabatak
Firat University, Turkey

Abstract

In this study, firstly the effects of cooperative and authoritarian management styles on teachers' organisational justice, job satisfaction, and OCBs were tested. Then, the mediating effects of job satisfaction and organisational justice on the relationship between principals' management style and teachers' OCBs were examined. In accordance with this aim, the prediction research design was used. The sample of the study consisted of 312 teachers. The predictive and mediating relationships between variables were examined by the structural equation model. According to the results obtained at the end of the study, both organisational justice perception and job satisfaction have partial mediating effect on the effect of cooperative management style on organisational citizenship behaviour, but neither organisational justice perception nor job satisfaction have any mediating effect on the effect of authoritarian management style on organisational citizenship behaviour.

Keywords: principals' management style, cooperative management, authoritarian management, organizational justice perception, job satisfaction, organisational citizenship behaviour



The existence, success, and continuity of an organisation depends on its management. The greatest share and responsibility in the successful management of the organisation lies in the managers and their management styles (Argon & Dilekci, 2014). Therefore, the management style is comprised of: (a) the general quality of the management of an organisation and (b) the behaviour managers exhibit in performing their routine work. This constitutes the interaction of a manager's behaviours that the organisation exhibits to realise its goals and the relationship it has established with employees to realise the objectives of the organisation.

Each manager has a 'management style' (Ustuner, 2016), one that differs from manager to manager (Argon & Dilekci, 2014). The management style implemented by the manager has significant effects on employees; as such, it is an important component of the effectiveness of this organisation (Grasso, 1994; Ustuner, 2016). A manager's style also affects employees' job satisfaction (Basaran & Guclu, 2018; Grasso, 1994; Kim, 2002; Lucas, 1991; Malka, 1989; Nakata & Saylor, 1994), performance and belonging (Argon & Dilekci, 2014), organisational efficiency (Grasso, 1994; Miller, 1981), motivation (Argon & Dilekci, 2014; Ozgun, 2008; Sari et al., 2018), and organisational commitment (Zeffane, 1994), productivity (Bourantas & Papalexandris, 1992; Odom et al., 1990; Zeffane, 1994, 1995) positively or negatively. An unwanted and improper management practice may cause the organisation to lose its credibility (Argon & Dilekci, 2014) or decrease its effectiveness and performance (Uche & Timinepere, 2012; Zakaria & Hashim, 2018). Therefore, managers should exhibit behaviours that take into account the motivation and productivity of the employees (Dick & Metcalfe, 2001).

Schools are some of the most important organisations in a society; by and large, they are managed by school principals. School principals, like other organisational managers, follow and exhibit a range of managerial behaviours. School principals' management styles were investigated by many researchers and classified differently. However, cooperative and authoritarian styles were included in the classification of almost all management styles. Due to the difficulty of examining all management styles, these two management styles, across all classifications are discussed in this study.

A school principal who exhibits the cooperative management style (CMS) provides the opportunity for teachers to participate in various pedagogical practices and contribute to the educational process. However, in the authoritarian management style (AMS), this is quite the opposite. In this style, employees' opinions are ignored, and they are not aware of the decision process. This management style, in which the headmaster makes decisions alone, prevents a democratic environment in the school and teachers are only practitioners. This style also exerts a negative impact on the working climate of the school (Celep, 1990). Therefore, it can be said that the

management style, which is a reflection of the school principal's behaviours, will significantly affect the attitudes and perceptions of teachers about the school.

School principal management style and organisational justice perception of teachers

A positive perception towards the organisation can turn into performance that contributes to the organisation; one of the perceptions related to the school principal's management style is the teachers' organisational justice perception. The perception of organisational justice is related to how decisions are made, how they are explained to the employees, how they are performed, and how they are perceived by the employees (Icerli, 2010); further, it differs according to individuals and society (Greenberg, 1990). The fact that the perception of organisational justice is influenced by all processes and practices in the organisation (Alanoglu & Demirtas, 2019) shows that managerial behaviours are very important in the context of organisational justice. The perception of organisational justice is a thought that occurs in the minds of individuals as a result of the reflection of process and practices. It is a very important concept for schools because it is individual-based, with the human factor playing a major role in all stages of the input-output process (Hoy & Tarter, 2004). Just behaviour also causes employees to exhibit organisational citizenship behaviours (Moorman, 1991). Therefore, understanding organisational justice is extremely important for educational organisations (Ismail, 2014).

School principal management style and job satisfaction of teachers

Another concept related to management style is the job satisfaction of teachers. Job satisfaction is defined as pleasure and happiness as a result of product satisfaction and time satisfaction with colleagues, as well as financial income from work (Eren, 2015). Job satisfaction can lead to an increase in productivity in the organisational context while producing the desired results for the individual (Yetim, 1997). Job satisfaction is closely related to the attitudes and behaviours of the manager (Bilir, 2007) and the support of the manager affects the efficiency and job satisfaction of the teacher (Ingersoll, 2001; Littrell et al., 1994). In addition, communication between school principals and teachers is an important factor affecting teachers' job satisfaction (Bursalioglu, 2012). It can be said that the school principal's management style is the determinant of his/her communication with teachers and, as such, indirectly affects job satisfaction.

The factor that makes job satisfaction important for educational organisations is its effect on the outcomes of the school. Studies (Michaelowa, 2002; Tek, 2014) suggested that student achievement was positively affected by the job satisfaction of teachers. Job satisfaction is also associated with teachers' organisational citizenship behaviour (Somech & Drach-Zahavy, 2000; Yilmaz, 2012). In particular, the relationship between teacher performance and student achievement indicates that teacher satisfaction has the capacity to fully influence the quality of education.

School principal management style and organisational citizenship behaviour of teachers

Organisational citizenship behaviours (OCBs) that Katz put forward as extra-role behaviours were first used by Bateman and Organ (1983) as a concept. Organ (1988) defined OCBs as voluntary behaviours that are not defined by the formal reward system and which are exhibited with the awareness that they contribute to the organisation's effectiveness. Somech and Drach-Zahavy (2000) stated that OCBs in the context of schools are aimed at improving the quality of teaching directly and desirably. For a behaviour to be evaluated as an OCB, it should be voluntarily exhibited and should contribute to the development of the school and the student in any situation (Alanoglu, 2014). When considered in this context, it can be said that teachers' OCBs will positively affect students and increase their academic achievement. In the study conducted by Karabatak et al. (2018), it was concluded that OCBs were related to school effectiveness.

Lee et al. (2013) and DiPaola and Hoy (2005) suggested that leadership behaviours significantly affect OCBs. Organ and Ryan (1995) stated that job satisfaction and perception of organisational justice are important premises of OCBs. To increase the level of OCBs, it is important to increase the employees' perception of justice and job satisfaction levels (Alizadeh et al., 2012; Konovsky & Organ, 1996; Lee et al., 2013).

The ultimate goal of schools is to increase the quality of students' education. Positive attitudes towards the school and the principal may evoke teachers' willingness to contribute to improving the efficacy of education. Teachers are therefore likely to make this contribution through OCBs. Alanoglu and Demirtas (2016) concluded that OCBs increase the effectiveness level of the school. In the study, teachers stated that they aimed to increase student success by making their schools more effective environments through OCBs. Martinez (2012) stated that teachers who exhibit OCBs are more effective in creating an effective teaching environment and making a difference in students' lives.

School principals in Turkey

In Turkey, the National Education System (NES), determined by the National Education Basic Act, consists of two main parts: 'formal education' and 'nonformal education'. Formal education includes pre-primary, primary school, secondary school, and higher education institutions. Nonformal education covers all educational activities organised alongside or outside formal education (NES, 2019).

Pre-primary, primary, and secondary schools are managed by school principals. The principals of all types of schools have almost the same duties and responsibilities. In general, a principal is responsible for school management and proper execution of the education and training activities in accordance with the stated objectives. The principal is asked to act as an example to his/her colleagues and students and to cooperate with the school staff. According to the Regulation on Secondary Education Institutions of the Ministry of National Education (NES, 1973), school principals manage teachers, students, parents, and the environment in education and training. The principals carry out activities to increase efficiency, create team spirit, integrate the school with the surrounding environment, improve the school's corporate culture, and keep the school ready for service. The principal constantly renews and improves the school in line with the principles of scientific and technological development, efficiency and transparency; he/she uses the time and all facilities to achieve the goals of the school. The school management personnel also perform some other duties such as research and planning, organisation, guidance, monitoring, supervision and evaluation, and communication and governance.

School principalship in Turkey has not yet become a professional job. There is no special programme for the training of school administrators. Different trends have emerged in the historical process of recruitment and selection, but these tendencies have not been consistent or continuous. For this reason, school administrators try to learn the competencies they need to possess or exhibit, either by trial and error (Kilinc & Cansoy, 2017) or by their own efforts (Agaoglu et al., 2012; Turhan & Karabatak, 2015).

When examining the studies with different samples in Turkey, in Alanoglu's (2019) research, the relationship between the perceived management styles of school principals and teachers' organisational justice perception and job satisfaction was examined. It was observed that the cooperative management style showed a positive and high level of organisational justice perception and job satisfaction, while the authoritarian management style had negative and mediating effect on organisational justice perception; however, it did not have a significant effect on job satisfaction. Basaran and Guclu (2018) found that there was a positive and strong relationship between the collaborative management style and job satisfaction, and there was no significant relationship between the authoritarian management style and job

satisfaction. In the study conducted by Batmaz (2012), it was concluded that the democratic management style positively affected job satisfaction and the autocratic management style negatively and significantly affected job satisfaction.

Purpose of the study

Cooperative and democratic management styles can lead to an increase in teachers' job satisfaction and perceptions of organisational justice. Teachers who have high job satisfaction and organisational justice perception due to the school principals' management style may also exhibit more OCBs to improve the quality of school and education. This study attempts to test these relations, which are thought to exist theoretically, and to explain the mediating effects of the level of organisational justice and job satisfaction on the relationship between the school principal's leadership styles (cooperative or authoritative) on teachers' OCBs. In addition, the study is expected to enable school principals to understand the effects of management styles on teachers' perceptions and attitudes and, in so doing, help them develop different perspectives on their own school management styles. To achieve the stated objectives, based on the relationships between management styles and organisational justice, job satisfaction and OCBs, answers to the following questions were sought:

1. *Does a cooperative management style have an effect on teachers' organisational justice perception, job satisfaction, and/or OCBs?*
2. *Does an authoritarian management style have an effect on teachers' organisational justice perception, job satisfaction, and/or OCBs?*
3. *Is there a mediating effect of organisational justice perception and/or job satisfaction on the effect of cooperative management style on teachers' OCBs?*
4. *Is there a mediating effect of organisational justice perception and job satisfaction on the effect of authoritarian management style on teachers' OCBs?*

Method

Research model

In this study, structural equation modeling (SEM), which is accepted as a research method in its own right (Simsek, 2007), was used. Structural equation modeling is a comprehensive statistical technique used to test causal relationships

between observed and latent variables (Celik & Yilmaz, 2016). The purpose of the structural equation analysis was to determine whether these predetermined relationship patterns were validated by the data (Simsek, 2007). Structural equation modeling can also be defined as a set of statistical methods that set a hypothesis test approach to the multivariate analysis of structural theory on a subject (Celik & Yilmaz, 2016). Therefore, SEM studies are generally used to test highly specific hypotheses (Byrne, 1998).

Four latent variables were used in the research model: the *principal management styles* (cooperative and authoritarian), *organisational justice*, *job satisfaction* and *OCBs*. The principal management styles are exogenous variables and organisational justice, job satisfaction, and OCBs are endogenous variables. The research model is shown in Figure 1.

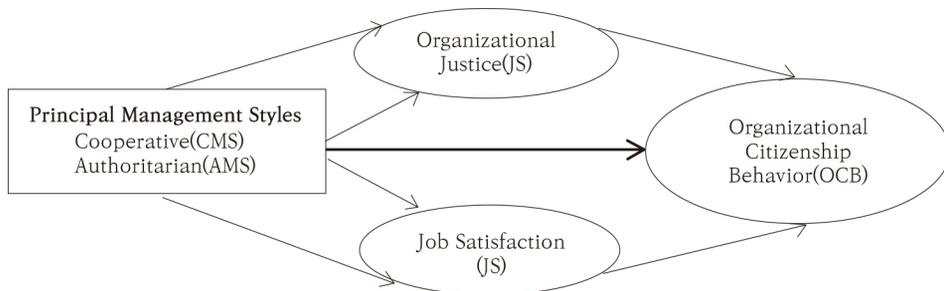


Figure 1. Research model

Population and sample

The study was conducted in Elazig, one of the eastern provinces in Turkey. In this study, the population of the study consisted of 1602 teachers working in 55 general secondary schools during the 2017–2018 academic year. A simple random-sampling method was used to get the opinions of the teachers. The main feature of this method was that the sample had a high probability of representing the universe (Buyukozturk et al., 2011). In this sampling method, all units in the universe have an equal and independent chance to be selected for the sample. Within the scope of the research, the questionnaires were given to the teachers by the researchers. To have a sufficient sample size, a total of about 500 questionnaires were sent to all general secondary schools in Elazig. However, only 321 questionnaires were returned. Nine of them were not evaluated because they were randomly filled. Thus, the sample size was calculated as 312, available and valid questionnaire, for a 95% confidence level and 5% acceptable error level. In addition,

the critical sample size (Critical N-CN) should be considered to determine the minimum number of samples required for a SEM to fit well (Hu & Bentler, 1995). In this study, this value was calculated as 199.91; thus, it can be said that the sample size used in the study is sufficient.

In the current study, 60% of 312 teachers who constituted the sample were female and 40% of them were males; 86.5% of them had a bachelor's degree and 13.5% of them had a graduate degree; 57.4% of them had graduated from schools of education and 42.6% of them had graduated from other higher educational institutions.

Measures

Perceived-School Principal Management Style Scale (P-SPMS): The management styles exhibited by the school principals were evaluated by the P-SPMS. This instrument consists of 25 items; it is scored along four dimensions: cooperative management style, authoritarian management style, indifferent management style, and resistant management style. The scale was developed by Ustuner (2016). Ustuner (2016) calculated the Kaiser-Meyer-Olkin (KMO) value of the scale as .945 and Bartlett sphericity test value as 3922.758 ($df = 300, p = .000$). In the current study, dimensions of cooperative and authoritarian management style of scale were used. The internal consistency coefficient was calculated as .93 for cooperative management style and .90 for authoritarian management style (cf. Ustuner, 2016). In this study, the internal consistency coefficient of the cooperative management style dimension was calculated as .96; the internal consistency coefficient of the authoritarian management style dimension was calculated as .87.

Organizational Justice Scale: This scale was developed by Hoy and Tarter (2004). The Likert-type 10-item scale was adapted to Turkish by Tasdan and Yilmaz (2008); its internal consistency coefficient was calculated as .92. In the current study, the internal consistency coefficient of the scale was calculated as .91.

Job Satisfaction Scale: This Likert-type, five-item scale was developed by Ho and Au (2006); it was adapted to Turkish by Demirtas (2010). The confirmatory factor analysis of the scale ($\chi^2 = 5.25, \chi^2 / df = 2.62, RMSEA = .06$) showed that the model fit was good. In this study, the internal consistency coefficient of the scale was calculated as .71.

Organizational Citizenship Behaviour Scale: This scale, developed by DiPaola and Hoy (2005) consists of one dimension and 12 Likert-type items. The Turkish adaptation was developed by Tasdan and Yilmaz (2008). The internal consistency coefficient of the adapted scale was .89. In this study, internal consistency coefficient was calculated as .88.

Data analysis

The SPSS 22 program was used to check the normality of data, perform descriptive analysis, and calculate the internal consistency coefficients of the scales. Firstly, the data collected were checked for loss and extreme values. Then, to check the normality of the data, the kurtosis and skewness values were controlled. Values between +1 and -1 mean that the data are normally distributed (Buyukozturk, 2012; Cokluk et al., 2016). It was observed that the data used in this study were distributed normally.

LISREL 8.80 was used to perform the measurement analysis of data. Then SEM was introduced. Firstly, the goodness of fit of the model was calculated. How well the predefined models explain the data was determined by fit statistics. There are multiple fit statistics that test the fit of models. These fit statistics test the parameters of the proposed models and the statistics obtained from the sample data. If the model does not fit the data, it is rejected. If the model fits the data, the model has the ability to explain the underlying causal structure of the observed data (Karagoz & Agbektas, 2016; Ozdamar, 2010). Included in these fit indices are the chi-squared test (χ^2), the root mean square error of approximation (RMSEA), the standardised root mean square residual (SRMR), the normed-fit indice (NFI), the incremental fit index (IFI), the non-normed fit index (NNFI), and the comparative fit index (CFI; Hooper et al., 2008).

In the models; χ^2 / df , RMSEA, SRMR, NFI, NNFI, CFI and IFI criteria were taken as reference for determining model fit. The ratio of χ^2 / df value between $2 \leq (\chi^2 / df) \leq 3$ is considered as acceptable fit (Sumer, 2000). A RMSEA value less than .08 indicates good fit, .08 to 1 indicates sufficient fit, above 1 indicates incompatibility (Hayduk, 1987). An SRMR value less than .05 indicated excellent fit; anything up to 1 indicates adequate fit. The values of NFI, NNFI, CFI, and IFI are between 0 and 1, and the approximation of these values to 1 indicates good fit. (Hair et al., 1996).

The goodness of fit of the measurement model was calculated as $\chi^2 / df = 1.96$; CFI = .97; IFI = .97; NFI = .94; NNFI = .97; SRMR = .07; RMSEA = .06. These values indicate that the measurement model has good fit. The measurement model fit values give the best value for good fit to be obtained in the SEM (Simsek, 2007). In the current study, it was seen that the fit values of the structural models established were close to the fit values of the measurement model.

According to Cokluk et al. (2016) in the SEM, the significance of the path coefficients between the independent variables and the dependent variables depends on the t values. The values between 1.96 and 2.56 show significant effect at the .05 level, while t values above 2.56 show a significant effect at .01 level. These values were taken into consideration when interpreting the results obtained in the research.

Finally, organisational justice and job satisfaction variables were added to the model as mediating variables one-by-one; the mediating variable was tested to determine whether the variable is 'complete' or 'partial' mediation according to MacKinnon et al. (2010). In order to determine whether a variable in the SEM has a mediating effect, the variation in the variance described by the argument should be tested by tests such as the Sobel test. In the current study, this test was used to determine the significance of the mediation effect. The Sobel test is a mediation test that helps determine whether the change in the path coefficients between the dependent and independent variables is significant when the mediator variable is included in the model (Sobel, 1982).

Findings

This study aimed to determine the mediating effect of teachers' organisational justice perception and job satisfaction on the effect of cooperative and authoritarian management styles on OCBs of teachers. For this purpose, firstly, the effect of cooperative and authoritarian management styles, which are considered as independent variables, on teachers' organisational justice perception, job satisfaction and OCBs were tested; thereby, Model 1 in Figure 2 was formed.

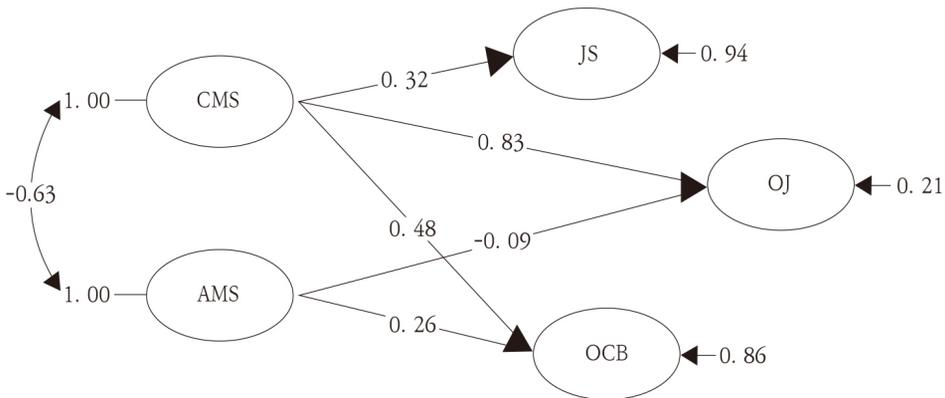


Figure 2. The effects of the management styles on teachers' organizational justice perception, job satisfaction, and OCB (Model 1)

When the values of Model 1 shown in Figure 2 were checked, it was determined that the goodness-of-fit indices of the model were good ($X^2 / df = 2.07$; CFI = .97; IFI = .97; NFI = .94; NNFI = .97; SRMR = .07; RMSEA = .06); hence, the model fit was good. In Model 1, it was observed that cooperative management style affected teachers' job satisfaction ($\beta = .32$; $p < .01$), organisational justice perception ($\beta = .83$; $p < .01$); further, OCBs ($\beta = .48$; $p < .01$) was positively and significantly. It was also revealed that while authoritarian management style affected organisational justice perception negatively and significantly ($\beta = -.09$; $p < .05$) and affected OCBs positively and significantly ($\beta = .26$; $p < .01$), its effect on job satisfaction was not significant and therefore not shown in Figure 2.

Organisational justice perception and job satisfaction, the dependent variables in the basic model, were taken as independent variables in Model 2 and their effects on OCBs were examined. Model 2 is shown in Figure 3.

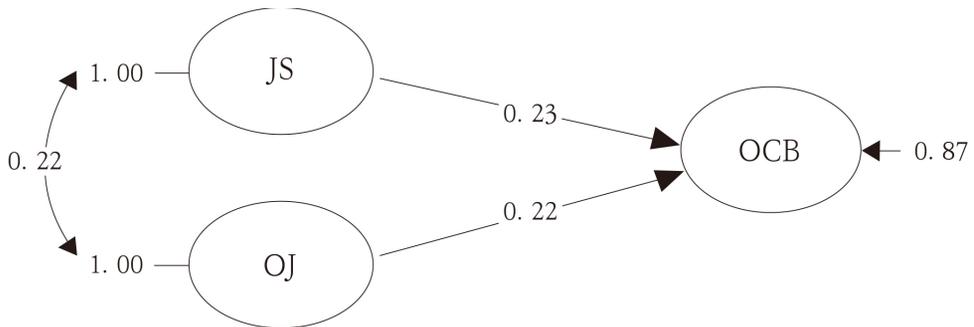


Figure 3. The effects of job satisfaction and organizational justice perception on OCB (Model 2)

When the values of Model 2 in Figure 3 were checked, it was found that the model fit ($X^2 / df = 2.27$; CFI = .95; IFI = .95; NFI = .92; NNFI = .95; SRMR = .08; RMSEA = .06) was acceptable. In addition, it was observed that teachers' job satisfaction ($\beta = .23$; $p < .01$) and organisational justice perception ($\beta = .22$; $p < .01$) had positive and significant effects on OCBs.

Model 3 was generated to determine whether the independent variables had an effect on the dependent variables. In the model, the organisational justice perception variable was taken as the mediating variable on the effect of cooperative and authoritarian management style on OCBs. Model 3 is shown in Figure 4.

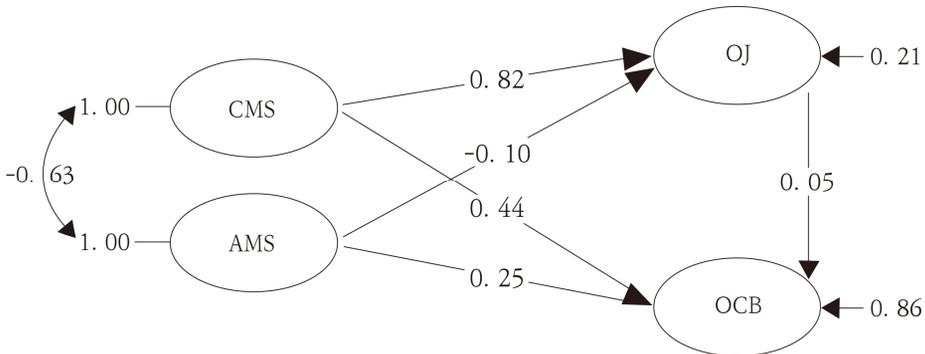


Figure 4. Mediating effect of organizational justice perception on the effect of cooperative and authoritarian management styles on OCB (Model 3)

In Figure 4, the goodness of fit indices ($\chi^2 / df = 2.08$; CFI = .97; IFI = .97; NFI = .94; NNFI = .97; SRMR = .07; RMSEA = .06) showed that the model fit was good. Model 3 findings related to the direct, indirect, and total effect coefficients of dependent and independent variables of the model are presented in Table 1.

Table 1. Structural equations, error variance, direct, indirect, and total effect coefficients

	CMS	AMS	OJ	CMS	AMS	CMS	AMS
	Direct	Direct	Direct	Indirect	Indirect	Total	Total
	Effect	Effect	Effect	Effect	Effect	Effect	Effect
OCB	0.44	0.26	0.05	0.04	0.00	0.48	0.26
Structural Equations			Error Variance	R^2			
$OCB = .44 * CMS + .26 * AMS + .22 * OJ$			.85	.15			
$OJ = .82 * CMS - .10 * AMS$			.20	.80			

When the organisational justice perception variable was taken as a mediating variable on the effect of cooperative and authoritarian management style on OCBs, it was observed that the effect of cooperative management style on OCBs decreases ($\beta = .44$; $p < .01$). This decrease was found to be significant on the Sobel test ($z = 8.86$; $p = .00$); further, it was determined that organisational justice perception was a partial mediator on the effect of cooperative management style on OCBs. However, the effect of authoritarian management style on OCBs ($\beta = .26$; $p < .01$) did not change. For this reason, it was revealed that organisational justice perception has no mediating effect on the effect of authoritarian management style on OCBs.

To determine the relationship between job satisfaction and the variables in Model 3, a job satisfaction variable was added to the model. Later, the effects of cooperative management style (CMS→JS) and the effects of job satisfaction on OCBs (JS→OCB) were tested. Model 4 is shown in Figure 5.

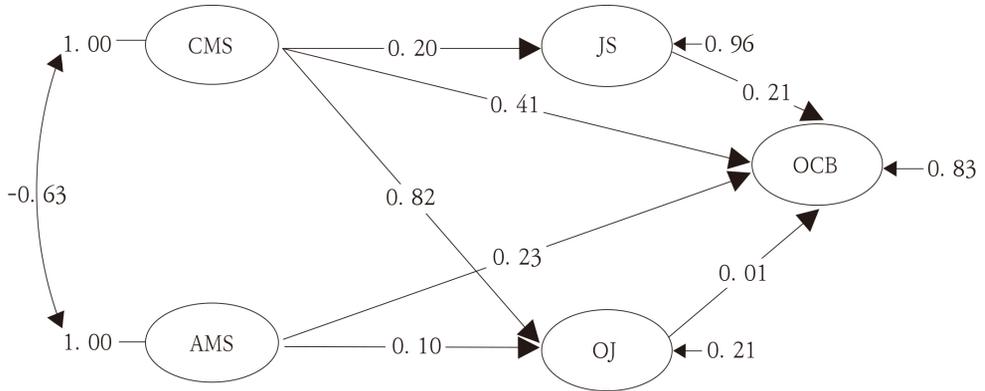


Figure 5. Mediating effect of organizational justice perception and job satisfaction on the effect of cooperative management style on OCB (Model 4)

Figure 5 showed that the goodness of fit ($\chi^2 / df = 2.07$; CFI = .97; IFI = .97; NFI = .94; NNFI = .97; SRMR = .07; RMSEA = .06) for Model 4 was good. Model 4 findings related to the direct, indirect, and total effect coefficients of dependent and independent variables of the model are presented in Table 2.

Table 2. Structural equations, error variance, direct, indirect, and total effect coefficients

	CMS Direct Effect	AMS Direct Effect	OJ Direct Effect	JS Direct Effect	CMS Indirect Effect	AMS Indirect Effect	CMS Total Effect	AMS Total Effect
OCB	0.41	0.22	0.01	0.20	0.05	0.00	0.46	0.22
Structural Equations					Error Variance	R^2		
$JS = 0.20 * CMS$					.97	.04		
$OJ = .82 * CMS - .10 * AMS$					.22	.79		
$OCB = .20 * JS + .01 * OJ + .41 * CMS + .22 * AMS$					.80	.17		

In Model 4, the effect of cooperative management style ($\beta = .44$) on OCBs decreased slightly, with the addition of job satisfaction to the model. These values were also positive and significant ($\beta = .41$; $p < .01$). The Sobel test was used to determine whether the decrease in these values was caused by job satisfaction. According to test results, it was observed that the decrease in cooperative management style ($z = 3.70$; $p = .00$) was caused by job satisfaction and that job satisfaction was a partial mediator on the effect of cooperative management style on OCBs.

Results and discussion

The current study examined the effect of cooperative and authoritarian management styles of school principals on teachers' organisational justice, job satisfaction, and OCBs. The study also aimed to provide empirical evidence with respect to the mediating effect of teachers' organisational justice perception and job satisfaction on the effect of cooperative and authoritarian management styles on the OCBs.

According to the results of the current study, the cooperative management style predicts organisational justice, job satisfaction, and OCBs positively and meaningfully. Authoritarian management style negatively predicts organisational justice, positively and significantly predicts OCBs and does not predict job satisfaction. In the literature, it is frequently seen that there is a positive relationship between school principals' cooperative management style (Alanoglu, 2019), diversity management ability (Akman, 2018; Kim & Park, 2016), leadership styles (Lau, 2010; Oguz, 2011a), leader-member exchange (Gurboyoglu, 2009), leader behaviours (Ayik et al., 2014; Caliskan, 2010; Yilmaz & Altinkurt, 2012), and perception of organisational justice. In addition, it was revealed that the school principals' authoritarian management style negatively affects teachers' perception of organisational justice (Alanoglu, 2019). It can be said that it is very important to raise teachers' perceptions of organisational justice by showing cooperative behaviours of school principals, because organisational justice increases willingness to work (Greenberg, 1990; Moorman, 1991). Further, school administrators are the most important factors which affect teachers' perception of organisational justice (Hoy & Tarter, 2004). Therefore, cooperation with teachers should not be ignored in the decision-making processes and practices in the school. It can be said that showing a democratic approach and avoiding an authoritarian management style (which minimises cooperation with the teachers) will make a positive difference in teachers' perceptions of organisational justice.

The results of the studies in the literature showed that school principals' democratic, autocratic (Batmaz, 2012) and cooperative (Alanoglu, 2019; Basaran & Guclu, 2018) management styles, perceived leadership style (Dolan, 2003; Oztabak, 2002), and leadership practices (Egriboyun, 2015; Uludag & Tepe, 2018) are related to job satisfaction. In addition, the results of the studies (Alanoglu, 2019; Basaran & Guclu, 2018) suggest there is no significant relationship between authoritarian management style and job satisfaction. These results can be interpreted as the following: while job satisfaction levels are positively affected when teachers perceive the management style of school principals positively, authoritarian manager behaviours do not have an effect on teacher job satisfaction. It can be thought that teachers' job satisfaction will positively affect the functioning of the school due to factors such as providing student development (Egriboyun, 2015) and being associated with teacher performance (Kyara, 2013; Talabi, 2016; Wolomasi et al., 2019). Therefore, it is very important that school principals exhibit a cooperative management style by avoiding authoritarian behaviours.

It was concluded that the transformational, transactional (Ali & Waqar, 2013; Oguuz, 2011b) and paternalist (Caliskan, 2010) leadership styles of school principals positively affected teachers' OCBs. In addition, the results of the current study support the results of the studies that leadership has a moderate effect on OCBs (Ozturk & Ay, 2015) and that an organic management style emphasising flexibility and adaptation can increase OCBs (Williams & Anderson, 1991). Teachers working under *laissez-faire* leadership exhibited the least OCBs (Ali & Waqar, 2013). Organisational citizenship behaviours are defined as voluntary behaviours that a person does not have to do (Van Dyne et al., 1994); it can be thought that teachers tend to exhibit voluntary behaviours when they develop positive feelings towards school. Even if the school principal exhibits authoritarian behaviour, teachers can act voluntarily to improve the quality of education. Although it is not the only factor in the development of these positive emotions, it is a fact that the school management style is an important factor.

The current study holds that the perception of organisational justice had a partial mediating effect on the effect of cooperative management style on OCBs but had no mediator effect on the effect of authoritarian management style on OCBs. Yesiltas (2013) found that distributional justice was a mediating variable on the effect of the authoritarian dimension of paternalist leadership on OCB. In addition, Caliskan (2010) found that organisational justice perception had a mediating effect between paternalist leadership styles and OCBs. The fact that management styles are the premises of OCBs (Avci, 2015) and the relationship between the perception of organisational justice and OCBs (Iplik, 2009; Karaca & Ozmen, 2018; Organ & Konovsky, 1989) supports the results regarding the mediation effect of organisational justice perception on OCBs. This result of the study can be interpreted as the

teachers' perception of organisational justice as negatively affected by the authoritarian management style, while teachers try to exhibit OCBs to increase school effectiveness. In other words, the perception of organisational justice has no effect on teachers' desire to exhibit these behaviours. Already, OCB is the general name of formally undefined behaviour that helps the organisation achieve its objectives (Organ, 1997). It is important for teachers to display these behaviours in order to realise the goals of the school. When teachers perceive the management style positively, they can exhibit a high level of OCBs.

According to another result of the current study, job satisfaction partially mediated the effect of cooperative management style on OCBs. Considering the studies examining the effect of management style on job satisfaction (Alanoglu, 2019; Basaran & Guclu, 2018) and those examining the relationships between job satisfaction and OCB (Fathiizadeh et al., 2018; Foote & Li-Ping Tang, 2008; Ikonne, 2013), job satisfaction is expected to mediate the effect of cooperative management style on OCBs. Job satisfaction is an increasing state of emotions as a result of the development of positive feelings towards the organisation. Teachers working under the cooperative management style exhibited more OCBs due to their increased job satisfaction.

Conclusion and recommendations

In this study, firstly, the effects of cooperative and authoritarian management styles on teachers' organisational justice, job satisfaction, and OCBs were tested. Then, the mediating effects of job satisfaction and organisational justice on the relationship between principals' management style and teachers' OCBs were examined. According to the study results, the perception of organisational justice of teachers working under the cooperative management style is high and positive, while the perception of organisational justice of teachers working under the authoritarian management style is low and negative. It is important for school principals to display cooperative behaviours and to avoid those that are perceived as authoritarian, in order to raise teachers' perception of justice, because teachers' perception of organisational justice is almost entirely due to positive managerial behaviours.

While cooperative perception of school principals' behaviours positively affected teachers' job satisfaction levels, authoritarian managerial behaviours did not significantly affect teachers' job satisfaction. Cooperative and authoritarian management style positively affected the levels of OCBs of teachers. However, teachers tended to exhibit more OCBs in response to the cooperative management

style than the authoritarian management style.

The main purpose of school principals' relations with teachers and their behaviours towards teachers is to improve the performance of the latter and, as well, to increase school effectiveness. One of the most concrete indicators of school effectiveness is the high academic achievement of students. Teachers can increase their students' academic achievement by exhibiting OCBs. Therefore, cooperative managerial behaviours will increase the organisational justice and job satisfaction levels of teachers and, as a result, will enable them to exhibit OCBs. Therefore, it is possible to say that the cooperative management style will increase the quality of education in the school.

In summary, it should be kept in mind that the perceptions of teachers about their own management style are shaped by the behaviours of the managers. Therefore, school principals should exhibit participatory, democratic, and cooperative behaviours in their interactions with teachers; these should also contribute to teachers' positive perceptions of the school.

As a result, organisational justice perception and job satisfaction were insufficient to explain the effect of a collaborative and authoritarian management style on organisational citizenship behaviours of teachers. This result shows that different variables play a role in explaining the organisational citizenship behaviours of teachers. Therefore, investigating other variables that play a role in explaining organisational citizenship behaviours will contribute to the field.

Some limitations should be taken into consideration when interpreting the results of this study. For example, the sample was selected from only certain provinces of Turkey and data were collected only from secondary school teachers. To increase the generalisability of the study, it is recommended that the study can be repeated with different populations and samples. In addition, the repetition of the study in different countries is an important issue in terms of generalisability of the findings.

Another limitation is that the data were collected by scales. This makes it difficult to interpret the results. Repeating the study supported by qualitative questions will both facilitate interpretation of the data and increase the study reliability. In the current investigation, cooperative and authoritarian management styles were dealt with due to the difficulty of examining all the management styles exhibited by school principals. Studies can be conducted on other management styles of school principals that have an impact on teachers' organisational citizenship behaviours.

Address for correspondence

Müslim Alanođlu
Educational Administration Discipline
Turkish Embassy in Podgorica, Montenegro
Email: muslimalanodlu@gmail.com

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Toward mindful development of action learning in business education

Gang Chen
Sun Yat-sen University, Guangzhou, China
Yanmei Zhang
Sun Yat-sen University, Guangzhou, China
Xin Zheng
Sun Yat-sen University, Guangzhou, China
Mingji Xu
Sun Yat-sen University, Guangzhou, China

Abstract

This article addresses questions raised at a recent academic discussion of action learning for business education: What are the pitfalls of existing action learning practices? How do educators mindfully and effectively develop action learning in business education? To examine these issues, we provide an overview of, and analyze, the evolution of ongoing action learning programs established by a leading Chinese business school with its partner schools in the US from 2007 to 2019. Based on this qualitative case study, we reveal implicit pitfalls of existing practices, propose an experiential learning-based conceptual framework for an in-depth understanding of curriculum design, and provide instructional guidelines for better implementation. All the findings help educators mindfully embed action learning essentials into an educational curriculum and innovate the educational policy of teaching pedagogies.

Keywords: action learning, business education, curriculum development, China, case study

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Action learning has been gaining widespread momentum in business education over the past decade (Lizzio & Wilsona, 2004). Many business schools have embraced action learning as an important complement to existing pedagogies in educational programs. Yet, not all of the endeavours have been wholly successful and there are cases of failures leading to a loss of huge resources. Compared with other commonly used teaching pedagogies, little research addresses how to consciously integrate action learning into the business curriculum (Latham et al., 2004).

As an approach leveraging on real-world problem solving, action learning is complicated and demanding. It involves both internal and external stakeholders (Kelliher & Byrne, 2018) beyond professors and students, and its success requires joint commitment. Moreover, it entails a great deal of uncertainty and ambiguity, and may create anxiety and confusion (Lesner & Zanuttini, 2011). Faculty members have embraced this new approach because it complements the traditional focus on content teaching, but they are uncertain of the learning outcomes. Students enthusiastically embrace this approach because of its emphasis on learning by doing, however they may feel frustrated because it is less structured. At the host companies, senior executives may anticipate new perspectives from students on their business challenges, but they may not be sure of the extent of their involvement and the nature of their managers' roles in action learning.

As more business schools bring action learning into their educational programs, the following two questions have arisen: What are the pitfalls in implementing action learning in business education? How do educators consciously develop the action learning approach, and effectively integrate it into the business curriculum? The situation becomes complicated because action learning is typically cross-cultural, cross-organizational and multidisciplinary (Marsick & O'Neil, 1999).

This paper provides a comprehensive understanding for business schools to mindfully integrate action learning into a business curriculum and avoid bandwagon behaviours (Fiol & O'Connor, 2003). We first review management studies of action learning and specify its distinctive features, compared with two other frequently used teaching approaches. After that, we detail the research design and methods. We then provide an overview of, and analyze, the evolution of action learning practices of a leading Chinese business school. Based on this in-depth case study along with interviews with stakeholders, we reveal implicit pitfalls of existing practices, propose an experiential learning-based conceptual framework for a better understanding of curriculum design, and provide instructional guidelines for better implementation. All these findings help explicitly embed the action learning essentials into a business curriculum, rather than burying them as a hidden curriculum. Finally, we discuss the strategic and managerial implications.

Literature review

Action learning: Beyond traditional lecture and case-based learning

Since the emergence of action learning pedagogy (Revens, 1980), large corporations have widely adopted the concept to address their strategic leadership and organization development issues (Dilworth & Boshyk, 2010). Action learning involves small groups working on real problems and taking action for effective learning and performance outcomes (Marquardt, 2004, Chapter 1). This pedagogy is based on the notion that students learn most effectively when working on real-time problems that occur in business settings (Bradfield et al., 2015). Business educators regard it as a complement to, and considerable improvement over, the traditional lecture- and case-based learning. The effectiveness of action learning has been reported in many organizational education programs and examined by academic studies, for example, Leonard and Marquardt (2010). In Table 1, we summarize the differences among the three pedagogies and identify distinctive features of action learning (e.g., real-world problem solving, multidisciplinary orientation, high complexity, learning by doing) (Ungaretti et al., 2015).

Table 1. Comparison of three learning approaches in business education

	Lecture-Based Learning	Case-Based Learning	Action-Based Learning
Goal	Enrich students' knowledge and concepts	Apply knowledge to address real-world problem in a lecture-hall setting	Apply knowledge and develop capabilities in real-world problem solving
Discipline	Separate disciplines focusing on functional management knowledge	Separate disciplines focusing on functional management knowledge	Multidisciplinary integration, learn in a cross-functional fashion
Process	Lecturing, guest speaking, content acquisition and conceptual understanding	Understand the case; apply theoretical knowledge to discuss and work out solutions	Complexity. Set learning objectives; group discussions, give learners feedback and guidance; questioning and reflection; take action in real-world problem solving
Student's role	Learning by listening: Students capture content and benefit from organized presentations of information	Learning by discussion: Students apply the knowledge to discuss and share solutions to given problems in a controlled environment	Learning by doing: Students work in groups and address problems in live business environments with no previously established solution
Faculty member's role	Serve as instructor: Select learning materials and deliver information and knowledge to a large number of students	Serve as consultant: Provide case contents to students; guide students in analysis of prepared case; and stimulate meaningful group discussions	Serve as facilitator: Guide the questioning and reflection process

Although action learning demonstrates similarities to project-based and problem-based learning, these three approaches have distinctly different emphases. Problem-based learning was established as a curriculum innovation in medical education (Barrows, 1996) and has been a mainstay of inquiry-based learning. Project-based learning emphasizes an in-depth exploration of projects. Students learn from major project activities (e.g., meeting a deadline for project completion, continually checking on project status, presenting a final output to stakeholders, and reflecting on the whole project process) (Smith & Dodds, 1997). In contrast, action learning concentrates more on questioning inquiry and learning from reflection (Yeung, 2009). It allows learner autonomy, where learners select their own learning materials and methods as needed. It also enables professional learning through critical reflection (De Fazio, 2016). This study is less concerned with differences among the three terms and more on embedding the essence of action learning into a business curriculum. It differs from papers about creating a curriculum or providing professional development using an action learning approach, (e.g., Bath et al., 2004), as well.

Theoretical models of action learning

Systematic and proven models and guidelines are necessary to make action learning work (Chenhall & Chermack, 2010). Action learning is fundamental for facilitating and enabling participants to learn through a practical experiential process, which aligns with Kolb's (1984) experiential learning theory (Lee et al., 2010). This theory presents a cyclical model of learning, in which effective learning occurs.

Researchers have proposed four major models based on Kolb's (1984) basic theoretical framework: the action learning group process model (Gregory, 1994), the systemic action learning cycle (Paton, 2001), the systemic action learning spiral (Paton, 2001) and the continuous learning model (Watkins & Marsick, 1993). Gregory's (1994) model posits that scientific inquiry is the best investigation approach for a postgraduate curriculum, because it encourages human resource professionals "to learn by bearing responsibility for action" (p.43). Paton's (2001) models cite soft systems methodology in relation to action learning, representing a valuable and logical process of systemic intervention, which leads to appropriate action in response to a problem. Watkins and Marsick's (1993) continuous learning model is based on a practical, useable approach to problem solving in real day-to-day situations. It uses critical reflection as its basis for action and inquiry into problems.

Research gap and research questions

The existing models mentioned above concentrate more on the learning-based processes, which primarily elaborate on essences, components and principles in general. However, few of them are aware of the pitfalls in the existing action learning practices in business education. There exists a disconnection between the general conceptual development and the real-life educational practices, and thus the bandwagon behaviours of action learning implementation are often observed. The lack of understanding of the intricacies inherent in the business educational context prevents educators from mindfully adopting action learning pedagogy. More efforts are needed to explore action learning from the perspective of curriculum development as an integral part of business education. This paper thus addresses the following research questions:

(Quest for knowing why.) Why does action learning delivered in business education often fail to achieve the learning objectives of educational programs? What are the underlying causes?

(Quest for knowing what.) What needs to be known for educators to mindfully embed action learning into their business educational curriculum? How can we methodically highlight and articulate action learning essences within a business educational context?

(Quest for knowing how.) How do educators consciously run action learning projects to achieve the desired learning outcomes? Are there any instructional guidelines to overcome the pitfalls of existing practices?

Research design and methods

Research approach and setting

Qualitative case study is the appropriate method for exploratory investigations of complex phenomena within certain contexts (e.g., real-life action learning practices in the business education context) (Baxter & Jack, 2008). We methodologically adopted this case study following the academic conventional rules and recommendations of Eisenhardt (1989) and Yin (2003), and engaged in in-depth data collection. We believed that the educational program stakeholders, who experience excitement, enthusiasm, confusion, discouragement and depression during action learning projects, owned valuable “data” that helped this study. The case-study approach offered an opportunity for participants (students, senior managers, faculty members and program directors) to retrospectively re-tell and reflect action learning practices.

It allowed us to explore our research questions through a variety of lenses to reveal the multiple facets of complex practices. Thus, we carefully chose the case and employed a multi-stage different-sort data collection method in order to unfold the underlying knowledge of this rich case.

The case study focused on the evolution of Lingnan College in embedding action learning into its MBA education in the period 2007 to 2019. As a leading business school from China, Lingnan College was a pioneer in adopting the action learning teaching pedagogy. It developed its own action learning courses, in addition to a parallel set of action learning programs with its international partner schools, i.e. the Sloan School of Management at Massachusetts Institute of Technology and the Carlson School of Management at the University of Minnesota (Table 2). This case study depicts and analyzes the school's evolution toward mindful development of action learning.

Table 2. Three action learning programs

Programs	Partner Schools	Time	Number of Host Companies	Number of Participating Students
Action learning labs	The Sloan School & Lingnan College	2007-2019	40	160
Global business practicum	The Carlson School & Lingnan College	2008-2019	10	280
Project-based learning	Lingnan College	2010-2019	79	336

Case overview

Taking the method of chronological report (Baxter & Jack, 2008), we overviewed Lingnan College's progression from its initial attempt of mindless adoption to its current mindful integration of action learning into its curriculum.

Bandwagon stage: 2007–2009

Lingnan College's initial adoption was typical of bandwagon behaviours (Fiol & O'Connor, 2003). Thanks to its collaboration with the Sloan school, the college was one of the few Chinese business schools to start action learning in 2007. In the early stage, the Sloan school provided general guidelines for project operations, and

Lingnan College was responsible for recommending host companies and, Chinese students, and for managing local logistical issues.

Early in 2008, the Carlson school approached Lingnan College about launching an action learning program. In the program, the Carlson school identified a U.S.-based global company operating in China and chose a business issue to explore. Lingnan College's students formed cross-cultural virtual teams with the Carlson school's students. The teams were required to provide solutions or recommendations.

Lingnan College embraced this new initiative with great enthusiasm but had limited experience. The school primarily followed the course framework of its partner schools and learned this new practice by doing. At this stage, few faculty thought about how this action-based learning was aligned with the overall MBA curriculum. The school adopted this new practice as part of its new endeavours in business education reform.

Construction stage: 2010–2011

Lingnan College found that action-based projects were more time consuming and required more administrative and academic support, compared with traditional pedagogies. A professional manager was then assigned to handle operational issues such as finding new projects, monitoring project quality and managing relationships with host companies.

Lingnan College learned quickly that success was largely determined by the participating students' commitment and engagement. However, motivating students to put in effort remained a challenge. Unlike full-time employees, the College's students worked for host companies and had limited access to various resources, which increased frustration and decreased motivation. Students tended to show more commitment to projects in which they were interested, and there were often students whose efforts were not commensurate with that of their peers.

Another challenge was how to define the scope of the business challenges. Host companies were commonly inclined to investigate broad business issues and expected students to provide more deliverables. In contrast, the school was more concerned with how to ensure that students could complete the project within a certain time frame (three to four months) and thus preferred to take projects that came with specific objectives.

Interpretation stage: 2012-2015

In 2012, Lingnan College witnessed a rapid increase of action learning projects,

from three per year to 15–20 projects. Two administrative staff were deployed, and more faculty members became involved as mentors. In September 2012, the school decided to deliver a new action-based two-credit course as an integral part of MBA curriculum. Faculty members teamed up to teach the course sessions and collaborated in designing the course syllabus.

Since then, faculty meetings and external action learning consultants have reviewed the course every term and made changes to the syllabus where appropriate. Faculty members in these discussions often centered on such issues as how to make questioning inquiry and reflection an integral part of action learning projects, how to facilitate stakeholders to reach consensus on learning outcomes, and how to ensure the engagement of different stakeholders.

Mindful improvement stage: 2016-2019

To further develop action learning, Lingnan College reviewed the feedback from students, host companies and faculty members, and decided to invite a domain expert outside the school to strengthen the essence of action learning. The school invited an international faculty member from Australia, who used to work in industry and had developed similar programs. In the 2017-2019 academic years, the faculty member served as a key teaching faculty member and worked as the master coach for each team. Lingnan College's faculty members continued to serve their respective teams as team coaches and concentrate on problem solving.

Questioning inquiry and reflection were then better embedded into the project processes across all the teams. With one core faculty member as the key coordinator, students received consistent instructions and followed the same schedule. Challenges still remained due to the complexity and multi-stakeholder involvement. Because new problems and issues arose every year, Lingnan College established a regular review mechanism and consciously modified the curriculum, the teaching team, and the business partners, as well as the strategic importance of action-based programs to ensure a beneficial learning experience for students.

Data collection

To enhance data credibility, we used multiple data sources, as suggested by Yin (2003). We surveyed three groups of stakeholders, including 18 students, 8 senior managers from four host companies, and 10 faculty and staff (i.e., 8 faculties serving as action learning coaches and 2 program directors). The selected stakeholders described their views of reality and individual perceptions, enabling us to better

understand the participants' thoughts, feelings, and actions within the context.

We employed three data collection approaches: ethnographic observations, semi-structured interviews, and archival materials. We mostly employed observations with students. We conducted long-time observations of students' learning behaviors and took notes, which laid the foundation for further analysis. We interviewed all the stakeholders. We adopted Riach's (2009) 'sticky moments' in interviews as a site for reflexivity and Cunliffe's (2002) "striking moments" to explore the processes, challenges and recommendations for action learning in business education. Multi-typed archival materials were included as well, including students' reflection reports, and records from semi- and end-of-term feedback meetings (Table 3).

Table 3. Summary of data collection methods and interviewees' basic information

Stakeholders	Data collection	Interviewees	Positions
Students	Ethnographic observations, archival materials, interviews (32 interviews, 1-1.5 hours each)	12 students	MBA students
		4 students from the Carlson School	MBA students
		2 students from the Sloan School	MBA students
Senior Managers	Semi-structured interviews (14 interviews, 1.5-3 hours each)	2 managers from Benbo company	Chief executive officer and marketing manger
		2 managers from UX168 company	General manager and marketing manager
		2 managers from Cowork company	Chief executive officer and chief operation manger
		2 managers from Plateno information Tech Co.	Director and marketing manager
Faculty and staff	Interviews, archival materials	4 faculty members from Lingnan College	
		2 faculty members from the Sloan and Carlson schools	Professors and associate professors
		2 external experts in action learning and consulting	
		2 administrative staff	Program directors

Data collection from students. As the primary participants in action learning programs, students were randomly selected for data collection. Besides observations and semi-structured interviews, we collected students' inputs using written reports with self-reflection questions in midterms and end of term examinations. First, students were led to recapture scenarios when they found something most helpful or confusing. Then, they were asked to think as advisors and required to provide recommendations to improve the curriculum for a better experience along the action learning journeys. The reflection helped us to explore a set of "why" questions, such as why some action learning projects fail to achieve the desired learning objectives.

Data collection from host companies. We conducted semi-structured interviews with senior managers from host companies in different industries. The interviewees held positions such as chief executive officers and general managers. Interviews were conducted at the beginning, middle and end of projects. The interview questions mainly consisted of a set of "what" questions, such as their expectations of action learning, and a set of "how" problems, such as how to formulate project problems, and how to evaluate participants' engagement and performance.

Data collection from faculty and staff. The data from faculty were primarily collected from the minutes of meetings and documents from semi-term and end-of-term reflection meetings. The team coaches focused on various questions specific to the scope of the business problems, team composition, student engagement and consultation quality. These discussions were helpful in continuously recognizing challenges and improving action learning practices.

Analysis

Our data analysis was conducted in three phases. In phase 1, we integrated and sorted out all the data. In phase 2, based on systematic interpretation of data, we used open coding to form aggregate dimensions of action learning. This required a constant dialogue between our data and existing literature. We eventually settled on five aggregate dimensions: learning outcomes, project scoping, team composition, questioning and reflection, stakeholders' engagement and commitment. Third, using the five dimensions as a foundation, we developed a conceptual framework (Figure 2) that connected our aggregate dimensions and illuminated instructional guidelines within the dimensions. Following the guidelines of Strauss and Corbin (1998), our inductive analysis process went through iterations, back and forth among the underlying causes, the conceptual framework, the guidelines and the data, making refinements along the way. Finally, we identified five major challenges, proposed a conceptual process framework and provided effective instructional guidelines, which we further elaborate in the following section.

Findings

Underlying causes of unsuccessful action learning projects

We summarise Lingnan College's experience in Figure 1 and identify five major underlying causes that prevent the action learning process from achieving the desired learning outcomes.

Lack of consensus on learning outcomes

Stakeholders differ in the desired project outcomes. Faculty members typically concentrate on developing students' capabilities and skills. For example, the Carlson school focuses on equipping students with consulting tools and nurturing students' team and communication skills (see Appendix 1). In contrast, host companies are keen to obtain "new thinking" and "insightful recommendations" to solve their own problems. Students' desired learning outcomes can range from establishing high-level problem-solving skills to developing specific skills such as communication and presentation techniques. We saw that stakeholders lack consensus on the preferred learning outcomes.

Ill-defined problems

Identifying the right problems and defining the appropriate project scope are critical to project success. When the problem owner and the problem solver are different entities, it takes time and effort to communicate and share understanding. Sometimes, the originally presented problem is not ultimately the critical problem that a team needs to address. Moreover, it is not easy to delineate project boundaries properly. Some projects are poorly scoped: too narrow and unambitious, or too broad and ambitious, or vague and unclear. Students often commented on issues of scope.

"The host company had very high expectation on us. They assigned us an over-broad topic that included strategic management, customer relationship management and human resource management. We knew that these three problems were correlated but solving all of them in just three months made us very frustrated. We negotiated with them, trying to limit and delineate the project boundaries, but we failed. They just wanted to solve as many problems as possible. It ended up with each of us working on one piece of problem, trying to finish before the deadline. Now I get the lesson of The Law of Raspberry Jam, 'the wider you spread it, the thinner it gets'." (MBA student)

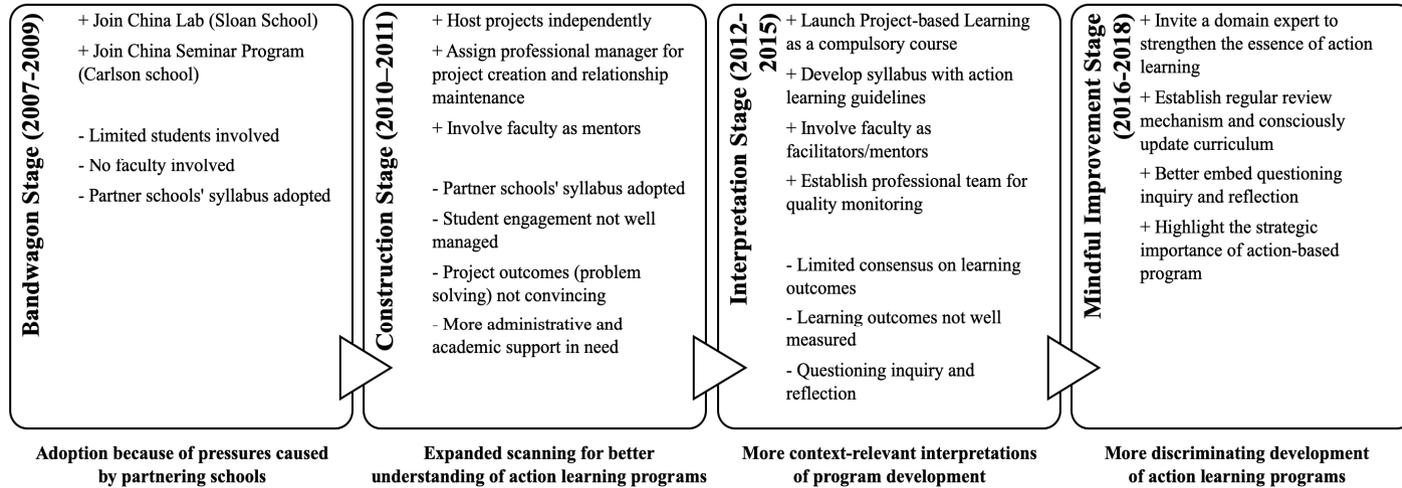


Figure 1. Lingnan college's evolution from mindless adoption to mindful development of action learning curriculum

Non-learning-oriented team building

Commonly, a syllabus specifies the required number of team members. Students often report that when allowed to pick up their group members they usually form a team with friends. The team is then built without considering professional areas and background diversity, and learning objectives. A team of familiar members limits demographic diversity and therefore reduces the opportunities of learning from peers and learning from conflicts.

Neglect of questioning and reflection

Questioning and reflection are two core elements of action learning, but existing action learning practices have not placed sufficient emphasis on them, and the field still lacks understanding of questioning inquiry and reflection in curriculum development. Moreover, it is still not clear about how to shift students' investigation paradigm to questioning inquiry, as a student noted at a reflection session after he completed the action-based course:

"It is beneficial to practice questioning skills in a group discussion with a coach. However, it is difficult to embed questioning inquiry in thinking process as an intuitive part where there is no coach around. It is not that hard to learn questioning skills, but it is really hard to make a change in my way of thinking." (MBA student)

Participants' engagement not well managed

Action learning pedagogy requires concerted efforts and collective engagement from all stakeholders.

Students' engagement and commitment. In the action learning context, students do not take the full role of employees and are not directly responsible for implementation. When facing time conflicts and other commitments, they are likely to exhibit less engagement, which prevents them from making extra effort and striving to deliver excellent results. We often observed such engagement problems in the teamwork and as a lack of interest in the project, labelling students exhibiting these behaviours "free riders".

Corporate engagement and support. Action learning requires full engagement and support from host companies. Usually, at least one senior executive is appointed to provide guidance to students. However, the senior executive appointed often has a tight schedule to meet with students and, on many occasions, is reluctant to provide key materials and data.

Faculty engagement. Faculty members often act as facilitators and are appointed to help students solve problems. However, compared with well-structured classroom teaching, the appropriate time and approach to provide guidance and support are unclear. Faculty members usually have different perceptions and practices. A reflection review with students shows that faculty engagement varied extensively.

Conceptual framework for curriculum mindful development

The aforementioned obstacles present critical needs to develop and manage action learning mindfully and effectively. In the following, we propose a comprehensive framework and provide instructional guidelines for action learning curriculum development.

Leveraging Kolb's (1984) experiential learning theory and previous models of action learning, we propose an input-process-outcome framework, capitalizing on action learning essentials to achieve effective action learning. The goal of this framework is to help faculty members and program directors consciously develop action learning syllabi in which learning outcomes, teaching and learning activities and learning outcome measures are well articulated within the business curriculum.

The framework is outcome-based, aligning with Association to Advance Collegiate Schools of Business International standards (AACSB International Accreditation Coordinating Committee, 2013). Unlike lecture-based courses emphasizing knowledge capture, the value of action learning lies in the capability development opportunities provided to students. Capability development can be reflected by continuous cognitive and behavioural improvements (Kraiger et al., 1993) that students can achieve during the learning process. It can be assessed through students' self-reflection reports or peer assessments. Learning outcomes can also be shown via students' business proposals or recommendations to the business challenges. It is often assessed using host companies' feedback and evaluations. Thereby, we suggest a balanced learning outcome, blending subjective capability development with objective project problem solving.

To achieve the desired outcomes, dedicated action learning processes are needed. In line with Leonard and Marquardt (2010), we suggest that these processes include both learning- and project-based views. The learning-based process is grounded in Paton's (2001) systemic action learning cycle, in which questioning inquiry and reflection are core. The project-based process contains the major stages of conducting a project: Project scoping, problem analysis, solution development and striving toward a resolution by taking actions (Smith & Dodds, 1997). The action learning process is both an iterative examination of organizational problems and an individual learning process in which learning is reinforced by promoting questioning insight and reflection.

Inputs, including team characteristics, business problems and collective engagement, also affect the action learning process and then further influence action learning outcomes. The team characteristics, which consist of team composition diversity and learning-oriented team building, influence the learning process. The characteristics of business challenges influence the effectiveness of the action learning process. Collective engagement and commitment from multiple stakeholders also have a strong impact on the learning process. Figure 2 presents an illustration of the framework.

Instructional guidelines for mindful implementation

In line with the proposed framework, we specify instructional guidelines to deal with the identified pitfalls of existing practices. We start from desired action learning outcomes and follow with guidelines on managing appropriate inputs. We then propose guidelines that ensure action learning activities are implemented in the right way, and guidelines that aim to achieve collective engagement, commitment and support.

Outcome driven: A shared understanding of learning objectives

In business education, the desired outcome of action learning projects involves solving a real problem. Stakeholders have different perceptions of problem solving. Host companies concentrate on solution effectiveness, while faculty members and students focus more on enhancing the students' problem-solving capabilities. It would be beneficial for the stakeholders to establish consensus on learning objectives.

Moreover, learning assessment methods are different from those in a company context. Students may achieve learning at three different levels: understanding something intellectually; applying newly acquired skills; and experiencing and thereby undergoing inner development that touches on beliefs and attitudes and leads to personal and professional development. A variety of instruments can be used, such as direct or indirect assessments, as suggested by AACSB (2013). A Sloan school student demonstrates the thoughtful learning outcomes as follows:

"During the two-week time, I think the main learning was not just limited to the consulting work we did for the client but to understand the whole thought process of my teammates and how different people approach problems differently. The best thing about the team I was working with was that we listened and respected each other's perspectives." (MBA student)

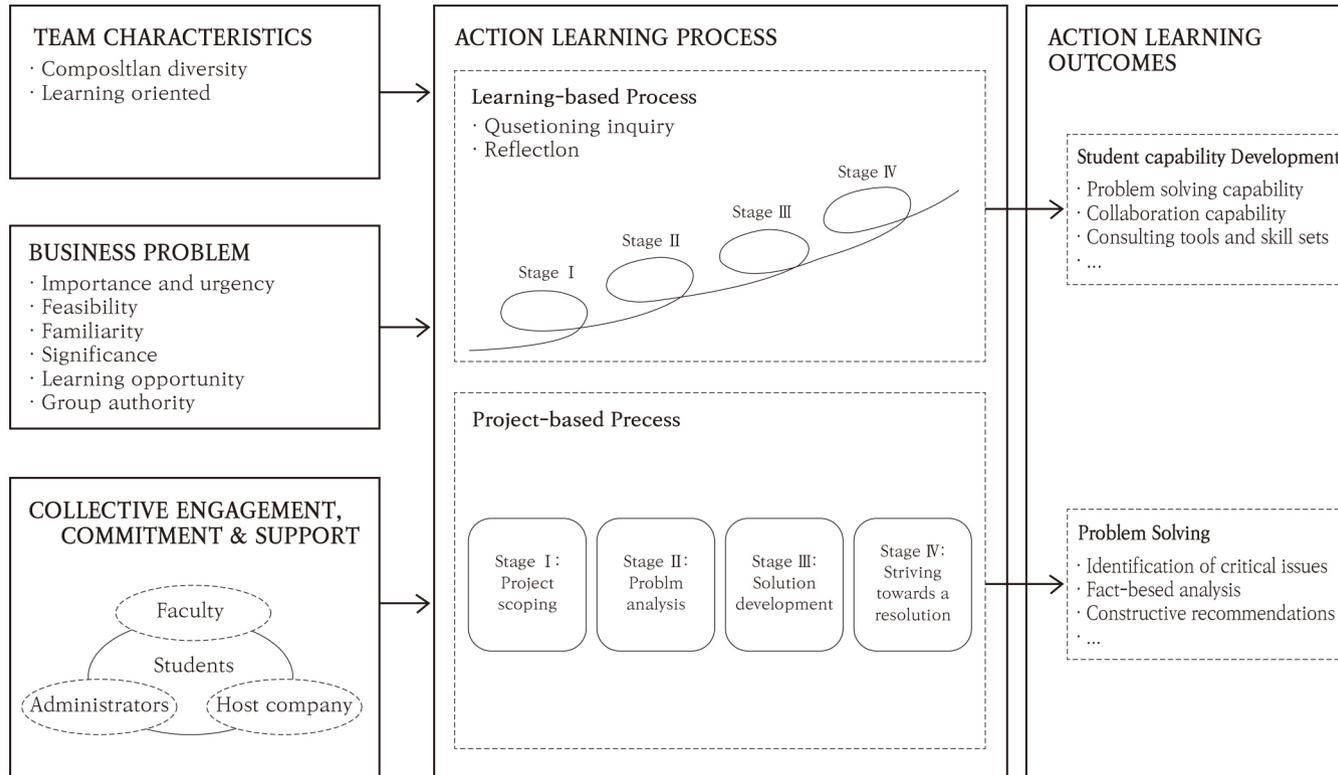


Figure 2. Conceptual framework for action learning curriculum development

Guideline 1: Start with a shared understanding of learning outcomes among all the stakeholders.

Guideline 2: Manage written learning outcomes while encouraging learner autonomy on content.

Input: Define proper business challenges

Students are expected to learn by identifying, analyzing and handling real-world challenges. However, students involved are seldom the problem presenter and lack a basis on which to select an appropriate problem. They tend to choose a problem they are capable of managing, which limits the learning opportunity. Course directors should carefully design the curriculum by considering the trade-offs, for instance, learning opportunities versus familiarity and feasibility, and the “value transfer,” for example, transferring organizational importance and urgency to students’ importance and urgency.

Guideline 3: Involve students in scoping, defining, and reframing business challenges.

Guideline 4: Balance problem feasibility and student familiarity, and articulate organizational importance and urgency with that of students.

Input: Incorporate team composition diversity

Action learning team members inherently vary in terms of gender, working experience, functional expertise, and education level (Bantel & Jackson, 1989). We observed that a team with appropriate demographic diversity often obtains better opportunities to learn from peers. Team members will ask more diverse questions and propose more novel ideas in constructing solutions. One respondent worked with a partner school’s students at a China Lab project for three months. He appreciated the learning experience and shared it with a younger student:

“Team members from the Sloan school are not American citizens. They come from Canada, Mexico, Chile, Australia and Israel. The cultural difference enriches our conversations. The diverse background enables them to provide a new look at the Chinese market and the Chinese company. The team building with Chinese and foreign students inspires a lot of interesting conversations, innovative ideas and thinking conflicts.” (China Lab student)

However, high team diversity does not always result in positive experiences. It may cause communication problems, which can limit learning opportunities, such as enhancing problem solving skills. We found that at reflection sessions, students often complained about team communication, although developing communication skills was not the learning objective for the course:

“Due to cultural differences, the thinking process and the working behaviour among our team members were extensively different. Many conflicts ... then [arose]. It was almost impossible to avoid encountering the conflicts. It took us a lot of effort to make everyone calm down. It took more effort to alleviate the negative effects of the conflicts.” (MBA student)

Therefore, program directors must balance communication effectiveness and team diversity in designing a team structure, considering the alignment of team diversity and desired course outcomes. They may include specific team building instructions in syllabi and provide a team building tutorial if in need. It would be good to facilitate students to identify team members’ strengths and allow them to share their strengths with each other.

Guideline 5: Strive for optimal team composition diversity to allow students to learn from peers.

Guideline 6: Align team composition diversity with process effectiveness and desired outcomes.

Process: Learn to learn through questioning, reflection and taking actions

Waddock and Lozano (2013) specify the influence of reflective practice on awareness, the will to lead and manage “soul” and “heart.” They also point out that the emphasis on analysis, tools and techniques in most management educational programs limits attention to these “soft” aspects. Moreover, collectively reflecting on goals and strategies (i.e., team reflexivity) has been shown to be valuable for team functioning (Pieterse et al., 2011). While some business schools’ syllabi have attempted to ensure that reflection is implemented, few of them have demonstrated a systematic approach to stimulate learner autonomy and self-reflection.

To make the change, program directors or faculty members should encourage reflection by explicitly requiring students to engage in tangible reflection activities. For example, directors can require participants to fill in a reflection form individually (e.g., the Carlson school’s Global Business Practicum), or attend a reflection lecture or join a reflection session as a team (e.g., the Sloan school’s China Lab). Directors

should consider shifting from passive to proactive reflection (Briner & Walshe, 2014). Reflection is not a one-shot activity; it should be an intuitive or integral part of a student. Course directors and faculty members should help students make the change by equipping them with reflective methods and providing tangible group reflection activities.

We observed that business schools seldom mention questioning inquiry in their curriculum. Faculty members often narrowly regard questioning inquiry as a technique within the group discussion. Thus, it is common for an action learning syllabus to have no systematic approach to shift students' investigation paradigm to questioning inquiry. Appendix 2 shows an example of embedding questioning inquiry into a course syllabus.

Guideline 7: Start with engaging students in tangible reflection activities.

Guideline 8: Equip students with questioning techniques and embed questioning inquiry into a course syllabus.

Guideline 9: Inject questioning inquiry and reflection into students' minds and help them establish this as an intuitive and integral part of student practice.

Enabler: Motivate students' engagement and commitment

The success of action learning projects is largely determined by students' engagement and commitment. How can educators fully motivate students and avoid "free riders"? How can they enhance students' satisfaction and project quality? Here, we provide recommendations in a variety of aspects.

When program directors approach companies for projects, clear guidance should be provided on how to select relevant projects. When students form a team and select a project, appropriate information should be available for them to form a clear understanding of the importance and urgency of the projects. Company reputation, senior managers' support and business challenges all influence students' interest in the program and, in turn, their commitment to the projects.

"Free riders" are demotivating. Making the progress of each participant visible to all other participants can decrease the incidence of this behaviour. Some effective methods to ensure equitable participation of all team members include team reflection, progress reports, peer review evaluation and interim reports. If some teams are performing inefficiently, program directors and faculty members may intervene. For example, a recent reflection session among team members required students to report what they had done well and what they had failed to achieve. Doing so exposed students who had not contributed equitably, and they were under great pressure to become more engaged.

Guideline 10: Motivate students by aligning their career development with the host company and the project domain.

Guideline 11: Leverage team members to make individual contributions visible to increase the motivation of all students to participate equitably.

Booster: Win the host company's support

The power of action learning teams is derived from senior executives' endorsement, support and recognition. Before launching the project, program directors should ensure that senior executives fully understand the value of action learning. Although students are not professional consultants, they add value by providing an outsider's perspective, which can prevent a company from becoming too insular in its thinking. Moreover, senior executives need to set realistic expectations. Relatively high senior executive expectations imply a psychological contract between the executives and students, and increase the participants' desire to meet them. Energy, creativity and synergy are directly correlated with the expectation that the team's project will result in organizational actions. Students will then have the full potential to help the business to be and to do better.

During the project process, supporting the team with resources and involvement is important. Senior executives can show the team that they are fully committed to the project by being available for feedback and discussion, and respecting different perspectives. Sound action learning design provides a stage on which behavioural performance dynamics can be observed and critiqued, and a springboard from which new choices and behavioural improvements can emerge. Through regular reviewing and monitoring, both will have healthy and balanced interactions throughout the process.

Guideline 12: Win the support of the host company's senior executives.

Discussion and implications

The findings of this paper suggest both strategic and managerial implications not only to business education, but to educational policy in general. Strategically, action learning provides a successful complement to existing teaching pedagogies. Although it presents some challenges, this innovative approach contributes to nurturing students' practical skills in connecting the real world and the future. Educational authorities are recommended to promote learning by doing when

innovating educational policy related to teaching pedagogies. Recently, Chinese educational authorities, such as the Teaching Advisory Committee of the Ministry of Education, have held a series of large-scale forums on how to build collaboration between educational institutions and industrial corporations to develop action learning further in higher education.

To strengthen the action learning pedagogy, educational institutions are encouraged to integrate explicitly action learning into their current curriculum. By offering practical courses, including action-based and inquiry-based training, educators can help students mitigate the knowing-doing gap (Sohn et al., 2017) that exists in many educational contexts of developing countries. The core of the teaching reform is to promote the transformation from a conventional curriculum system centered on knowledge transfer to a system centered on growing students' problem-solving capabilities.

Moving toward mindful curriculum development of action learning, we offer the following practical and theoretical aspects of managerial implications.

Consensus of learning outcomes. In line with existing empirical studies (e.g., Bradley et al., 2005), our study confirms that a lack of clarity about learning objectives has decreased the impact of action learning. In practice, it is not easy to establish consensus on what to achieve (either explicitly or implicitly) and how to achieve it (e.g., how to lead the less structured learning activities). This paper promotes the sharing of learning outcomes among all involved stakeholders. We also encourage the practice of written learning outcomes, which has been shown to have a considerable impact in lessening misunderstanding among stakeholders.

Project scoping. Our observations conform to scholars' existing views in scoping and reframing business challenges (Bradfield et al., 2015). Scoping is an important learning process and an integral part of an action learning course. We find that a number of projects are poorly scoped. Contrary to existing views that often focus on the role of problem owners in a general context, we insist on student involvement in scoping business challenges in the business educational context. Our study also suggests that to delineate project boundaries properly, it is wise to articulate and connect organizational importance and urgency with students' learning needs.

Team composition. Many empirical studies extensively investigate the effect of team diversity on team performance in business contexts (e.g., Bantel & Jackson, 1989) and find that demographic diversity is particularly related to firm performance (Miller & Triana, 2009). However, our study finds that action learning teams are seldom built with learning objectives in mind, nor do they consider demographic diversity. To better manage the team composition diversity, we highlight the balance between process effectiveness and project outcomes. We thus offer a considerable supplement to the literature on team diversity.

Questioning and reflection. Early in the 1980s, Revans (1980), the originator of action learning, described a well-known formula: $L = P + Q$, where L is learning, P refers to programming and Q refers to questioning to create insight into what people see, hear, or feel. Marquardt et al. (2009) propose extending the formula by incorporating R, reflection. We concur with their views on the essences of action learning, but the know-how quest has not yet been answered in business education. Systematic approaches are needed to stimulate learner autonomy and self-reflection. Based on our case study, this paper suggests different ways to inject questioning inquiry and reflection into different stages of action learning process.

Participants' engagement. In the business context, employee engagement largely determines both individual- and firm-level performance outcomes. In the business educational context, the question is how to motivate all stakeholders to be fully engaged in projects to increase the chance of success. Based on our interviews with stakeholders, this paper provides a better understanding of different stakeholders. We suggest multiple ways to deal with students who fail to participate equitably and to win the support of host companies.

Conclusion

This study starts with a qualitative case study of Lingnan College's journey of integrating action learning into its business education. The case demonstrates an evolution from mindless adoption toward mindful development. Using the collective experience of the Sloan, Carlson and Lingnan colleges, we have identified current challenges that have not been addressed yet. We propose a conceptual framework and provide instructional guidelines with the aim of achieving better learning outcomes and better real-world solutions.

Future research could verify the proposed conceptual framework with further empirical evidence. It also would be beneficial to examine the proposed instructional guidelines in other business schools. Furthermore, a cross-case study would be valuable to develop a better understanding of the evolution of mindful development of action learning in education.

Address for correspondence

Xin Zheng
Lingnan College, Sun Yat-sen University
No. 135 Xingang Xi Road, Guangzhou, China
Email: zhengx9@mail.sysu.edu.cn

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Appendix 1. Learning objectives and outcome assessment of action-based courses

Table A1. Learning objectives and outcome assessment of action-based courses at the sloan school, the carlson school and lingnan college

School	Course	Learning goals/objectives	Learning outcomes	Measures
Sloan school	Action Learning labs	<ol style="list-style-type: none"> To provide students with <i>insights regarding the issues and challenges businesses face</i> in China and India. To structure for students an <i>intensive experiential learning opportunity working collaboratively with senior leadership</i> in a dynamic local organization. To help students <i>develop their skills of integrated problem framing</i> in order to assist organizations in complex situations move to action. 	N/A	<ol style="list-style-type: none"> Class participation (25%) Mentor assessment (70%) (student project updates, workplan, remote research report, poster, final host company report) Host company feedback (5%)
Carlson school	Global Business Practicum	<ol style="list-style-type: none"> Develop and apply effective <i>consulting tools and skill sets</i> in an international setting; Deepen students' knowledge base around <i>team-based skills and tools</i>; <i>Communicate effective frameworks</i> for successfully completing consulting projects; Deepen students' <i>global decision making & collaboration capabilities</i>, Heighten students' <i>awareness and appreciation</i> toward the culture and business strategies Develop an increased ability to work in diverse cultural and interdisciplinary teams. 	<p>Upon completion of this course, students should be able to</p> <ol style="list-style-type: none"> explain key frameworks and concepts in market assessments, consulting projects, and teamwork apply marketing and other cross functional concepts to solve a consulting problem connect this learning to other learning gained from the CSOM PTMBA program and know where to go to further their knowledge of course topics 	<ol style="list-style-type: none"> Final presentation (50%) Class participation (15% USA +15% China) After-action reviews (20%)
L school	Project-based Learning	<p>The purpose of this course is to enhance students' capability of <i>solving real business problems</i> through project-based learning. There are three specific goals:</p> <ol style="list-style-type: none"> Within a real-world business environment, students could work with a host company, which will result in positive impacts on the business of the 	<p>On completion of this course, students should be able to</p> <ol style="list-style-type: none"> Identify business problems, specify critical issues, and establish an analytical framework for the problems. Conduct fact-based analysis and figure out the root cause of the 	<ol style="list-style-type: none"> Class participation (10%) Project assessment (by instructor) 55% Feedback from host company (20%) Reflection session (10%) Peer evaluation (5%)

School	Course	Learning goals/objectives	Learning outcomes	Measures
		company. 2. With real business problems, students could select and apply the right tools to identify critical issues and solve the problems. 3. With a collaborative learning environment, students could learn for themselves, with and from peers and instructors.	problems. 3. Propose constructive recommendations. 4. Have better skills in managing a business project and in communication, negotiation, and presentation.	

Appendix 2. An example of course roadmap

Figure A1 demonstrates an overview of Lingnan College’s action learning course. Here, program directors and faculty members made great effort to break down the questioning inquiry process. They attempted to facilitate and lead a series of project-based group discussions to meet the learning outcomes on questioning inquiry. Faculty members delivered introductory lectures on the methodology at the beginning of the course. They also provided tutorials in problem-solving skills/techniques tailored to students’ education background.

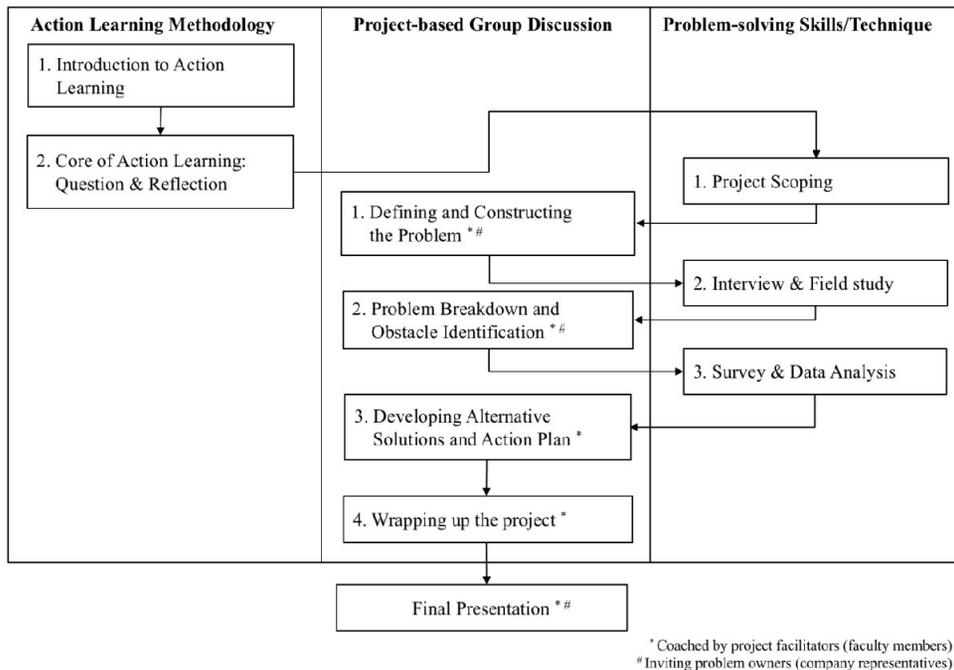


Figure A1. A course roadmap

Nurturing the global competence of high school students in Shenzhen: The impact of school-based global learning education, knowledge, and family income

Kwok Kuen Tsang
Beijing Normal University, China
Hing Kwan To
Education University of Hong Kong, China
Raymond K. H. Chan
Chinese University of Hong Kong, China

Abstract

The aim of this study is to investigate the relationship between school-based global learning education (GLE), knowledge, family income, and global competence, which consists of global perspective and intercultural literacy. Based on a survey of 599 high school students in Shenzhen, it finds that school-based GLE has direct positive effects on intercultural literacy. Although GLE does not have a direct impact on global perspective, it can influence global perspective through knowledge. When family income is taken into consideration, school-based GLE has no impact on the knowledge of students from low-income families, and their knowledge has no effect on their intercultural literacy. In contrast, family income has a negative impact on the knowledge of students from high-income families, and their knowledge has a positive effect on their intercultural literacy.

Keywords: global competence, global perspective, global literacy, school-based global learning education, family income

Global competence is the disposition and capability of people to explore, comprehend, and respond to diverse local, global, and intercultural challenges to their lives from different perspectives (Mansilla & Jackson, 2011). It is regarded as an important factor in students' social engagement and participation in an increasingly globalized and culturally diverse world (OECD, 2018). Thus, nurturing students' global competence is an important goal for societies that aim to promote social justice and equality. Education is believed to provide equal opportunities for every student to develop different kinds of competence, including global competence. Thus, school-based global learning education (GLE) is important for nurturing the global competence of students, regardless of family background (Doscher & Landorf, 2018). However, the literature reveals that school-based GLE may not necessarily benefit all students, even though it may transmit knowledge related to global competence to them. Compared with students from low-income families, students from high-income families may have better educational outcomes from school-based GLE because their families can provide them with richer resources for learning global competence (Ng et al., 2018). Accordingly, the effects of school-based GLE may be moderated by students' family income. To inform the debate about the impact of school-based GLE on students' global competence, this study addresses the following research question: What are the relationships between school-based GLE, family income, knowledge, and students' global competence?

Global competence

Researchers tend to define "global competence" differently and use the term loosely to account for diverse phenomena, such as global mindset, global perspective, intercultural competence, and intercultural sensitivity (Li, 2013). This situation may lead to a lack of validity when the concept is used in empirical research or to develop policies and practices. To overcome this limitation, this study conceptualizes global competence based on two frequently used perspectives: the disposition perspective and the capability perspective.

Disposition perspective on global competence

The disposition perspective conceptualizes global competence as the dispositions—including attitudes, values, and ways of knowing—that help people to respect others with different cultural backgrounds, understand global issues, and locate themselves in the globalized world (Gibson et al., 2008). Attitudes and values reflect

openness to intercultural opportunities, *tolerance* of cultural differences and ambiguity, *respect* for cultural diversity, and a *sense of global identity* (OECD, 2018), while ways of knowing involve *understanding* local, global, cultural, and intercultural issues, processes, trends, and systems in the global context (Li, 2013). Some researchers prefer the term “global perspective” or “global mindset,” referring, similarly, to the dispositions that facilitate people’s understanding of local and global issues, appreciation of different perspectives, comprehension of the complexity of global conditions and trends, and sense of global identity (Braskamp et al., 2014). While students’ global competence is significantly affected by these dispositions, it is also shaped by students’ capacity to perform relevant activities satisfactorily. To address this concern, researchers have also sought to conceptualize global competence from the capability perspective.

Capability perspective on global competence

The capability perspective regards global competence as the ability to respond to and handle cultural differences and diversity for effective cross-cultural or intercultural engagement and participation (Mansilla & Jackson, 2011). Some researchers use the terms “intercultural literacy,” “intercultural competence,” or “intercultural sensitivity” (Deardorff, 2006; Diehl & Prins, 2008). The literature indicates that globally competent people are able to: 1) *analyze* local, global or intercultural issues when engaging in research (Mansilla & Jackson, 2011); 2) *interact* appropriately with and effectively *communicate* ideas to people from different cultural backgrounds (Mansilla & Jackson, 2013) 3) *reflexively participate* in the world to promote sustainable development and collective well-being (OECD, 2018). Although this perspective considers the importance of global competence capabilities for engagement and participation, it tends to ignore the influence of an individual’s dispositions on these capabilities. Consequently, neither the disposition perspective nor the capability perspective provides a comprehensive account of global competence.

Proposed conceptualization of global competence

The disposition and capability perspectives suggest different but complementary dimensions of global competence. For example, if a person demonstrates openness to intercultural diversity and appreciates the views of others, he/she may also be capable of appropriately interacting with people from different cultural backgrounds and reflexively participating in the globalized world (OECD, 2018). In other words, an individual’s global competence is a result of both his/her dispositions and

capabilities. Hence, this study provides a comprehensive conceptualization of global competence by synthesizing these perspectives. In this conceptualization, the first dimension of global competence comprises dispositions such as attitudes, values, and ways of thinking about oneself, events, and issues in the globalized world. The second is capabilities, including intercultural identification, communication, and interaction in the globalized world. The dispositional dimension can be referred to as “global perspective” and the capability dimension as “intercultural literacy.” Each dimension of global competence facilitates students’ engagement with, and integration into, the globalized world.

Knowledge and global competence

Global competence is affected by many factors. One is a person’s knowledge of cultural interconnectedness, similarities, and differences (Li, 2013). For example, students equipped with such knowledge are better able to challenge stereotypes about ethnic groups and people, respect and accept differences and diversity, and promote social justice (Mansilla & Jackson, 2011). Intercultural knowledge, intracultural knowledge, and foreign language proficiency are key to an individual’s development of global competence (Bresciani, 2008; Li, 2013; Parkinson, 2009).

According to Case (1993), intercultural knowledge is the understanding of diverse ideas, values, and cultural practices. Such knowledge extends beyond surface-level familiarity with different societies’ traditional foods, customs, and routines, providing students instead with a deeper understanding of the complexity of cultural and global phenomena in the globalized world (Li, 2013). Thus, intercultural knowledge is essential for students to become globally competent (Bresciani, 2008).

Intracultural knowledge means an individual’s understanding of ideas, values, and cultural practices in his/her own society. As Reimers (2009) suggests, intracultural knowledge helps students appreciate and make sense of themselves and their own culture in relation to other cultures in the global context, and in turn encourages them to engage in global and intercultural communication and interaction. In this sense, it may be positively related to students’ global competence (Li, 2013).

Parkinson (2009) notes that foreign language proficiency is essential for students’ global competence, because it enables them to develop a deeper understanding of foreign cultures, reach across cross-cultural boundaries, and communicate and interact with people from different cultures. Diehl and Prins (2008) note that if students can communicate well in multiple languages, they tend to have better intercultural literacy. Therefore, researchers suggest that learning a foreign language

is an important way for students to develop global competence (Nair & Henning, 2017). Accordingly, we formulated the following hypotheses:

H1: If students have foreign language proficiency, intracultural knowledge, and intercultural knowledge, they will have a better global perspective.

H2: If students have better foreign language proficiency, intracultural knowledge, and intercultural knowledge, they will have better intercultural literacy.

School-based GLE and global competence

Education as a social institution is expected to perform a major role in the transmission of knowledge, skills, attitudes, and values to children in modern society, because the family has a weaker socialization function in modern society (McLanahan & Sandefur, 1994). Thus, modern societies have developed school systems to provide equal opportunities for every child to receive education (Cookson & Sadovnik, 2002). Although family background may still have an impact on a child's life, it is believed that universal school education can reduce the effects of disparities in family background. As Mann (1997, p. 78) argues, "universal education can counterwork this tendency to the domination of capital and servility of labor ... Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men, the balance-wheel of the social machinery."

Influenced by this belief, education scholars suggest providing a variety of GLE at school, through which students can acquire cultural and intercultural knowledge and skills, and thus enhance their global competence (Whitehead, 2015). For example, inbound and outbound exchange programs and activities are frequently used in school-based GLE to foster students' global competence. These provide students with intercultural experiences that improve their foreign language competence through direct interaction with people in the foreign country, and increase their understanding of the foreign culture, their own culture, and their interrelationship in the globalized world (Hill, 1991). In addition, schools provide GLE for students at home. For example, some schools integrate GLE into existing curricula like history, economics, social studies, and geography. This encourages students to systematically learn, share, and discuss their views on global issues (Merryfield, 2008). GLE may be used to structure community-service programs or classroom diversity initiatives, enabling students to appreciate different cultural practices and values through interaction with people from diverse cultural and ethnic backgrounds (Whitehead, 2015). According to a study conducted by Shanker et al. (2019), school-based GLE can promote students' global competence. Accordingly, we make the following hypotheses;

H3: If school-based GLE provides more cultural and intercultural learning opportunities, it will have a positive impact on students' knowledge, including language proficiency, intercultural knowledge, and intracultural knowledge.

H4: If school-based GLE provides more cultural and intercultural learning opportunities, it will have a positive impact on students' global perspective.

H5: If school-based GLE provides more cultural and intercultural learning opportunities, it will have a positive impact on students' intercultural literacy.

Family income and global competence

Although it is often assumed that school-based GLE cultivates students' global competence, this assumption is challenged by sociological studies that have demonstrated that students' educational attainment tends to be a result of their family background rather than the quality and quantity of education they receive in school. The Coleman Report, a landmark empirical sociological study addressing this issue (Coleman et al., 1966), shows that student outcomes are better predicted by family background than by school factors like curricula and facilities. This implies that students' educational outcomes are strongly influenced by family-based preparation for schooling, instead of school factors (Davies & Guppy, 2010).

In general, research shows that students from high-income families have access to richer resources and are thus better prepared for schooling, resulting in more advantageous educational outcomes (Bloome et al., 2018). As Bourdieu and Passeron (1990) show, the children of high-income families are advantaged because their families have richer economic resources (e.g., money), cultural resources (e.g., cultural knowledge and skills), and social resources (e.g., social connections). Economic resources mean that children have more opportunities to receive high quality educational services outside school; cultural resources cultivate children's dispositions in ways conducive to educational performance; and social resources enable children to obtain diverse educational information to help them to plan their education pathways. Thus, students from high-income families tend to have better educational outcomes than students from low-income families.

Students' global competence may also depend on their family income. For instance, high-income families tend to encourage children to explore and analyze different sociocultural issues in the local and global communities (Weenink, 2008), so their children may be better motivated to acquire global and intercultural knowledge and skills, resulting in greater aspiration to global success (Kim, 2011). Moreover, high-income families have richer resources for supporting their children in global learning activities in their leisure time, such as traveling abroad, acquiring a foreign language, and learning about foreign cultures (Hovland, 2009). Accordingly, students

from high-income families may be better prepared than students from low-income families with the knowledge necessary to develop global competence. This leads us to the final set of hypotheses:

H6: Students from high-income families will have richer knowledge, including foreign language proficiency, intercultural knowledge, and intracultural knowledge, than students from low-income families.

H7: Students from high-income families will have a better global perspective than students from low-income families.

H8: Students from high-income families will have better intercultural literacy than students from low-income families.

Method

Research context

China is a newcomer to global competence education (or international understanding education). In 2010, the Chinese government announced the Outline of the National Plan for Medium and Long-Term Education Reform and Development (2010-2020), which emphasizes developing students' global competence (officially referred to as international understanding). In response, Chinese schools and educators in various cities have implemented school-based GLE to nurture students' global competence. They have integrated GLE into existing school curricula (Qu, 2018) and designed school-based GLE lessons and activities (Zhang, 2018).

Shenzhen has demonstrated particular commitment to promoting students' global competence via education. For example, the Shenzhen government has attempted to institutionalize GLE in schools since 2013, when it launched the Plan of Promoting Global Perspective in Shenzhen (2013-2020). This outlined the government's plan to introduce GLE into 95% of China's primary and secondary schools by 2020. Accordingly, many Shenzhen schools now offer school-based GLE (Li, 2015).

Although there are increasing opportunities for students to receive GLE in schools, this does not mean that students from high- and low-income families can achieve equal global competence outcomes. Gravemeyer et al. (2010) report that the poverty rate in Shenzhen is around 13.07%, and Lin et al. (2017) find that Shenzhen's Gini coefficient is around 5.0. This suggests that economic inequality and, consequently, social and educational inequality are serious problems in Shenzhen (Lin et al., 2017). Moreover, disparate levels of affluence between different city districts in Shenzhen also have an impact on schools' resources and education

outcomes, measured in terms of student academic achievements. In this context, family income is a critical factor in students' global competence, because students from high-income families may receive many more resources for learning a foreign language and acquiring intercultural and intracultural knowledge than students from low-income families (Ng et al., 2018). This can also mediate the impacts of resource issues faced by schools in different regions.

In short, Shenzhen is a city committed to promoting students' global competence through school-based GLE, but its effectiveness may be hampered by income inequality. Shenzhen is thus an excellent case for evaluating GLE and ascertaining how students' social class background, measured in terms of income, affects the outcomes of GLE.

Participants

In January and February 2018, the research team sampled one high school in each administrative district of Shenzhen, with the exception of one district that did not provide high school education, based on school lists retrieved from Shenzhen Government Online (<http://www.sz.gov.cn/cn/>) in December, 2017. After the list of participating schools was confirmed, the research team invited the schools to distribute questionnaires to students and return the completed questionnaires. The students were invited to complete the questionnaires in person. Of the 750 distributed questionnaires, 620 were returned, giving a response rate of 82.7%. Of these 620 questionnaires, 599 were identified as valid.

Among these participants, 42.2% were male and 57.8% were female; the average age was 17.0 years ($SD = .33$). Most of the participants were in Grade 11 (93.6%), followed by Grade 12 (3.4%) and Grade 10 (2.9%). In terms of family income, 39.2% earned more than RMB20,000 per month, 25.4% earned between RMB15,001 and RMB20,000 per month, 17.7% earned between RMB10,001 and RMB15,000 per month, 14.4% earned between RMB5,001 and RMB10,000 per month, and 3.3% earned less than RMB5,000 per month. The composition of the sample accurately reflected Shenzhen's characteristics as a high income city that nonetheless has a certain percentage of lower income people.

Measurement

Knowledge

Foreign language proficiency, intercultural knowledge, and intracultural knowledge were measured in the knowledge questionnaire. Eleven items required the participants to rate their foreign language proficiency (e.g., “You can speak a foreign language”) and knowledge of sociocultural issues abroad (intercultural knowledge) (e.g., “You know the cultures of foreign societies”) and in China (intracultural knowledge) (e.g., “You know Chinese culture”) on a 5-point Likert-scale from 1 (*very poor*) to 5 (*very good*).

Global perspective

There were no valid instruments to measure global perspective. Therefore, we adopted a self-designed scale based on the 2018 PISA questionnaire (STI 191-194), and the global literacy scale prepared by R. Zhang et al. (2010), which had been administered in mainland China. A 5-point Likert-scale was adopted to ascertain the degree of participants’ agreement with each statement. The original version of this scale was augmented by four subscales: global awareness, global willingness, global approval, and global literacy confidence. After conducting exploratory factor analysis and confirmatory factor analysis, we found that the three-factor version ($X^2 = 1313.07$, $df = 167$, $X^2/df = 7.86$, comparative fit index [CFI] = .83, root mean square error of approximation [RMSEA] = .10) provided a better model fit than the four-factor version ($X^2 = 1392.04$, $df = 164$, $X^2/df = 8.48$, CFI = .81, RMSEA = .11). Therefore, the three-factor version was adopted in this study. The measurement of global literacy included twenty items in three subscales: exploration (five items), openness (four items), and hybrid identity (eleven items). Acceptable internal consistency ($\alpha = .81$) was found for the exploration subscale. This indicated that the students initiated cultural exploration. The openness subscale measured the students’ attitudes toward inter-cultural acceptancy. Cronbach’s alpha indicated good internal consistency ($\alpha = .84$) for this subscale. High internal consistency ($\alpha = .90$) was found in the hybrid identity subscale measuring global identity, inter-cultural identity, and intra-cultural identity.

Intercultural literacy scale

The participants were asked to complete the intercultural literacy scale, which was developed by Ng et al. (2018). Each item used a 5-point Likert scale from 1

(*totally disagree*) to 5 (*totally agree*). The sample items were “I can identify the similarities and differences between countries and between cultures” and “I can communicate with people from other countries to enhance our mutual understanding, even though we hold different opinions and values.”

Global learning education

The participants were asked to report whether they had opportunities to learn about cultural and intercultural practices and issues in GLE lessons, curricula, and activities in school. The responses were used to measure how many cultural and intercultural learning opportunities were provided through school-based GLE.

Family income

The participants reported their families' monthly income. According to the National Bureau of Statistics (2018), the median monthly household income in China is RMB10,781. Therefore, a monthly household income of RMB10,781 was the threshold used in the study to distinguish between high-income and low-income families.

Results

Factor analysis

Exploratory factor analysis and confirmatory factor analysis were used to examine the factor structure of the global literacy survey. According to the confirmatory factor analysis, global perspective comprised three factors: exploration, openness, and hybrid identity ($X^2 = 1313.07$, $df = 167$, $X^2/df = 7.86$, CFI = .83, RMSEA = .10). An internal reliability test suggested that the exploration ($\alpha = .81$), openness ($\alpha = .84$), and hybrid identity ($\alpha = .90$) subscales were reliable. Exploration reflected the students' willingness to explore and investigate different local, global, and intercultural issues around the world. Openness concerned the students' acceptance of intercultural and cultural diversity. Hybrid identity related to individual identification with global and/or intercultural communities.

The factor structure of the intercultural literacy scale was also tested by exploratory factor analysis and confirmatory factor analysis. The results suggested

that intercultural literacy comprised two factors: intercultural tolerance, defined as the ability to tolerate and respect cultural difference and diversity, and intercultural sensitivity, defined as the ability to identify similarities and differences between cultures and appropriately respond to the challenges of cultural diversity. Confirmatory factor analysis indicated an acceptable goodness-of-fit between these two factors ($X^2 = 31.87$, $df = 4$, $X^2/df = 7.97$, $CFI = .97$, $RMSEA = .11$). The intercultural tolerance subscale consisted of three items with an acceptable level of internal reliability ($\alpha = .79$) and the intercultural sensitivity subscale comprised two items with an acceptable level of internal reliability ($\alpha = .79$).

In addition, multigroup invariance comparison was used to investigate the difference between high-income families and low-income families for the constructs of global perspective and intercultural literacy. Three first-order factors, i.e., exploration, openness, and hybrid identity, were included in the global perspective construct. The results suggested that the construct of global perspective was acceptable ($X^2 = 1467.00$; $df = 120$; $X^2/df = 4.92$; $p < .05$; $CFI = .81$; $RMSEA = .08$) and there were no significant differences in global perspective between low- and high-income families ($X^2 = 19.18$; $df = 16$; $p > .05$). The fit indices showed that the intercultural literacy scale had high construct validity. The construct of intercultural literacy contained two first-order factors ($X^2 = 31.87$; $df = 4$; $X^2/df = 7.97$; $p < .05$ $CFI = .97$; $RMSEA = .10$; $RMR = .02$; $GFI = .98$). There was no significant difference between low- and high-income families in the construct of intercultural literacy ($X^2 = 3.94$; $df = 3$; $p > .05$).

Independent *t*-tests among low- and high-income families

The results suggest that there were differences between low- and high-income families for all the variables. As Table 1 shows, compared with their low-income counterparts, students from high-income families attended more school-based GLE and performed better in terms of foreign language proficiency, intercultural knowledge, intracultural knowledge, exploration, openness, hybrid identity, cultural tolerance, and cultural differentiation. Accordingly, these findings support H6, H7, and H8.

Table 1. Independent samples *t*-test among low-income and high-income students

Construct	<i>M (SD)</i>		<i>T</i>
	Low-Income Family (<i>n</i> = 101)	High-Income Family (<i>n</i> = 498)	
School-based GLE	1.63 (.70)	1.40 (.82)	2.63**
Knowledge—foreign language proficiency	3.17 (.72)	3.69 (.74)	-6.49***
Knowledge—intercultural knowledge	3.14 (.58)	3.43 (.66)	-4.20***
Knowledge—intracultural knowledge	3.21 (.57)	3.58 (.64)	-5.41***
Global perspective—Exploration	3.55 (.56)	3.75 (.55)	-3.36**
Global perspective—Openness	3.40 (.45)	3.70 (.50)	-5.42***
Global perspective—Hybrid identity	3.65 (.54)	3.91 (.51)	-4.66***
Intercultural literacy—Cultural tolerance	3.35 (.52)	3.48 (.60)	-2.02*
Intercultural literacy—Cultural sensitivity	3.33 (.56)	3.60 (.63)	-4.08***

****p* < .001; ***p* < .01; **p* < .05

Structural equation modeling

Structural equation modeling was adopted to examine the mediating effects of knowledge and global perspective on the relationship between school-based GLE and intercultural literacy. The fit indices of the model for the full sample (*n* = 599) are shown in Table 2. As Figure 1 shows, school-based GLE was directly positively correlated with intercultural literacy. However, there was a negative correlation between school-based GLE and knowledge. Knowledge was positively correlated with global perspective, which was positively correlated with intercultural literacy. Furthermore, these results indicate that knowledge and global perspective mediate the relationship between school-based GLE and intercultural literacy. Accordingly, the findings support H1, H2, H4, and H5, but reject H3.

Table 2. Fit indices for the conceptual model

Model	Model Fit Indices						
	χ^2	<i>df</i>	χ^2/df	CFI	RMSEA	RMR	GFI
Full sample (<i>n</i> = 599)	105.07	23	4.57	.97	.08	.02	.96
Low-income family (<i>n</i> = 101)	35.67	23	1.55	.97	.07	.02	.93
High-income family (<i>n</i> = 498)	103.88	23	4.52	.96	.08	.02	.95

Table 3. Nested model comparisons (Assuming model unconstrained to be correct)

Model	Model Fit Indices					
	χ^2	<i>df</i>	NFI	IFI	RFI	TLI
Measurement intercepts	45.89***	8	.02	.02	.01	.01
Structure weight	64.10***	11	.03	.03	.01	.01
Structural intercept	72.40***	12	.03	.03	.01	.01
Structural residuals	74.84***	13	.03	.03	.01	.01

****p* < .001; ***p* < .01

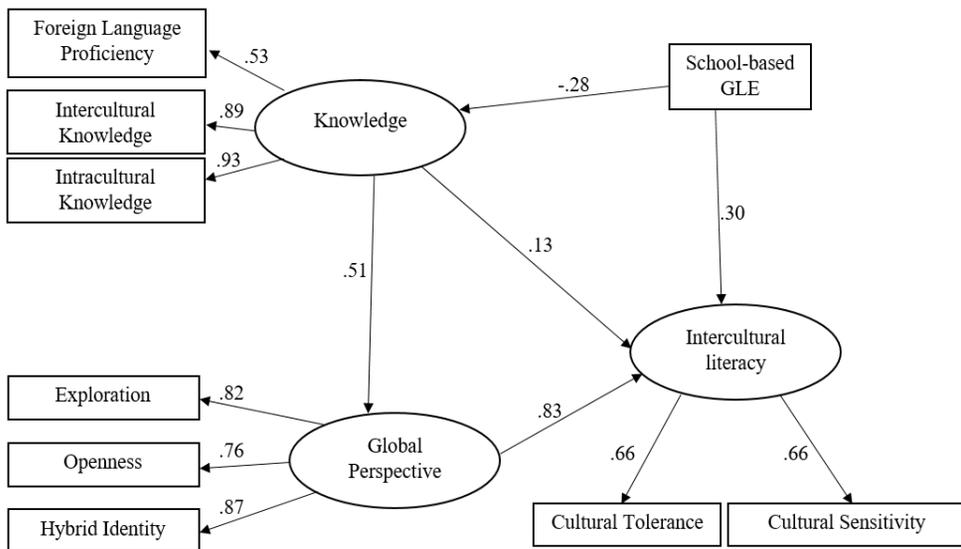


Figure 1. Standardized solutions for structural model—full sample (*n* = 599)

Multigroup invariance comparison

For the model of low-income families (*n* = 101), Figure 2 illustrates that school-based GLE was significantly positively correlated with intercultural literacy. However, there was no significant relationship between school-based GLE and knowledge. These results reveal an indirect relationship between knowledge and intercultural literacy through global perspective. Therefore, these results confirm that students from low-income families develop intercultural literacy through school-based GLE only, not through their knowledge.

In contrast, the model of high-income families (see Figure 3) was similar to the model of the entire sample (see Figure 1). School-based GLE was positively and directly correlated with intercultural literacy. Nevertheless, the relationship between school-based GLE and knowledge was negative. Global perspective was directly and positively correlated with intercultural literacy. Accordingly, students from high-income families develop their intercultural literacy via school-based GLE. However, school-based GLE may compromise their knowledge, and such knowledge would otherwise have a positive impact on their global perspective and intercultural literacy.

Further analysis showed that there was a significant difference between the low-income family model and high-income family model, when all of the paths were constrained ($X^2 = 35.08; df = 13; p < .05$), when covariances were constrained ($X^2 = 65.40; df = 16; p < .05$), and when the residuals of all of the variables were constrained to be equal ($X^2 = 105.20; df = 24; p < .05$) (see Table 2 and Table 3). These findings support the different patterns of global competence between students from low- and high-income families described above.

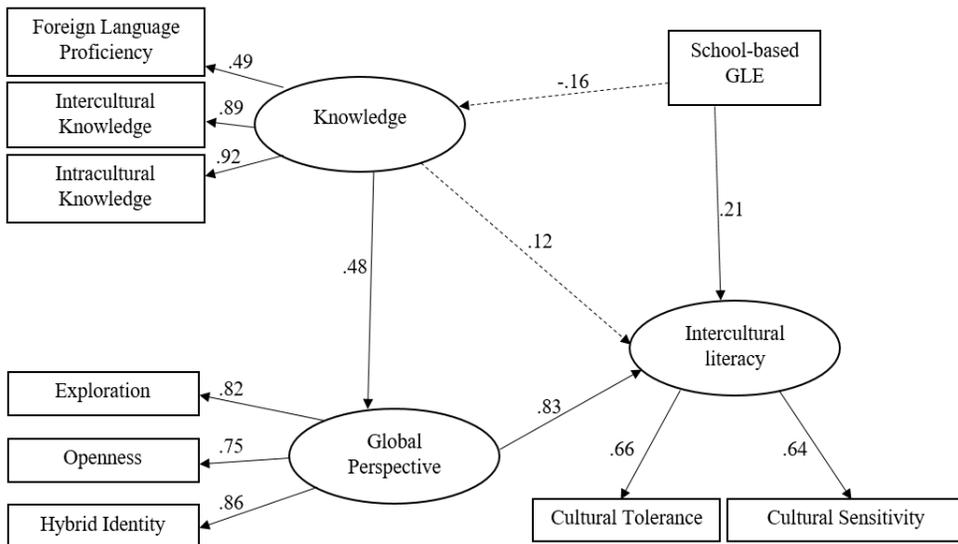


Figure 2. Standardized solutions for structural model—low-income families ($n = 101$)

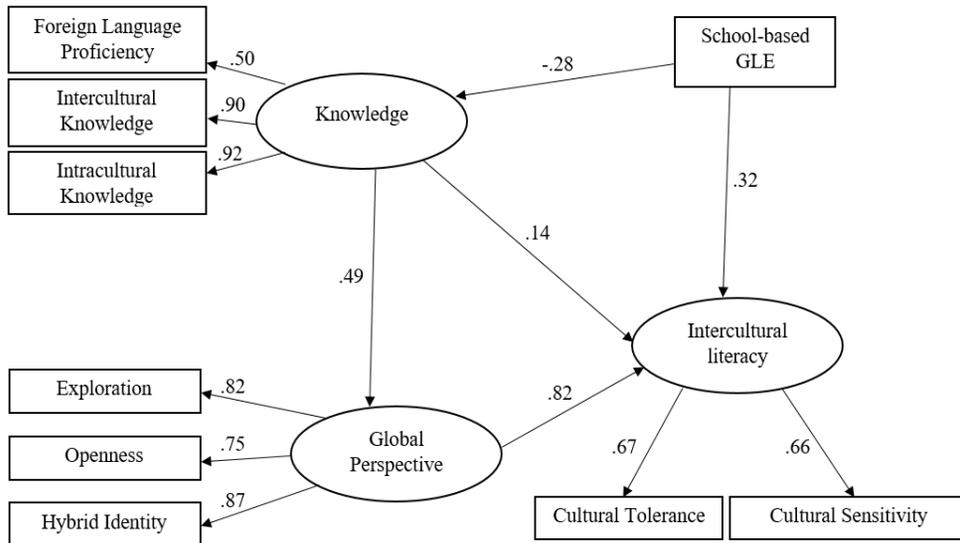


Figure 3. Standardized solutions for structural model—high-income families ($n = 498$)

Discussion

These findings demonstrate that students' foreign language proficiency, intercultural knowledge, and intracultural knowledge have a positive influence on their global perspective and intercultural literacy, indicating that if they have better foreign language proficiency and understanding of intercultural and intracultural issues, they will have stronger global competence. The findings also support the literature on the relationship between family income and global competence (Ng et al., 2018; Weenink, 2008), which finds that students from high-income families tend to have a stronger global perspective and better intercultural literacy than students from low-income families. The findings also indicate that students from high-income families have better knowledge than students from low-income families. The reason might be that children from high-income families benefit from richer family resources, which lay down a better knowledge foundation and in turn create positive synergy with school-based GLE.

The findings to some extent support the sociological literature suggesting that schooling reproduces inequality between students' family backgrounds (e.g., Bourdieu & Passeron, 1990). Nevertheless, the data reveal that the relationships between schooling, family income, and educational attainment may be more complicated, at

least in the case of global competence development. According to the findings, school-based GLE has a negative impact on the knowledge of students from high-income families, and their knowledge still has a positive effect on intercultural literacy (see Figure 3). This implies that schooling may not necessarily benefit, and may even restrict, their global competence development. One possible reason is that the students have already engaged in a variety of global learning activities, and have cultivated global competence knowledge and attitudes outside school.

Chinese society is deeply influenced by Confucian thought. Parents are culturally required to offer their children a high-quality education to help them to succeed in later life (Sun, 2012). Chinese parents are committed to providing their children with a good education not only because of their aspirations for their children but also to avoid being regarded as irresponsible (Leung & Shek, 2011). Because parents from high-income families have much richer resources than their low-income counterparts, they can provide their children with more opportunities to experience many different global learning activities to improve their foreign language proficiency, intercultural knowledge, and intracultural knowledge outside school. Thus, their children may already be equipped with richer global and intercultural knowledge and may perceive the knowledge provided by school-based GLE as inadequate. As a result, these students may perceive school-based GLE as restricting their acquisition of more knowledge to promote their global perspective and intercultural literacy.

Thus, education does not necessarily reduce the disparity in outcomes between students from high- and low-income families, because students from high-income families may still be more motivated and find it easier to learn about global and intercultural skills and issues using prior knowledge obtained from their family (Kim, 2011). This may explain why we observed a negative relationship between school-based GLE and knowledge among students from high-income families, even though knowledge had a positive effect on intercultural literacy. If this explanation is correct, then the reproduction mechanism of schooling may be more complicated than described in existing sociological studies—schooling may conditionally benefit the development of students from high-income families. Further studies should pay attention to this issue to advance our understanding of the reproduction mechanism of schooling.

According to the literature, school-based GLE fosters students' global competence, and can give them opportunities to acquire knowledge that facilitates the development of global perspective and intercultural literacy (Gibson et al., 2008). Nevertheless, the findings of this study do not fully support this argument. First, we find that in general, school-based GLE has a direct positive effect on intercultural literacy and an indirect effect on global perspective through knowledge, but it tends to negatively impact students' knowledge (see Figure 1). Second, we find that for students from low-income families, school-based GLE may not affect knowledge, and thus may

have no effect on intercultural literacy (see Figure 2). These findings imply that school-based GLE in Shenzhen may not address students' need to gain foreign language proficiency and intercultural and intracultural knowledge, which can lead to a stronger global perspective and better intercultural literacy. For example, Li (2015) highlights that some Shenzhen schools nurture students' global competence through experiential learning and project-based learning approaches. To ensure successful learning, these approaches may necessitate students' prior possession of certain kinds of skills, such as information searching, processing, and analysis. Nevertheless, students from low-income families may lack these skills (Wang et al., 2006), thus impeding their learning process. In this situation, students may experience a sense of failure and dissatisfaction in developing a global perspective, which may even reduce their interest in developing intercultural literacy. Moreover, as Zhu and Ruan (2018) observe, Chinese teachers favor traditional, teacher-centered pedagogical approaches despite learning about more progressive types of pedagogy. It is possible that the Shenzhen teachers surveyed in this study also applied traditional approaches to implementing school-based GLE. However, the Asia Society and OECD (2018) indicate that teaching global competence requires interactive, democratic, problem-based, student-centered, and inquiry-based pedagogical approaches. They also show that schools must create safe spaces in which students can freely express opinions, speculate, and debate with fellow students and teachers without being considered discourteous. Thus, school-based GLE is more than a subject, curriculum, or learning activity; it is an open and inclusive learning culture that enables students to experience, learn, and construct knowledge about global competence through structured discussion and debate, project-based learning, service learning, and other collaborative learning activities inside and outside school. As Shenzhen schools and teachers may not create this kind of culture, school-based GLE may not be implemented effectively.

Accordingly, a number of recommendations can be made for education policy-makers to improve school-based GLE. First, as the findings suggest, students' global competence is strongly influenced by family income. Low-income families have fewer resources for supporting students in global learning activities outside school to foster their foreign language proficiency and intercultural and intracultural knowledge. Therefore, to reduce the gap between students from high- and low-income families, education policy makers should provide more resources to help students from low-income families develop global competence. In practice, policy-makers could develop instruments for schools to understand the prior knowledge, expectations, and needs of their students from low-income families, helping them to plan suitable school-based GLE. They may also consider offering more financial support for low-income students to engage in GLE activities like overseas exchange programs. Policy-makers can also consider directly sponsoring

students to join these activities, to increase their opportunities to learn and experience cultural and intercultural practices and issues. They can also subsidize businesses and social organizations to offer complimentary GLE activities for students from low-income families. Otherwise, the global competence gap between students from high- and low-income families will widen.

Second, schools and teachers in Shenzhen should design GLE and create a learning culture that meets their students' need to learn global competence. However, they may not have the autonomy to do this, because China has a top-down and centralized education system (Yalun & Du, 2019). Therefore, education policy-makers should give greater autonomy to individual schools and teachers, because decentralization can empower them to design school-based curricula to respond effectively to their students' learning needs (Cheng, 1996). Policy-makers should also provide training for school leaders and teachers in autonomously designing and implementing school-based GLE.

One limitation of this study concerns the use of a self-reported questionnaire to assess students' knowledge and global competence. The students' responses may have reflected only their self-perceived performance in these domains, rather than their actual knowledge and competence. Therefore, further studies should repeat this study using objective measures of knowledge and global competence. Moreover, the study's cross-sectional design does not illustrate changes in students' global competence over time after participating in school-based GLE. These findings also do not provide information to evaluate which kinds of school-based GLE are more effective. Therefore, researchers should conduct longitudinal studies to investigate how school-based GLE changes students' global competence over time, and evaluation studies to investigate the effectiveness of different school-based GLE approaches. In addition, this study only examines the global competence of high school students in Shenzhen. Therefore, the findings may not be generalizable to other cities. Thus, it is recommended that further studies be repeated with other student populations. Finally, the absence of a valid global competence measurement may have affected the research validity. Thus, further research should be undertaken to develop a valid instrument for use in future studies.

Address for correspondence

Kwok Kuen Tsang
Beijing Normal University
No. 19 Xijiekou Wai St., Beijing 100875, P.R. China
Email: kktsang@bnu.edu.cn

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Structural relationship among environment, motivation, engagement and transfer of training of teachers in distance education*

Hye-Sook Kim
Daegu University, South Korea
Shin-Bok Yu
Kyungpook National University, South Korea

Abstract

This study investigates the structural relationship among motivation, environment, engagement and transfer of training of teachers in distance education. There were 1,437 survey responses from primary and secondary school teachers in South Korea, and structural equation modeling was used to analyze the data. The findings underline that learning engagement in distance education had a significant mediating effect on the relationship between task value, self-efficacy, contextual factors and transfer of training. Also, contextual factors of distance education had significant direct effects on learning engagement and transfer of training. These findings suggest implications for the motivational and contextual factors when designing and developing effective instructional and learning strategies in distance education for teachers.

Keywords: distance education, teacher training, learning engagement, transfer of training, structural equation model

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Adult distance education is not a new phenomenon, but in recent years a growing number of distance programs have been aimed at primary and secondary school teachers. Teachers need to update their knowledge and skills on curricular matters, psychology, and the pedagogy of learners, as well as new research on teaching and learning; hence, they need appropriate in-service training as well (OECD, 2005). With the development of information and communication technology, distance learning has been activated. Participation has also increased since distance learning can occur at any time, which aligns with the busy daily life and work life of teachers.

Studies show that once teachers are exposed to distance courses, they will become familiar with the technology and nuances of distance education and will be more prone to use it as a delivery pedagogy in their classroom (Willis & Raines, 2001). There are some learning strategies that are uniquely required for distance learning (Eastmond, 1993). Studies that examine reasons for participating in distance education may offer insight into the relationship between motivation and outcome. Learners across studies appear to enroll in online courses for similar reasons; for example, convenience, flexibility in scheduling, credit recovery, accelerated learning opportunities, conflict avoidance, and the ability to take courses not offered in one's local area (Mills, 2003; Tunison & Noonan, 2001).

In spite of such quantitative growth, there has been a repeated call for systematic quality management and support for distance education for teachers in South Korea. First, expectations of teachers are constantly growing regarding the contents and program operations of distance education. Although teachers who take distance education courses have lower levels of satisfaction for their teachers in both the technical and systematic arenas in the past (Kim et al., 2014), recently, satisfaction with the content and program operations is low (Ahn et al., 2018; Kim et al., 2018). Teachers who take distance education courses are requesting that online course contents are relevant to their teaching, reflect the latest trends, and induce their interests, and the programs be composed of specialized and accurate contents. In addition, from the perspective of the learners, the qualitative level of the teachers' engagement in distance education programs is not up to par with the level of quantitative growth. According to a study by Kim et al. (2016), only 22.1% of the group had a high level of cognitive and emotional engagement in distance education, with a higher proportion in the non-voluntary than voluntary engagement group. In addition, they found that there was inadequate financial support for teacher training from schools and the Office of Education, along with a significant gap not only in the amount of subsidies to support teacher training for each unit school, but also in the organizational culture of the school that encourages voluntary training.

With the establishment of distance teacher training institutions since 2000, An et al. (2000) developed the initial model for distance education for teachers, including

a prototype and a management plan. They proposed an open system model composed of the core internal part and external elements for distance education. The core internal part of operations includes a need analysis, course development, transmission and interaction, and evaluation. The external elements include facility support, policy support, student records, and student support. These elements have been treated as major evaluation factors to certify distance teacher training institutions. Recent research on distance education can be divided largely into survey work on the level of satisfaction of teachers (Kim et al., 2014; Yu et al., 2013), analysis of the quality of the content and learning management systems (Kim, 2013), analysis of educational programs in distance education (Kim et al., 2013), the relationship between learner characteristics, levels of satisfaction on learning and academic achievement in distance education (Hwang & Choi, 2006; Kang et al. 2011), improvement in distance education policies (Jung et al., 2013) and development of tools for measuring the performance of distance education (Joo et al., 2014). That is, in the early stages, the majority of research focused on the demand for distance education programs, content development, and improvement or evaluation of the system.

In recent years, with the segmentation of research on distance education, more studies have investigated the psychological characteristics of the participants in distance education and disclosed the relationship among the relevant variables. Several studies aimed at disclosing the types of learners, according to engagement, or investigating the variables that affect engagement as the characteristics of the learners (Kim et al., 2016), analyzing the correlation between the contextual variables and the level of preparedness and self-efficacy of teachers (Nam, 2017), examining the structural relationship between the distance education service, levels of loyalty and satisfaction of teacher's distance training courses, and recognition of the quality by participants (Jeong, 2017) and investigating the relationship between the level of distance learning engagement and how well teachers used what they learned (Ahn et al., 2018). Such changes illustrate the expansion of the interest in learning engagement and variables that influence distance education, including changes in the level of satisfaction, self-efficacy and transfer of training by engagement in distance learning, and the individual and contextual factors that influence distance learning engagement, rather than the demands for content or the evaluation itself. So far, few studies have examined the relationship between distance learning engagement and transfer of training for teachers. In particular, there are not many researches dealing with exploring the structural model and the role learning engagement plays in transferring what teachers learned in distance education through motivational and environmental variables. Because there are virtually no studies examining the relevance of the motivational and environmental variables mentioned and their impact on learning engagement in distance education, it is difficult to get an idea of on what mechanism the distance education related variables could be operated, if we expect

an effect. Therefore, this study explores ways to increase the level of teachers' participation in distance education and increase the degree of application in the field.

This study presents contextual variables and motivational variables as the overall variables that affect the learning engagement of teachers in distance education programs on the basis of the learning engagement model, in order to assess the structural relationship among the overall influential variables. By examining the contextual factors and motivational variables, and the effects of these variables on the transfer of training through learning engagement in distance education, we anticipate that we will arrive at implications for the development of teaching and learning strategies teacher distance education. The research questions are as follows:

- 1) What is the structural relationship among motivation factors, contextual factors, learning engagement and transfer of training in distance education?
- 2) Is learning engagement significant as a mediating effect in the path of motivation and contextual variables in the transfer of training in distance education?

Variables and their relationships

In this section, we describe the concept of task value, self-efficacy, contextual factors, learning engagement, transfer of training and the relationships between the variables.

Learning engagement in distance education for teacher training

Distance education, or distant learning, has been a major form of professional development for pre-service and in-service teachers in developing and developed countries. In this study, distance education means teaching and learning via the Internet. Although there are various definition of e-learning (Khan, 2005; Lee, 2002; Rosenberg, 2001), from a technical perspective, e-learning uses a telecommunication network such as the Internet and delivery system that can be expanded to a desktop computer or mobile units. Distance education signifies training executed through the Internet for the entire training program and all the activities that occur during the process of distance education are managed through a learning management system (Korea Education and Research Information Service, 2007). The number of teachers participating in distant training programs is increasing every year in South Korea.

The number of teachers who completed distance education programs nearly doubled in the 4 years from 2012, from 699,115 to 1,242,516 (South Korea Ministry of Education & Korean Educational Development Institute, 2017).

Learning engagement in distance education is a critical factor for predicting the effects of learning, and is defined as the efforts made in the learning process by the learner in order to accomplish the goals of learning (Coates, 2006). Learning engagement in distance education requires cognitive, emotional and behavioral effort by the teachers who become the learners, thereby requiring multifaceted approaches. Since teachers often need to engage in a distance education program while executing their jobs of teaching their own students at the same time, there is a need for a cognitive approach including time management and self-control strategies (Hwang & Choi, 2006). In this study, we used a distance learning engagement scale from Kim et al. (2016) that had been validated for the multifaceted approach appropriate for teachers engaged in distance education (Fredricks et al., 2004; Sun & Rueda, 2012), which presented learning engagement at school from the cognitive, emotional and behavioral perspectives. This scale distinguished learning engagement in distance education into cognitive engagement and emotional engagement. For the cognitive engagement, use of self-regulated learning strategies is proposed mainly as the cognitive effort of the learners to acquire the complicated contents and skills in the learning process, while for the emotional engagement includes the interest in learning and the attitude of the learner towards distance education.

In particular, in the distance education environment, it is difficult to anticipate effective learning without the cognitive and emotional engagement of learners because many factors related to learning, such as learning time and progress, are determined by the learner's choice.

Learning engagement affecting transfer of training

Transfer of training is the extent of application and utilization of the techniques, attitude and abilities acquired through educational training to situations that are other than learning, such as one's professional work (Wexley & Latham, 1981). Transfer of training is defined as 'generalization and continuing with what has been learnt and scrapped through educational training' (Baldwin & Ford, 1988). In-depth cognitive learning and active learning of the learner are the core issues of transfer. In order for learners to generate transfer effects after having engaged in learning, they need to be able to process the knowledge attained at a profound level in the learning process, the acquired knowledge must be conceptually condensed, and the learners must be able to connect them with learning contents under diversified situations (Pugh & Bergin, 2006). When considering that the intrinsic purpose of teacher

training is to apply the contents learned through specialization development at their worksite, there is a need to discuss the effects of learning engagement in distance education on the transfer of training. One of the factors affecting transfer of training—motivation for participation—is a defining learner's characteristic that was emphasized first by Burke and Hutchins in 2007. They found that the primary learner characteristics influencing transfer of training include the trainee's intellectual ability, self-efficacy regarding the training task, motivation level, as well as job/career variables and personality traits that can largely affect trainee motivation.

A cluster analysis of the types of learner by learning engagement in distance education (Kim et al., 2016) found that learners are classified into four types: high engagement, average engagement, cognitive engagement deficiency and low engagement, with the extent of transfer of training manifested in the order of engagement, from greatest to least. This finding suggests the need to investigate the causal relationship between learning engagement in distance education and transfer of training.

Task value, self-efficacy and contextual factors affecting learning engagement and transfer of training

Within the field of educational research, motivation and learning engagement are considered important. It is critical that learners become genuinely interested in learning and are motivated to learn in such a way that they acquire new knowledge and persist in their learning over time. The learning engagement model by Skinner et al. (2008) proposed in this study considers learners' motivational factors. This study focused on the teacher's task value and self-efficacy motivation. Task value refers to the value of the tasks acknowledged by the learners, which include interest, importance and usefulness of the task itself (Wigfield & Eccles, 1992). Expectancy-Value Theory (Wigfield & Eccles, 1992) states that expectancies and values determine which tasks people pursue and persist in. Task value is closely related to the selection of tasks, use of cognitive strategy and self-control (Han, 2004). Thus, if the learner considers the task more valuable, there is higher probability of choosing the task with use of the appropriate cognitive strategy and increasing the frequency of executing the task (Kang et al., 2011). Therefore, task value not only affects the selection of and continuation with the training process, but also, it is related to the effort made in the learning activities or learning engagement. For example, learners in distance education with higher task values displayed higher level of cognitive and emotional engagement (Kim & Yu, 2016). Also, in a study of university students, task value predicted behavioral and cognitive engagement

(Marchand & Gutierrez, 2017). However, there are few studies dealing with the direct relationship between task value and transfer of training.

Self-efficacy refers to the confidence of an individual in his/her ability to organize and execute actions required to accomplish the intended outcomes (Bandura, 1977). In this study, the concept of academic self-efficacy can be viewed as the confidence in the outcome of distance education. Skaalvik and Skaalvik (2014) found that higher teacher self-efficacy predicted greater engagement in distance education with approximately 2,500 Norwegian elementary and middle school teachers. In the case of Massive Open Online Courses (MOOCs) for adult learners, academic self-efficacy of the learner is found to have a significant effect on the decision to engage and persist in learning, since the program is a long-term process and the autonomy of the learner is emphasized (Breslow et al., 2013). In addition, there has been some research on self-efficacy as another motivational factor to explain learning engagement in a university or adult e-learning situation (Ha & Im, 2010; Joo et al., 2010; Sun & Rueda, 2012; You & Kang, 2011; Wang et al., 2008). To summarize these studies, in an online learning environment, a learner with higher academic self-efficacy has a higher possibility of more assertively engaging in learning by promoting self-determined motivation, and displays a more affirmative attitude toward learning outcomes such as academic performance.

Switzer et al. (2005) proposed that self-efficacy may increase transfer of training primarily through motivation to learn. In other words, transfer of training is expected to be influenced by mediating factors of commitment to transfer goals to success rather than directly affected by self-efficacy (Machin & Fogarty, 1997). Studies on the direct effect between self-efficacy and transfer of training are limited and difficult to find, but it can be seen that self-efficacy affects transfer of training indirectly through goal commitment.

Task characteristics among the contextual factors that explain learning engagement is linked with the recognition of the environment in e-learning. Technology factors that explain learning engagement in e-learning, that is, functionality and interaction, impart affirmative effects on cognitive engagement and have significant mediation effects on the learning transfer or transfer of training (Kim, 2013). Therefore, functionalities including minimization of system error and convenience in accessing the web and interaction, such as inducing the engagement of the learner in question and answer sessions, influence learning engagement in online programs. Fredricks et al. (2008) presented task characteristics among the contextual factors that affect learning engagement. That is, if the learning lesson in class has higher relevance with the tasks of the learner, and if the level of support for learning and interaction with colleagues is higher, then the level of engagement is also high. In addition, a needs analysis of teacher groups in distance education (Kim et al., 2018), the most demanding level is whether what they learned in distance education can be used immediately in class and reflected in the latest trends in teaching methods.

Contextual factors have been viewed as a critical factor in the success of distance education. Wise et al. (2004) found that contextual factors are thought to create an approachable environment and hence, more satisfying learning experience and greater learning engagement. However, the target of the study was students, not teachers, in online learning. Learners feel more motivated to engage when they think that what they are learning will be helpful and when they are satisfied with contextual factors such as content quality and program operation in distance learning. Also, social presence has been viewed as a critical factor in the success of online learning. High social presence is thought to create an approachable environment and hence, more satisfying learning experience and learning.

Method

Participants

A total of 1,437 primary and secondary school teachers who completed more than 60 hours of distance education during the last three years completed our survey. Teachers who wished to participate were asked to complete the survey online. Demographic information on the participants is shown in Table 1. The teachers were allowed to access the survey website from a link through each distance teacher training institution. They were provided incentives, such as beverage coupons, to complete the survey. The distance teacher training institutions are divided into municipal training institutions, university-affiliated training institutions, private training institutions, and public institution training institutions.

This study did not target specific programs to identify causal relationships among variables affecting learning engagement and transfer of training. The purpose of this study was to search for variables that affect learning engagement in distance education in the overall sense, rather than the results limited to specific programs. Therefore, the participant's program was limited to the most recently completed programs at the time of survey completion. These programs include interactions between instructors and learners, or between learners through limited ways. For example, teachers can give their own opinions related to the training subject and the instructor or tutor can provide feedback on their responses. In some programs, discussion boards are also available to share ideas among trainees. Although each province's school district has different requirements, teachers must participate in a certain number of trainings per year to prepare for school evaluation and promotion. As shown in Table 2, the training topics and program duration are very diverse.

Table 1. Descriptive statistics of the participants

Variables		Frequency (%)
School level	Elementary school	717 (49.9)
	Middle school	339 (23.6)
	High school	381 (26.5)
School area size	Metropolitan city	812 (56.5)
	Medium and small city	407 (28.3)
	Town area	208 (14.5)
	Island area	10 (0.7)
Teaching experience	Less than 5 years	217 (15.1)
	More than 5 but less than 10 years	182 (12.7)
	More than 10 but less than 20 years	418 (29.1)
	More than 20 years	620 (43.1)
Training institutions	Municipal	547 (38.1)
	Private	335 (23.3)
	Public	529 (36.8)
	University-affiliated	26 (1.8)
Gender	Male	583 (40.6)
	Female	854 (59.4)
Total		1,437 (100)

Table 2. Topic and duration of participants' distance training programs

Training Theme and Duration		Number of Respondents	%
Training topic	teaching and learning	506	35.2
	career and guidance	460	32.0
	liberal arts	373	26.0
	others	98	6.8
Training Duration	Under 15h per week	541	35.8
	16-30h per week	793	55.2
	31-45h per week	52	3.6
	46-60h per week	50	3.5
	61h or more	28	1.9

ANOVA and the post-hoc analysis were conducted to determine if there were differences in research variables by the training topic. The results showed that teaching and learning, career and guidance, and liberal arts were attended by the most teachers. Because others were difficult to classify as a specific training theme, ANOVA was conducted again for only these three training themes. The results showed the differences in task value, self-efficacy, learning engagement and contextual factors, and transfer of training in the other three training topics were not statistically significant.

Measures

The survey included items related to each of the five constructs: task value, self-efficacy, contextual factors of distance education, learning engagement, and training of transfer. From prior studies, we selected and validated items for each construct. Contextual factors were composed of questions to measure the sufficiency of relevance, usability, contents and program operation in distance education derived from studies that examined satisfaction with a distance education program and key evaluation standards (Kim et al., 2013; You & Song, 2013). Specifically, it is composed of questions that measure whether the relevance complied with the demands of the teachers, whether the usability is convenient for the online learning system, whether the contents are appropriate for the subject of teacher training, and whether the program operation is sufficient for the operation of a distance education program with learner support services. Participants were instructed to provide answers for this study by limiting their experiences to the distance education program that they completed most recently. In this study, transfer of training is presented as the extent of application of the contents learned through distance education in executing a teacher's tasks, by classifying them into classroom lessons, guidance and consultation for students, classroom management, and other school related duties. The teachers rated the survey items from 1 (*strongly disagree*) to 4 (*strongly agree*) on a four-point Likert scale. The summary of measurement items is presented in Table 3.

Table 3. Measurement variables

Variables	No. of Questions	Cronbach's Alpha		Source	Example of items
		Factors	Total		
Task value	3	-	.896	Joo & Kim (2008)	I think the distance learning curriculum is very useful overall.
Self-efficacy	3	-	.887	Joo & Kim (2008)	I am very confident in my course learning.
Contextual Factors	Relevance	3	.884	Stufflebeam (2002) Kim et al. (2014) Yu et al. (2013)	It is operated in response to the needs of the students.
	Usability	5	.853		It is convenient to connect and operate the system.
	Contents	6	.926		The amount of learning is appropriate.
	Program operation	6	.921		Interaction with tutors and instructors is enough.
Learning Engagement	Cognitive engagement	6	.889	Sun & Rueda (2012)	I searched the Internet and other materials for information related to distance training.
	Emotional engagement	4	.891		I am interested in the task of doing distance training.
Transfer of training	4	-	.903	Kim, Kim, & Yu (2018)	What we learned in distance training was applied to class management.
Total	40				

Research model

Our research model is based on the learning engagement model proposed by of Skinner et al. (2008). This model explains learning in the flow of '(environment) context → (motivation) self → (engagement) action → (accomplishment) outcome'. The perspective of context explained in this model views the contextual variables surrounding the learner, such as the support of an instructor, as influencing the motivational perspective related to the capacity or autonomy of the learner, and contextual variables and motivational variables as affecting learning engagement. Moreover, the model assumes that learning engagement can lead to results, such as academic accomplishment. In particular, this kind of process suggests the importance of learning engagement.

The purpose of this study is to examine whether the task value and self-efficacy of distance education learners and contextual factors affect learning engagement in a distance education program, and what effects teachers have on transfer of training through learning engagement in distance education. The model for this study is presented in Fig. 1.

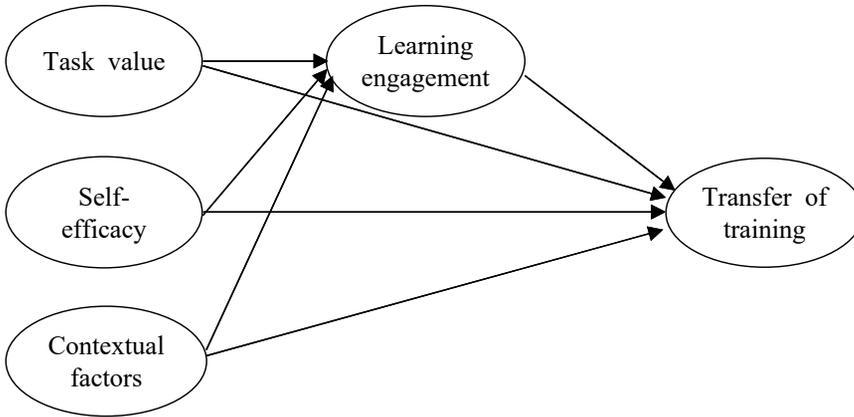


Figure 1. The research model

Data analysis

We used structural equation model (SEM) analysis to measure precisely the relationships between variables by controlling each variable’s measurement error and to identify the direct and indirect effects of the factors. SPSS Statistics 18.0 (IBM, Armonk, NY) was used to analyze descriptive statistics and test reliability and validity of each construct. AMOS 20.0 (SPSS Inc, Chicago, IL) was first used to conduct a confirmatory factor analysis of the fit and validity of the measurement, and then the structural model of this study was adopted. Analysis procedures were as follows. First, we assessed the measurement model, and the relationship among the latent variables was verified through the structural model analysis. The Maximum Likelihood Estimation (MLE) was used to estimate the coefficient, and the chi-square value was (X^2) considered fundamental to evaluate the appropriateness between the model and data. Moreover, we used the following goodness-of-fit indices: the fit of the measurement model using TLI ($\geq .90$), CFI ($\geq .90$) and RMSEA ($\leq .80$, 90% CI) as supported by Brown and Cudeck (1992). Second, indirect effects were investigated through bootstrapping and then the Sobel test (Preacher & Hayes, 2004) was implemented to verify the statistical significance of the mediating effects of learning engagement on the relationship between task value, self-efficacy, contextual factor and transfer of training for distance education.

Results

Descriptive statistics and correlations

Results of the correlation coefficient, average, standard deviation, skewness and kurtosis between the measurement variables included in this study are illustrated in Table 4. Multivariate normal distribution must be presumed for analysis of the structural equation model, and it was possible to confirm that the equation model complied with the multivariate normal distribution through skewness and kurtosis. In this study, the absolute value of skewness was in the range of .32 ~ .64, while that of kurtosis was in the range of .02 ~ .75. Because the standard kurtosis was smaller than 3 and the kurtosis smaller than 10, all the normalization standards were satisfied – that is, the current data satisfied the assumption of multivariate normal distribution (Kline, 2015). Based on the results of correlation analysis of each variable, the correlation coefficients between all the variables were found to be statistically significant with the significance level of .01 and all the variables displayed a positive correlation.

Table 4. Descriptive statistics of measurement variables

Measurement Variable	1	2	3	4	5	6	7	8	9
1	1	.718**	.601**	.498**	.614**	.568**	.660**	.722**	.650**
2		1	.456**	.418**	.507**	.455**	.618**	.570**	.542**
3			1	.660**	.772**	.695**	.478**	.521**	.602**
4				1	.704**	.672**	.380**	.408**	.502**
5					1	.782**	.478**	.530**	.607**
6						1	.476**	.519**	.603**
7							1	.732**	.635**
8								1	.670**
9									1
<i>Mean</i>	9.76	9.78	9.84	15.95	19.66	18.89	18.38	11.96	12.59
<i>SD</i>	1.80	1.71	1.81	3.09	3.57	3.82	3.57	2.83	2.46
<i>Skewness</i>	-.59	-.32	-.62	-.61	-.64	-.42	-.35	-.45	-.52
<i>Kurtosis</i>	.75	.17	.69	.35	.59	-.02	.45	-.07	.65

** $p < .01$

1. Task value, 2. Self-efficacy, 3. Contextual factors(Relevance), 4. Contextual factors(Usability), 5. Contextual factors(Contents), 6. Contextual factors(Program operation), 7. Cognitive engagement, 8. Emotional engagement, and 9. Transfer of training

Assessing the measurement model

Before analyzing the structural model, we calculated the goodness-of-fit indices for the measurement model. As presented in Table 5, the results showed that the measurement model had a good fit with the data (TLI=.970, CFI=.976 and RMSEA=.058). These results indicate that our measurements of the latent model variables were valid. In addition, all of the factor loadings were higher than .30, ranging from .760 to .921 ($p < .001$), indicating good convergent validity (see Table 6).

Table 5. Fit statistics for the measurement model

	χ^2	df	TLI	CFI	RMSEA (90% CI)
Measurement Model	543.946***	94	.970	.976	.058 (.053 - .062)
Criteria (Browne & Cudeck, 1992)			> .90	> .90	< .80

*** $p < .001$

Table 6. Path coefficient of the measurement model

Latent variable	Observed variable	Estimates (B)	SE	Standardized Estimates (β)
Task value ←	Task value(1)	1.000		.849
	Task value(2)	.921***	.022	.869
	Task value(3)	.975***	.023	.873
Self-efficacy ←	Self-efficacy(1)	1.000		.850
	Self-efficacy (2)	.964***	.026	.829
	Self-efficacy(3)	1.045***	.026	.870
Learning Engagement ←	Cognitive engagement	1.000		.847
	Emotional engagement	.810***	.021	.864
Contextual Factors ←	Relevance	1.000		.844
	Usability	1.588***	.044	.785
	Contents	2.152***	.046	.921
	Program operation	2.213***	.051	.886
Transfer of Training ←	Transfer of training(1)	1.000		.850
	Transfer of training(2)	1.019***	.024	.872
	Transfer of training(3)	1.048***	.024	.880
	Transfer of training(4)	.969***	.029	.760

Assessing the structural model

After confirming that the goodness-of-fit indices for the measurement model met the criteria, we analyzed the fit of the structural model. As shown in Table 7, the research model showed a good fit with the data, as judged by the suggested criteria (TLI = .970, CFI = .976 and RMSEA = .058). In the research model, all direct effects were statistically significant, except for the effect of (1) self-efficacy on transfer of training ($\beta = .008, p > .828$) and (2) task value on transfer of training ($\beta = .032, p > .597$). Therefore, we sequentially removed the two paths stated from the structural model within the range of not damaging the appropriateness with considerations for the simplicity of the model (Bae, 2009). Because the initial and modified models showed a hierarchical relationship, a chi-square was used to measure the statistical difference between the two models, which showed no significant difference between the two in terms of the goodness of fit ($\Delta X^2 = 0.564, \Delta df = 2, p > .05$). With this finding, we confirmed the modified model as the final research model due to its conciseness. Figure 2 shows the standardized path coefficients of the modified model.

Table 7. The goodness-of-fit comparison between research model and modified model

Goodness-of-fit indices	X^2	df	TLI	CFI	RMSEA (90% CI)	$\Delta X^2(\Delta df)$
Research model	543.946***	98	.970	.976	.058 (.053 - .062)	.564(2)
Modified model	544.510***	96	.970	.976	.057 (.052 - .062)	

*** $p < .001$

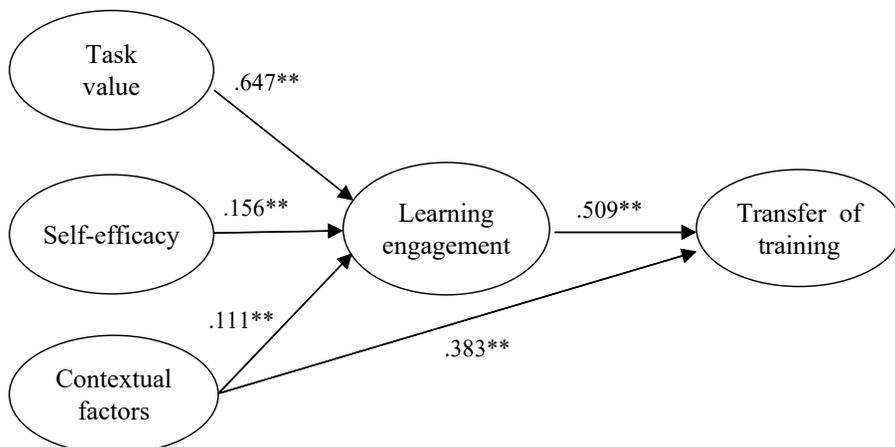


Figure 2. Modified Model with Standardized Path Coefficients

The relationships between the variables in the modified model are shown in Table 8. First, task value ($\beta = .647, p < .001$) and self-efficacy ($\beta = .156, p < .001$), which are the motivational factors, had statistically significant effects on learning engagement in distance education. Second, contextual factors of distance education had statistically significant effects on learning engagement ($\beta = .111, p < .001$) and transfer of training ($\beta = .383, p < .001$) in distance education. Last, learning engagement had a statistically significant effect on transfer of training ($\beta = .509, p < .001$) in distance education.

Table 8. Path coefficients of the structural model

Path		Estimates (B)	SE	Standardized Estimates (β)	<i>t</i>
Task value	→ Learning engagement	3.322	.249	.647	13.331***
Self-efficacy	→ Learning engagement	.880	.220	.156	3.991***
Contextual factors	→ Learning engagement	.220	.059	.111	3.755***
Contextual factors	→ Transfer of training	.146	.011	.383	13.184***
Learning engagement	→ Transfer of training	.098	.006	.509	16.624***

*** $p < .001$

Table 9 shows total effects, direct effects and indirect effects of variables on transfer of training. Both the direct and indirect effects of the contextual factors in distance education on transfer of training were found to be statistically significant, with the direct effects ($\beta = .383, p < .05$) imparting greater influence than the indirect effects ($\beta = .057, p < .01$). In addition, squared multiple correlation (SMC) indicates that the extent of what is explained in variance by the task value, self-efficacy, contextual factors and learning engagement in distance education for transfer of training was 66.4%.

Table 9. Total, direct, and indirect effects of variables on transfer of training

Variables	Total Effect	Direct Effect	Indirect Effect	SMC
Task value	.330*	-	.330*	.664
Self-efficacy	.079**	-	.079**	
Contextual factors	.440*	.383*	.057**	
Learning engagement	.509**	.509**	-	

* $p < .05$, ** $p < .01$,

Mediation analysis

To investigate learning engagement's mediation effect, we verified the statistical significance of the indirect effects by conducting bootstrapping at a significance level of .001. Results of the z -value computed by formula of Sobel (Preacher & Hayes, 2004) to verify the mediating effects of learning engagement are given in Table 10. The results show that the mediating effects of learning engagement were statistically significant in all paths from the task value to transfer of training ($z = 3.635, p < .001$), from self-efficacy to transfer of training ($z = 3.885, p < .001$) and from contextual factors in distance education to transfer of training ($z = 10.333, p < .001$).

Table 10. Mediation effect of learning engagement

Path		Coefficient	SE	z
Task value		.022	.006	3.635***
Self-efficacy	→ Learning engagement → Transfer of training	.086	.022	3.885***
Contextual factors		.326	.032	10.333***

*** $p < .001$

Discussion

The purpose of this study was to investigate the relationship among motivation, environment, learning engagement and transfer of training for teachers so that we could propose an integrated model to explain learning engagement and transfer of training in distance education. The key results and implications are summarized below.

First, the results showed that task value had a significant direct effect on learning engagement in distance education. This confirms teachers' acknowledgement that the completion of the distance education program was important and useful for them as a learning motive and can lead to in-depth cognitive engagement (Hidi & Harackiewicz, 2000; Pintrich & Schunk, 2002). In addition, it is in line with a prior study that the task value of adult learners in MOOCs encourages learning engagement (Jung & Lee, 2018). In particular, it was found that the task value had a relatively greater effect on learning engagement in comparison to other variables (see Table 8). This suggests that recognition of the importance and usefulness of the corresponding distance education program by the learner can become the motivating

force to induce assertive engagement.

Second, self-efficacy had a significant direct effect on learning engagement in distance education. That is, when designing distance education programs, it is important to plan a learning strategy to enhance self-efficacy in order to increase learning engagement. Such results are in concordance with the results of previous research conducted on university students and MOOCs (Jung & Lee, 2018; You & Song, 2013). You and Kang (2011) concluded in their study on university students that recognition of learners' own academic self-efficacy is a core factor that leads to assertive learning engagement.

Third, contextual factors in distance education had a significant direct effect on both learning engagement and transfer of training. In particular, contextual factors showed greater direct effects on transfer of training, which could be deemed the ultimate goal of distance education, than the indirect effect through learning engagement. As learners perceive that their distance education courses are more relevant and more usable, and the content and program operation are more appropriate, they are more likely to engage in distance education. Also, contextual factors had a significant indirect effect on transfer of training. Park and Kim (2015) investigated factors that affect the transfer of training by the teachers in an in-person training situation, and found that an indirect path from learning engagement to transfer of training via program content, that is, the contextual factor is significant although the direct path through which the voluntary engagement affects transfer of training is not significant. Thus, even if the voluntary engagement of a teacher is high, it is not possible to guarantee the enhancement of specialization that can be used in their professional work if the program does not consider task relevance for the practical training goal. The relevance and contents among the contextual factors presented in this study signify whether the demands of the teachers are being reflected and whether the contents of distance education programs can actually be utilized and useful.

Fourth, learning engagement had a significant direct effect on transfer of training. Results of the cluster analysis by Kim et al. (2016) indicated that there is a significant difference in transfer of training in accordance with the cognitive and emotional engagement types of learners; however, it failed to present it as a structural relationship between the variables. In this study, it was possible to explain clearly the relationship between the two variables by disclosing that the direct path from learning engagement in distance education to transfer of training is statistically significant. Therefore, there is a need to establish a strategy for enhancing learning engagement both for motivation and contextual factors at the programmatic development stage of and during implementation, in order to enhance the transfer of training.

Fifth, this study explored the indirect effect of learning engagement on the

relationship between the study variables and transfer of training in distance education. Learning engagement significantly mediated the relationship between task value, self-efficacy, contextual factor and transfer of training. In particular, although the direct path from the task value to transfer of training and from self-efficacy to transfer of training in the research model in this study were not significant, it is necessary to note that the indirect path via learning engagement was statistically significant. The motivation variables have an effect on learning engagement, as indicated in the learning engagement model. However, without learning engagement, learners cannot gain the learning outcome (Skinner et al., 2008). This suggests that it is important to induce cognitive and emotional engagement in distance education until learners come to use what they have learned, even though the learners have a high task value and self-efficacy. This result is in concordance with the results of Jung and Lee (2018), who found that although the path from academic self-efficacy and perceived usefulness to learning persistence in MOOCs was not significant, learning engagement as the indirect effect was significant.

Recently, the number of distance education program participants in South Korea has been continuously increasing. However, rather than being satisfied with the quantitative growth in distance education, it is necessary to develop a lot of content with high transition in terms of quality, and to make it possible for many teachers to participate. To this end, the implications of educational policy and system improvements are as follows. First, it is necessary to increase the proportion of autonomous selective training rather than compulsory training for teachers. Second, a distance education program should be developed that meets various demands by using the characteristics from a variety of distance teacher-training institutions and by expanding the quality management system. Third, emphasis should be placed on the development of distance education programs centered on transfer of training. It is necessary to enhance the participation of teachers through training through the life cycle training system. Last, it is necessary not only to expand the support for teacher training tuition fees in each school, but also to provide free Wi-Fi in schools in order to use mobile content freely.

The results of this study show that a remote training program that can be satisfied by teachers should be developed not only to be more immersed in learning, but also to apply what they learned in the field faster. Based on the results of this study and previous studies (Burns, 2011; Kang et al., 2011; Kim et al., 2018; Knowles, 1984), the following recommendations for designing distance education programs are suggested. First, it is necessary to provide detailed information on online content so that teachers have confidence in understanding the content of the program and accessing it online. Second, before the training starts, there are ways to ensure that teachers are fully aware of the value of the training program and to participate in the training. Third, adult learners are practical and want solutions they can implement to

address real-life challenges. Therefore, the program should be structured to give the opportunity to reflect on and analyze teachers' own practice. As adult learners, teachers should be provided appropriate time for learning at a distance. Fourth, it is necessary to conduct regular surveys of needs, and to understand which topics are important and relevant to learners' ages, school levels, and subject-specific characteristics. Last, it is necessary to give teachers the opportunity to practice a new approach or apply new knowledge to enhance transfer of training. More practical approaches, such as micro-teaching, should be central to the design of a distance education program that aims to improve the quality of instruction and affect student learning.

Although this study suggested several points for future studies, some limitations remain. The primary purpose of this study was to see if there are relationships between learning engagement and transfer of training, and motivational and contextual factors in distance education. Therefore, the analysis was conducted with all subjects as elementary, middle and high school teachers, and the characteristics according to school level were not examined. In addition, as a result of analyzing differences in the school level for major variables in this study, primary school teachers had higher task value, self-efficacy, transfer of training, and contextual factors than middle and high school teachers; however, there was no statistically significant difference in learning engagement by school levels. It is necessary to examine in future studies whether the structural model between learning engagement and transfer of training, and motivation and contextual variables suggested in this study differs according to school level, using a multi-group structural equation model analysis. Also, this study is not a case study that examines the relationship between variables in a specific distance training program, but rather to find the relationship between the main variables that explain distance education in a general point of view. Multiple variables can be considered in one model, but major variables were selected and presented considering the simplicity of the model. In future studies, other models explaining teachers' learning engagement and transfer of training may be added to expand this model.

Despite these limitations, this study examined and provided an understanding of how learning engagement can be facilitated in distance education, considering the effects of motivational and contextual variables. We can once again pay attention to the importance of learning engagement in distance education. Therefore, to improve learning engagement in distance education, it is necessary to develop programs that reflect learners' needs. Also, the effects of motivational and contextual variables should be considered for the instructional design of programs. Through this study, it was confirmed that learning engagement of teachers as adult learners is one of the crucial factors in distance education and that it can have an effect on the learning outcomes. It was found that in order to improve teachers' participation in learning in a remote training situation, it is necessary to consider what teachers want, what task is important, and how to improve the program to satisfy the participants.

Address for correspondence

Hye-Sook Kim

Associate Professor/ Daegu University

201, Daegudae-ro, Gyeongsan-si, Gyeongsangbuk-do, 38453 Republic of Korea

Email: khs1@daegu.ac.kr

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The relationship of high school teachers' political skills to their career satisfaction: The mediating role of personal reputation

Tuncer Fidan
Burdur Mehmet Akif Ersoy University, Turkey
Mehmet Hilmi Koç
İstanbul Metropolitan Municipality, Turkey

Abstract

This study examines the relationship between high school teachers' political skill and career satisfaction, and the mediating role of personal reputation in this relationship. This study used prediction design. The Political Skill Scale, Career Satisfaction Scale and Personal Reputation Scale were administered to the participants. The findings indicated that all dimensions of political skill were significant predictors of personal reputation. Furthermore, social astuteness, interpersonal influence and networking were significant predictors of career satisfaction, whereas apparent sincerity was not. Personal reputation was found to mediate the relationship between social astuteness, interpersonal influence, networking and career satisfaction. Based on these findings, providing trainings about the positive and negative effects of political skill to administrators and teachers, especially to novice teachers, is recommended.

Keywords: political skill, personal reputation, career satisfaction, teacher, high school

It is possible to portray schools as organizations where many internal and external stakeholders, with different and contradictory goals, are struggling for dominance. Although they are the subjects of the power struggle, the organizational definitions developed for schools often fail to reflect the complex network of relationships. Research on schools is mostly based on the conceptions of organizations developed for commercial organizations and bureaucracies. This results in our knowledge about schools reflecting the point of view of external stakeholders rather than the internal stakeholders. In reality, schools are more complex, less stable, and more unpredictable than traditional conceptions depict as the formal organization structure (Ball, 2012). Therefore, relying only on traditional power types of organizational science, such as authority, ideology or expertise, may not be enough for teachers to achieve their career goals. With authority, it may be enough to give orders to people for the achievement of a goal. The power of ideology can lead to the execution of organizational activities through generally accepted norms and beliefs without the need for external intervention. The expertise of individuals can ensure that they can dominate over those who do not have the same level of expertise. However, authority is rarely accepted without resistance; ideological integrity is rarely seen in public schools, and expertise often contradicts individual interests. In addition, the power of political relations in schools increases when these other powers weaken. Accordingly, approaching schools from a micropolitics perspective allows us to describe better the organizational structures of schools (Ball, 2012; Mintzberg, 1985).

Micropolitics is a concept developed to describe the political behaviors of employees in an organization. From the point of view of micropolitics, schools are political spaces in which different groups with different agendas and interests compete to achieve their goals. Resources such as success, prestige, promotion to administrative positions and social mobility are often limited in schools. Moreover, teachers usually believe that information about their performance is often distorted by other people in the school environment. Such negative thoughts stem from individual insecurities, hidden agendas, ideological conflicts and conflicts of responsibility. The political behaviors of teachers are mostly in response to these pressures (Blase, 2000). In this respect, politically skilled teachers devote a lot of time to networking, coalition building, being close to strong people, and negotiating, because teachers can meet their needs for respect and success, and can protect their interests through their personal connections as well as traditional formal power types (Durnalı & Ayyıldız, 2019). In other words, according to micropolitics perspective, the development of personal reputation usually requires political skill in addition to formal authority. Personal reputation can, in turn, increase career satisfaction through preventing punishment and facilitating the attainment of personal career goals (Blickle et al., 2011). Career satisfaction mostly comes after personal reputation, as it predominantly

results from subjective evaluations about existing work conditions (Fu, 2010).

However, the relationships between political skill, personal reputation and career satisfaction might also be affected by personal factors, such as gender, educational status, teacher union membership, professional experience, administrative experience and desire to become an administrator. For instance, gaining reputation and career success is particularly challenging for female teachers. The opportunities for career advancement, such as access to important information about the school environment and participation in social networks, are more difficult for them to reach than their male counterparts. Therefore, female teachers should be more politically skilled to attain reputation and career success (Perrewé & Nelson, 2004). Furthermore, teachers usually tend to use diplomas or certificates, such as postgraduate degrees, as a means of interpersonal influence to gain reputation and to preempt their rivals in acquiring career-related rewards (Spence, 2002). Similarly, teachers can use the power of teacher unions, which strengthen the negotiation capabilities of teachers and transform them into a part of a large network, to build up reputations and reach their own career goals (Wasser & Lamare, 2014).

In addition, teachers acquire political skill over time. Teachers often endeavor to develop their skills related to classroom management and teaching methods at the beginning of their careers. Expectations of administrators, colleagues, parents and students, as well as professional values, occupy an important place in teachers' opinions about school life during this period. As they gain experience, they realize that such factors are not sufficient for attaining reputation and career goals, and they need to consider political relations to succeed. This change is mainly due to the fact that they feel vulnerable to destructive criticisms and aggressive behaviors arising from the work environment. Against such difficulties, teachers are developing the political self to protect themselves and take measures against possible future attacks (Blase, 2000). Political skill is also expected to be possessed by all administrators, regardless of their gender, education or experience, and by those who desire to become an administrator. Performance is no longer the only criterion for executive evaluations and appointments. Politically skilled administrators (and administrator candidates), who are successful at personal and organizational reputation management, can easily adapt to fast-changing conditions. This also leads them to be in greater demand and facilitates reaching career goals (Ferris et al., 2007).

The aim of this study is to investigate the relationship between high school teachers' political skill and career satisfaction and the mediating role of personal reputation in this relationship. In this regard, first, direct predictive effects of dimensions of political skill on career satisfaction and, then, their indirect effects through personal reputation were examined. Studies regarding political skill, personal reputation and career satisfaction can introduce a new perspective to analyze the complexity of school life, since there are discrepancies between the school image

presented in organizational theories and what teachers experience in real work life. Micropolitics studies can also enable teachers and researchers to explore new types of leadership, based on realities and decision-making processes experienced in school life. These studies can reveal the degree to which political skill is effective in achieving personal reputation and career success, which are among the main goals of teachers' work lives (Brosky, 2011). In addition, studies of teachers have already examined relationships of political skill to influence tactics (Brosky, 2011), job satisfaction (Taliadorou & Pashiardis, 2015), psychological capital (Özdemir & Gören, 2015), burnout (Jawahar et al., 2007) and leadership orientation (Özdemir, 2018). Although there are studies on the relationship between political skill, personal reputation and career success in the literature (Blickle et al., 2011), studies on teachers have not been conducted yet. Furthermore, there are studies indicating that the relationship between the dimensions of political skill, personal reputation and career success should be examined (Kimura, 2015).

Theoretical underpinnings

The effects of political skill on career success are explained predominantly based on interpersonal influence theory, since career success can only be partially related to academic skills and hard work (Ferris et al., 2005a, 2007). Therefore, employees must have political skill to achieve their career goals. In other words, employees must have expertise in interpersonal influence strategies such as persuasion, manipulation and negotiation (Mintzberg, 1985). By using these strategies in interpersonal relations, employees can consciously manage the impressions they want to leave on others. In this respect, they can produce new images or make their existing images more attractive to influence other people and gain personal benefit (Higgins et al., 2003).

The second theoretical basis of this study is signal theory of Spence (2002). Signal theory is related to the reduction of information asymmetry between different sides of communication, such as administrator-employee or employer-employee. Individuals send signals to convey information, reduce uncertainty or influence the beliefs of other individuals. For example, highly-qualified candidates use documents, such as diplomas and certificates reflecting the quality of their educational backgrounds, to send signals and thus to stand out from their low-qualification competitors and to eliminate the lack of knowledge of employers (Spence, 2002). Signal theory is used to explain the effects of information asymmetry in management literature. By means of signals, signallers can gain reputation in the eyes of other individuals by highlighting their characteristics, behaviors and actions. Politically skilled individuals can reach their career goals more easily by establishing close

relationships with their superiors and by generating signals shaping the perceptions of other employees (Blickle et al., 2011).

Political skill also makes it easier for employees to develop social exchange relationships with their superiors and colleagues and to strengthen their personal reputation. Social exchange theory (Blau, 2017) is based on the assumption that the resources we need and value, such as goods, money, service, friendship, status and reputation, can be obtained from other social actors. Individuals with resources that may be subject to exchange are involved in the social exchange process and generate benefits for other people or organizations at a specific cost. In this way, benefits are mutually exchanged.

Political skill and career satisfaction

Political skill involves interpersonal influence and networking skills, the use of formal authority by showing sensitivity to the feelings and thoughts of other employees; and the skills of predicting what is possible and establishing the necessary alliances to achieve personal goals. These are usually required to be successful in today's organizations, which have predominantly become a political scene (Mintzberg, 1985). Although Mintzberg (1985) mainly relates the concept of political skill to formal sources of power, recent research tends to re-conceptualize it as an ability to be effective in informal interactions (Kimura, 2015). For example, Ferris et al. (2005a) define political skill as an individual's understanding of the desires of other employees and the reasons behind their actions in the organization, and the use of this information to ensure that others act in accordance with his/her personal and/or organizational goals.

Political skill requires the knowledge of how power flows in the organization from the top to bottom, the channels and sources of formal and informal influences, the kinds of friendship and enmity, the organization's public and secret rules, and which of these can be violated. With the help of this information, it is possible to identify the interpersonal sources of influence required to persuade other employees to act in a desired way (Mintzberg, 1985). In the light of these debates, it can be argued that political skill refers to *a comprehensive pattern of social competencies, with cognitive, emotional and behavioral manifestations* rather than limited behaviours specific to certain situations (Ferris et al., 2007). Thus, political skill consists of four dimensions: *social astuteness, interpersonal influence, networking, and apparent sincerity* (Ferris et al., 2005a).

Social astuteness

Social astuteness involves accurately perceiving social situations, and personal interactions taking place within these settings. Politically skilled teachers are extremely successful in observing others' behaviors and can adapt quickly to environmental changes (Brosky, 2011; Perrewé & Nelson, 2004). They have strong intuition and high self-awareness. In other words, they have the ability to identify with others to get something for themselves (Ferris et al., 2007).

Interpersonal influence

Political skill requires individuals to exert a strong influence on people around them. Teachers with a high level of interpersonal influence can adapt their behavior to different environments and situations to get the reactions they desire from their colleagues and other school stakeholders. Their flexibility facilitates the building of alliances they need to achieve their goals. Those people also possess the skill of persuasion (Ferris et al., 2005a; Taliadorou & Pashiardis, 2015).

Networking

Politically skilled individuals tend to see interpersonal interactions as an opportunity, not as a threat. In other words, political skill requires individuals to establish networks proactively and reach the resources they need through this network. Teachers with a high level of networking skills are able to reach resources by positioning themselves at an advantageous point within this network and establish alliances and coalitions to assess the opportunities they encounter. These people are good negotiators and conflict managers (Ferris et al., 2007).

Apparent sincerity

Achieving success in political relations requires a sincere and genuine attitude (Mintzberg, 1985). Therefore, politically skilled teachers should have a high level of sincerity, honesty, reliability and openness. Apparent sincerity is especially important for the success of attempts to influence other people. This is because it focuses on how the intentions behind the exhibited behavior are perceived by the target individuals (Brosky, 2011; Munyon et al., 2015). Influence attempts can only be successful if the influencer is perceived as possessing no hidden agenda (Ferris et al., 2005a).

Political skill is expected to have positive relationships with indicators of career success, such as financial income, life and career satisfaction. Career success, in addition to objective criteria, such as financial income and organizational position, can also be investigated by subjective criteria, such as life and career satisfaction (Blickle et al., 2011). Moreover, the term 'career' refers to a dynamic action full of ups and downs, rather than a stable and upward journey, as in the past (Sullivan & Baruch, 2009). Therefore, subjective criteria, such as career satisfaction, can be used as an indicator of people's welfare or perceived quality of life (Aryee & Luk, 1996).

Career satisfaction

This term refers to the satisfaction that individuals receive from the internal and external aspects of their careers, such as payment, progress and development opportunities. Career satisfaction is related to the extent to which the long-term expectations of one's careers are met (Judge et al., 1995). Similarly, Fu (2010) conceptualizes career satisfaction as a general level of happiness during an individual's chosen career. Conley et al. (2005) describe career satisfaction as the realization level of a teacher's career goals and expectations.

There are empirical studies that link political behavior and political knowledge with career success (e.g., Blickle et al., 2011); since socially astute employees who can accurately grasp the social interactions and the behaviors of their colleagues within the organization are able to know how to present themselves to others in a positive way and how to win their hearts. At the same time, those people can influence others to achieve their career goals (Todd et al., 2009). Such close interactions facilitate the establishment of intra-organizational contacts and relations. Interpersonal interactions lead to the creation of common interests and values on one hand, and the emergence of trust and respect on the other. These factors may facilitate the sharing, exchange and incorporation of resources within a network. They can also enable politically skilled individuals to build stronger coalitions and reach a wide variety of resources (Wei et al., 2012). Finally, if these people seem sincere in their attempts at influencing and building relationships, they can win the sympathy of other people and convince them to act in line with their career goals (Todd et al., 2009). Based on the discussion of political skill and career satisfaction in the literature, it is possible to develop the following hypotheses:

Hypothesis 1a: There is a positive relationship between social astuteness and career satisfaction.

Hypothesis 1b: There is a positive relationship between interpersonal influence and career satisfaction.

Hypothesis 1c: There is a positive relationship between networking and career satisfaction.

Hypothesis 1d: There is a positive relationship between apparent sincerity and career satisfaction.

The mediating role of personal reputation

The term reputation is often defined as the opinion people have toward a person or entity, based on his/her/its past behaviors or character (Cambridge, 2008). In other words, reputation is a general belief about the character of a person or entity. Past behavior should be presented to other people in a good way; because reputation is related to trust or distrust towards a person or living being stemming from an action or situation (Bromley, 1993).

However, in the management literature, the concept of reputation is defined in different ways. For example, Bromley (2001) has developed a definition, “disseminating ideas about a person or entity within the stakeholder or interest groups,” because reputation reflects a collective image revealed through communication. In business life, reputation emerges when individuals perform their duties effectively, and act cooperatively and helpfully towards their colleagues (Zinko et al., 2012).

At this point, Ferris et al. (2003) state that personal reputation is a perceptual identity. This identity reflects the complex combination of distinct personal characteristics, achievements, visible behaviors and images that are directly observable and/or transmitted through indirect sources. That is to say, personal reputation is not an instantaneous impression. On the contrary, it emerges when certain behaviors are consistently exhibited over time (Zinko et al., 2012). Similarly, Parsons (2005) states that the personal reputation of a teacher is related to how and to what extent his or her image is shared by the school stakeholders. Teachers' past achievements, classroom management skills and field knowledge are the basis of their personal reputations.

Therefore, we argue that the dimensions of political skill can contribute to the development of personal reputation (Zinko et al., 2012). Personal reputation requires understanding of the differentiated expectations of a variety stakeholders of an organization and knowing what to do to meet these expectations. In other words, a high level of social astuteness makes creating a personal reputation easier. Social astuteness can also give an advantage to individuals in determining which interpersonal sources of influence will be effective in a given circumstance (Blickle et al., 2011). For example, teachers' reputations are closely related to their influences on school administrators and students. The reputation of the teachers who can

control students' behaviors and influence them to exhibit certain behaviors is strengthened, and then they are considered successful teachers by administrators (Parsons, 2005). Similarly, politically skilled individuals can spread their signals in the organization in such a way that they can create a positive image through proactive networking activities, and can build their reputation. When these social skills are combined with individuals' ability to adapt their behaviors to different situations in a sincere way, it is possible to gain the trust and support of other people. In other words, individuals who look sincere in their actions receive more positive reactions than others and create their personal reputation more easily (Ferris et al., 2007). It is possible to reach the following hypotheses in the light of the findings about political skill and personal reputation in the literature.

Hypothesis 2a: There is a positive relationship between social astuteness and personal reputation.

Hypothesis 2b: There is a positive relationship between interpersonal influence and personal reputation.

Hypothesis 2c: There is a positive relationship between networking and personal reputation.

Hypothesis 2d: There is a positive relationship between apparent sincerity and personal reputation.

It is possible to see career satisfaction as one of the consequences of personal reputation while political skill is accepted as one of its antecedents, since as personal reputation increases, the existing powers of individuals also increase. This extra power comes with a reputation, alleviates the need for individual accountability and gives them a certain degree of autonomy in the face of the norms to which they must conform (Zinko et al., 2012). Therefore, positive impressions of individuals in the past lead to subsequent gains of support from organizational executives, and thus to gain an advantage in their work life. Their reputation makes them seem more powerful and capable, making it easier for other employees to respond positively when they ask for help. Moreover, administrators often have to settle for limited information resources in performance assessments. This uncertainty forces them to make decisions based on clues that are not relevant to performance. In other words, in uncertain situations, personal reputation can enhance performance evaluations (Blickle et al., 2011). It is therefore possible to reach the following hypotheses:

Hypothesis 3: There is a positive relationship between personal reputation and career satisfaction.

Hypothesis 4: Personal reputation mediates the relationship between social astuteness, interpersonal influence, networking, apparent sincerity and career satisfaction.

The hypotheses of the study led to the emergence of a theoretical model consisting of the dimensions of political skill, personal reputation and career satisfaction. This model is presented in figure 1.

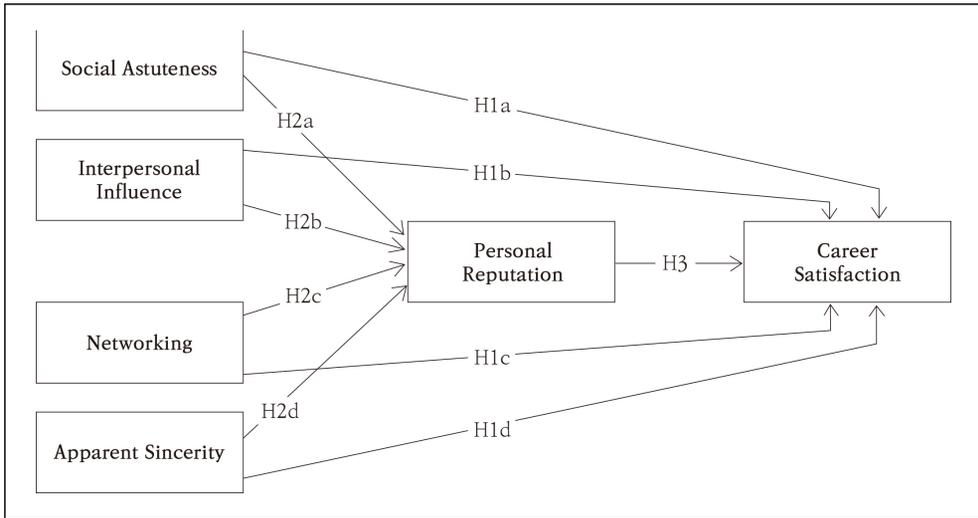


Figure 1. Research model and hypotheses

Method

This study uses a prediction design, a type of a correlational study. The independent and dependent variables do not occur simultaneously in prediction design. Instead, independent variables usually precede a dependent variable, based on a cause-and-effect relationship (Beins, 2017).

Population and sampling

The population of the study consists of 37,100 teachers working in 783 public high schools in Istanbul in the academic year 2018-2019. Correspondingly, the sample size was determined as 381. In the sampling, a stratified sampling method

was used, considering the differentiation of Istanbul districts in terms of quality of life. The strata were determined according to the Quality of Life Index in Istanbul, which was developed by Şeker (2015). According to this index, 39 districts in Istanbul were divided into five socio-economic groups. Kadıköy from the first group; Fatih from the second group; Maltepe, Bahçelievler, and Küçükçekmece from the third group; Kağıthane, Ümraniye, and Avcılar from the fourth group; Sancaktepe and Esenler districts from the fifth group were selected randomly. 11,965 teachers are employed in the 10 selected districts. The number of teachers to be selected in each district was determined by comparing the number of teachers in the districts to the total number. Five hundred surveys, more than required by sample size calculations, were delivered as a measure against potential response errors. Surveys were delivered and collected by the authors through school visits. It took an average of 15 minutes to complete the surveys. Of the 500 surveys distributed, 449 were returned. Thirty-two were not included in the analysis due to erroneous or incomplete data, and 36 due to being clear outliers. 381 scales, which equal the determined sample size, were included in the analysis.

66% of the participants were female and 34% were male. 73% hold a graduate degree and 27% hold a postgraduate degree. While 60% are union members, 40% are not. 44% have 1-15 years of experience and 56% have 16 years and over work experience. 24% of the participants had been in administrative positions in the past. In the future, 25% are planning to pursue a career in school administration or higher positions.

Data collection tools

The Political Skill Scale (PSS; Ferris et al., 2005a), the Career Satisfaction Scale (CSS; Greenhaus et al., 1990) and the Personal Reputation Scale (PRS; Hochwarter et al., 2007) were used to collect data. Adaptation studies were conducted with teachers working in high schools in Ankara. Explanatory factor analysis and confirmatory factor analysis were conducted with different groups of participants.

The political skill scale

The original PSS (Ferris et al., 2005a), consists of 18 items. The four-factor scale, obtained as a result of the adaptation studies, consists of 15 items and is a five-point Likert-type scale ranging from “*strongly disagree*” to “*strongly agree*.” The total variance explained by the PSS was 67.65%. The PSS consists of four dimensions: social astuteness, interpersonal influence, networking, and apparent sincerity. There

are four items in the social astuteness dimension. The Cronbach's alpha of this dimension was .80. The sample item for this dimension was, "I have good intuition or savvy about how to present myself to others." There are four items in the interpersonal influence dimension. The Cronbach's alpha of this dimension was .80. The sample item for this dimension was, "I am able to communicate easily and effectively with others." There are four items in the networking dimension. The Cronbach's alpha of this dimension was .72. The sample item for this dimension was, "I spend a lot of time and effort at work networking with others." There are three items in the apparent sincerity dimension. The Cronbach's alpha of this dimension was .83. The sample item for this dimension was, "When communicating with others, I try to be genuine in what I say and do." The four-factor structure of the scale was tested with a confirmatory factor analysis. The result of the confirmatory factor analysis indicated that a four-factor model captured distinct constructs and provided an acceptable (Hu & Bentler, 1999) fit to the data, with $[\chi^2 [83] = 242,602, p < 0.01]$, $\chi^2 /sd = 2.92$, RMSEA = .07, GFI = .91, IFI = .92 and CFI = .92.

The career satisfaction scale

The original scale consists of five items. The single factor scale obtained as a result of the adaptation studies consists of five items and is a five-point Likert-type scale ranging from "strongly disagree" to "strongly agree." The total variance explained by the CSS is 65.33%. The Cronbach's alpha of the scale was .84. The sample item for the scale was, "I am satisfied with my progress in achieving my career goals." The single factor structure of the scale was tested with confirmatory factor analysis. The results of the confirmatory factor analysis yielded the following fit indexes: $[\chi^2 [5] = 13,520, p < 0.01]$, $\chi^2 /sd = 2.70$, RMSEA = .07, GFI = .99, IFI = .99 and CFI = .99. As a result, the analysis indicated that the single factor model is confirmed, in other words, provided an acceptable fit to the data (Hu & Bentler, 1999).

The personal reputation scale

The scale, developed by Hochwarter et al. (2007), consists of 12 items. The single factor scale, obtained as a result of the adaptation studies, consists of eight items and is a five-point Likert-type scale ranging from "strongly disagree" to "strongly agree." The total variance explained by the PRS was 58.40%. The Cronbach's alpha of the scale was .80. The sample item for scale was, "I am highly respected by others." The single factor structure of the scale was tested with confirmatory

factor analysis. The results of the confirmatory factor analysis yielded the following fit indexes: [$\chi^2(17) = 42,440, p < .01$], $\chi^2/sd = 2.50$, RMSEA = .07, GFI = .97, IFI = .98 and CFI = .97. As a result, the analysis indicated that the single factor model is confirmed, in other words, provided an acceptable fit to the data (Hu & Bentler, 1999).

Control variables

Gender, educational status, teacher union membership, professional experience, administrative experience and desire to become an administrator were included as control variables. These variables were dummy coded as female = 0, male = 1; graduate degree = 0, postgraduate degree = 1; union member = 0, non-member = 1; 1-15 years of experience = 0, 16 years and above experience = 1; administrative experience = 0, no administrative experience = 1; desire to become an administrator = 0, no desire to become an administrator = 1.

Data analysis

To determine the appropriateness of the data for multivariate analysis, the assumption of normality was examined. In order to examine multivariate normality, skewness and kurtosis coefficients were examined as a descriptive method. The skewness and kurtosis coefficients were found to be within the range of -1 to +1. In addition, graphical methods, such as box-plot graphs, multiple scatter plots and Q-Q graphs, were used. Box-plot graphs indicated that the data was spread symmetrically around the medians. When multiple scatter graphs were analyzed, it was seen that the data were distributed elliptically. Q-Q graphs demonstrated that the overlap between the actual values and the expected values revealed a straight line with an angle of 45 degrees (Garson, 2012).

The data were first analyzed with descriptive statistics such as arithmetic mean and standard deviation. The level, direction, and significance of the relationship between the variables were calculated with the Pearson correlation coefficient. The multicollinearity problem was tested using correlation coefficients and variance inflation factor (VIF) values. Then, hierarchical regression analysis and mediation tests were conducted. In the first stage, the relationship between the independent variables and the mediator variable was tested. In the second stage, the relationship between the independent variables and dependent variable was tested, and finally, the change in relationship between the independent variables and the dependent variable was examined when the mediator variable was included in the analysis.

PROCESS macro, which consists of bootstrapping procedures, was used to test the significance of indirect effects (Preacher & Hayes, 2008). In addition, the Durbin-Watson test was used to detect the existence of autocorrelation among the residuals.

Findings

Descriptive statistics and Pearson correlation coefficients of variables were presented before conducting hierarchical regression analysis. The results are presented in Table 1.

Table 1. Means, standard deviations and correlations

Variables	Mean	sd	1	2	3	4	5
1. Social Astuteness	4.09	0.55					
2. Interpersonal Influence	4.18	0.56	.72*				
3. Networking	3.67	0.68	.61*	.64*			
4. Apparent Sincerity	4.64	0.43	.44*	.50*	.40*		
5. Career Satisfaction	3.74	0.71	.48*	.50*	.45*	.31*	
6. Personal Reputation	4.23	0.49	.66*	.65*	.60*	.51*	.54*

Note. $n = 381$; * $p < .01$

As seen in Table 1, apparent sincerity is the most frequently used political skill dimension, while networking is the least used. There is a moderate and high correlation between all variables. The highest relationship level between the variables is .72, which implies that there is no multicollinearity problem (Tabachnick & Fidell, 2007). Table 2 presents hierarchical regression analysis results.

The VIF values in Table 2 range between 1.07 and 2.67, which supports the assumption that there is no multicollinearity problem. In a similar vein, the variation of Durbin-Watson values between 1.76 and 1.90 indicates that there is no positive or negative autocorrelation between the error terms in the regression models.

Table 2. Results of hierarchical regression analysis

Predictor Variables	Personal Reputation				Career Satisfaction					
	Model 1		Model 2		Model 1		Model 2		Model 3	
	β	VIF	β	VIF	β	VIF	β	VIF	β	VIF
Control Variables										
F(0) vs M(1)	-.01	1.29	-.05	1.33	-.04	1.29	-.08	1.33	-.06	1.33
G(0) vs PG(1)	.02	1.07	-.02	1.07	.02	1.07	-.01	1.07	.01	1.07
UM: Yes(0) vs No(1)	.10*	1.09	.02	1.13	.08	1.09	.01	1.13	.01	1.13
Prof. Exp.:1-15(0) vs 16+(1)	.21**	1.09	.10**	1.13	.20**	1.09	.12**	1.13	.09*	1.15
Adm. Exp.: Yes(0) vs No(1)	-.04	1.27	-.05	1.28	.01	1.27	.01	1.28	.02	1.29
DTBAA: Yes(0) vs No(1)	-.08	1.27	.01	1.31	-.01	1.27	-.07	1.31	.07	1.31
Main Effects										
SA			.30**	2.31			.21**	2.31	.12	2.51
Int. Inf.			.20**	2.57			.22**	2.57	.16*	2.67
NW			.21**	1.93			.19**	1.93	.13*	2.03
AS			.18**	1.44			.01	1.44	-.05	1.51
PR									.30**	2.29
<i>F</i>	3.94		47.74		2.96		17.79		19.25	
<i>R</i> ²	.06		.56		.05		.33		.37	
Adj. <i>R</i> ²	.04		.55		.03		.31		.35	
ΔR^2			.50				28.		.04	
DW			1.76						1.90	

Note. $n = 381$; * $p < .05$; ** $p < .01$; F = Female; M = Male; G = Graduate; PG = Postgraduate; UM = Union Membership; Prof. Exp. = Professional Experience; Adm. Exp. = Administrative Experience; DTBAA = Desire to Become an Administrator; SA = Social Astuteness; Int. Inf. = Interpersonal Influence; NW = Networking; AS = Apparent Sincerity; PR = Personal Reputation; DW = Durbin-Watson

As shown in Table 2, the effects of control variables on personal reputation were analyzed in model 1. Gender and educational status were found to have no significant effect on personal reputation, whereas union membership and professional experience variables were significant predictors of personal reputation. Control variables accounted for 4% of the variance in the dependent variable. The direction of the relationship between these variables and personal reputation suggested that the personal reputation scores of teachers with 16 years or more experience and that of non-union members were relatively higher.

In the second model, when the main variables were included in the analysis, union membership was no longer a significant predictor of personal reputation; but professional experience retained its significant effect. In other words, the effect of these variables might be absorbed by some dimensions of political skill, which

implies that teachers' use of political skill is varied by their union membership or professional experience. In support of the hypotheses 2a-b-c-d, significant and positive relationships were found between social astuteness ($\beta = .30, p < .01$), interpersonal influence ($\beta = .20, p < .01$), networking ($\beta = .21, p < .01$), apparent sincerity ($\beta = .18, p < .01$) and personal reputation. Control variables and independent variables accounted for 55% of the variance in the dependent variable. Accordingly, we argue that the effect of control variables on personal reputation is limited ($F = 3.94, p < .01, \text{Adj. } R^2 = .04$) while independent variables account for a greater portion of the variance ($F = 47.74, p < .01, \text{Adj. } R^2 = .55$).

When the results of the prediction of career satisfaction were examined, professional experience was the only significant predictor among control variables in the first model. Control variables accounted for 3% of the variance in the dependent variable. The direction of the relationship between professional experience and career satisfaction indicated that teachers with professional experience of 16 years or more had higher career satisfaction than those with less experience. This finding supports Blase (2000), who states that teachers realize the necessity of political skill for career success as their professional experience increases.

In the second model, when the main variables were included in the analysis, the professional experience remained as a significant predictor of career satisfaction. In support of the hypotheses 1a-b-c, social astuteness ($\beta = .21, p < .01$), interpersonal influence ($\beta = .22, p < .01$) and networking ($\beta = .19, p < .01$) were found to be significantly and positively related to career satisfaction. On the other hand, hypothesis 1d was not supported because apparent sincerity ($\beta = .01, p > .05$) was not a significant predictor of career satisfaction. Although apparent sincerity ($\beta = .01, p > .05$) was not found as a significant predictor in this model, it might have an indirect effect on career satisfaction due to its significant relationship with personal reputation. Control variables and dimensions of political skill together accounted for 31% of the variance in the dependent variable. Accordingly, control variables had a limited effect on career satisfaction ($F = 2.96, p < .01, \text{Adj. } R^2 = .03$). On the other hand, when the independent variables were included in the model, there was a large increase in the amount of variance explained ($F = 17.79, p < .01, \text{Adj. } R^2 = .31$).

In the third model, when personal reputation was included in the analysis, social astuteness ($\beta = .12, p > .05$) was no longer significant predictor of career satisfaction, whereas the effects of professional experience ($\beta = .09, p < .05$), interpersonal influence ($\beta = .16, p < .05$) and networking ($\beta = .13, p < .05$) weakened. As mentioned in hypothesis 3, a significant and positive relationship was found between personal reputation and career satisfaction ($\beta = .30, p < .01$). The independent variables together accounted for 35% of the variability of career satisfaction. As seen in Table 2, the variability of career satisfaction was largely caused by social astuteness, interpersonal influence and networking; but the effects

of control variables and personal reputation were limited. We argue that the variance caused by personal reputation was largely due to its mediating role in the relationship between these three independent variables and career satisfaction. A bootstrap analysis was conducted to determine the significance of indirect effects by using 5000 replicates with 95% confidence intervals (Preacher & Hayes, 2008). Results excluded zero and confirmed that professional experience ($B = 0.15$, $SE = 0.4$, $CI [0.0754, 0.2283]$), social astuteness ($B = 0.34$, $SE = 0.5$, $CI [0.2408, 0.4417]$), interpersonal influence ($B = 0.31$, $SE=0.5$, $CI [0.2209, 0.4190]$) and networking ($B = 0.27$, $SE = 0.4$, $CI [0.1971, 0.3362]$) have an indirect effect on career satisfaction through personal reputation. The disappearance of the significant effects of social astuteness when personal reputation was included in the model indicates a full mediation effect, while the weakening of the effects of interpersonal influence, networking and the professional experience is a sign of partial mediation. As a result, it is possible to state that hypothesis 4 is partially supported because apparent sincerity was not found to be a significant predictor of career satisfaction.

Discussion and conclusion

In this study, we examined the relationships between the dimensions of political skill, personal reputation and career satisfaction. We found that the most common political skill used by teachers was apparent sincerity, while the least used skill was networking. It can be argued that this finding is consistent with similar studies (e.g., Brosky, 2011); because teachers usually deem sincerity as an integral part of their professional values (Close, 2013) while networking is frequently regarded as a skill to be used when necessary to use opportunities (Ferris et al., 2007).

Moreover, the finding that social astuteness, interpersonal influence, networking and apparent sincerity positively influenced personal reputation was generally consistent with previous studies, even though they were largely conducted in non-educational organizations. For example, Close (2013), in his conceptual paper, argues that social astuteness can enable teachers and administrators to accurately read the dynamics of complex situations, which also helps them to determine appropriate influence strategies to build reputation. In this regard, qualitative studies with managers of private sector firms confirmed that interpersonal influence actions aiming to create accountability and develop a trust culture were among the characteristics of highly reputable managers (Smith et al., 2009). At this point, Kim (2013), in her qualitative study with private sector managers, found that managers could enhance personal reputation through networking with potential career sponsors and key members of an organization. Finally, apparent sincerity was

usually found to be among key factors increasing the personal reputation of managers, as employees expected them to be sincere and certain in their interpersonal relationships and influence strategies (Trevino et al., 2000). The consistency across educational and non-educational organizations might stem from the relatively objective nature of building a personal reputation. In other words, it arises when employees—and also teachers—meet role expectations regarding their profession, and have a positive image among stakeholders (Parsons, 2005; Zinko et al., 2012). Therefore, we argue that the four dimensions of political skill have an important role in increasing or protecting teachers' personal reputations.

The findings also demonstrated that social astuteness, interpersonal influence and networking had a positive effect on career satisfaction, whereas apparent sincerity did not. Our findings on the relationship between political skill and career satisfaction are partially consistent with those of previous studies, since there are conflicting findings on the relationship between political skill and career satisfaction in the literature. For example, Lu and Guy (2018), in their quantitative study with public sector employees, found that interpersonal influence and apparent sincerity had positive effects on career satisfaction. Maroulis (2015), who reached a different finding in her quantitative study with public and private sector managers, suggests that interpersonal influence and networking could be associated with the perception of career success. On the other hand, Shakti and Srivastava (2004), in their quantitative study with private sector mid-level managers, found that interpersonal influence, networking and apparent sincerity had positive effects on career satisfaction. At this point, there are researchers claiming that political skill can cause different effects depending on cultural values (Özdemir & Gören, 2015), sectors (Vigoda-Gadot & Kapun, 2005) and position in the workplace (Judge et al., 1995). Furthermore, career satisfaction usually relies on subjective criteria, such as happiness and personal expectations, which might potentially lead to results varying due to contextual and personal differences (Fu, 2010; Conley et al., 2005). Thus, it is possible to conclude that the relationship between political skill and career satisfaction can differ according to contextual and personal factors, and theoretical discussions on this topic have only been partially supported (Blickle et al., 2011; Kimura, 2015; Todd et al., 2009).

The findings of this study regarding the relationship between personal reputation and career satisfaction largely overlap with the results of previous studies (Blickle et al., 2011; Ng & Feldman, 2014), since managing the perceptions of school stakeholders to build a positive image, including expertise and performance, is regarded among prerequisites for being a successful teacher (Blase, 2000). Yet, one of the dimensions of political skill, apparent sincerity, was not a significant predictor of career satisfaction. Therefore, we argue that findings of this study partially supported the theoretical arguments in the related literature (Kimura, 2015; Blickle

et al., 2011). In addition, personal reputation had a full mediating role in the relationship between social astuteness and career satisfaction. This may be due to the fact that social astuteness is largely dependent upon an individual's managing his/her impression to correspond to others' expectations and organizational roles (Ferris et al., 2003). In other words, socially astute teachers can observe the behaviors of other colleagues accurately and respond to environmental demands quickly. They thus can increase their personal reputation, which, in turn, enhances their career satisfaction. Furthermore, we argue that professional experience, interpersonal influence and networking, whose effects on career satisfaction were partially mediated by personal reputation, can influence career satisfaction directly or through alternative channels than personal reputation. On this point, Baron and Markman (2000) note that reputation alone is not sufficient for success; past experience, personal interaction and networking skills can also directly affect the success of individuals.

Theoretical and practical implications

This study contributes to the educational administration literature in many respects. First, this study is the first empirical study to examine the relationships of social astuteness, interpersonal influence, networking and apparent sincerity to personal reputation and career satisfaction. In addition, the effects of variables such as gender, educational status, teacher union membership, professional experience, administrative experience and the desire to become an administrator were also investigated. In this way, the theoretical models put forward in the literature (Blickle et al., 2011; Kimura, 2015), were tested, and the theoretical propositions regarding apparent sincerity were refuted. The results indicate that political skill can be affected by cultural values and sectoral differences. We suggest that the theory development studies regarding political skill should take into consideration the meaning and importance that employees attributed to the political skill in different cultural environments and sectors.

Besides testing the theoretical models in the relevant literature, these findings revealed that there may be other factors, such as political skill, that could build the personal reputation and career satisfaction of teachers, other than professional knowledge and performance. At this point, Ferris et al.(2005b) suggest that employees could gain skills that enhance their careers through political skill training, such as the ability to express their thoughts more effectively, access important information, and work more closely with colleagues and build relationships based on trust. For this reason, providing political skill training to teachers, especially those early in their careers, may yield positive results for teachers and schools (Balci et al.,

2016). On the other hand, there may be teachers who have high professional competence and effort but low political skill. They may have difficulty in expressing themselves to administrators, their colleagues and other stakeholders and may be adversely affected by this situation. School administrators should be aware of the potential negative impacts of political skill and avoid making unfair evaluations due to the influence of politically skilled teachers during performance appraisals. Therefore, it is suggested to organize training programs for school administrators and teachers about the positive and negative effects of political skill.

Limitations and implications for further research

This study was conducted with a sample of teachers working in public high schools in Istanbul. For this reason, the results may not be generalized to teachers working at the other school levels or in private schools. Different results may also occur in studies conducted with teachers residing in smaller settlements. Furthermore, the fact that the study was carried out using self-reported scales may cause doubts about the accuracy of the participants' responses. In addition to these limitations, variables that may be effective in acquiring and using political skill, such as age, work experience before starting the teaching profession and school size (an indicator of the bureaucratic distance between the administrator and the teacher) were not included in this study. Nevertheless, the number and nature of the control variables included in the study and the consistency of the results with those from the past studies on teachers (Brosky, 2011) can be deemed as factors increasing the reliability of the study.

We can test the validity of the results of this study by using samples selected from cities of different sizes in future studies. The use of samples selected from private schools as well as public schools may enable the generalization of results to different school environments. In these studies, the use of data collected from third-party observers as well as self-report scales can give researchers different perspectives. The inclusion of different control variables in future studies, which may be effective in the acquisition and use of political skill, may alleviate possible doubts about endogeneity bias.

Further studies should also focus on exploring how political skill affects career satisfaction through channels other than personal reputation. A study including factors such as expertise, knowledge, job skills and performance, as well as political skill, can further elucidate in detail the impact of political skill on career satisfaction. Moreover, we suggest conducting studies on how school principals evaluate highly qualified teachers, in terms of expertise, professional experience and performance, who have poor political skill, as well as politically skilled teachers with poor

qualifications in the school context. Finally, the effects of union membership and professional experience could be analyzed within a structural equation model to better portray the relationship of these variables to political skill, reputation and career satisfaction.

In conclusion, this study aimed to examine the influence of teachers' use of political skill dimensions, such as social astuteness, interpersonal influence, networking and apparent sincerity, on their personal reputation and career satisfaction. The four dimensions of political skill were found to affect positively the personal reputation of teachers, while only apparent sincerity was not a significant predictor of career satisfaction. Based on the findings of the study, various suggestions are made to both scholars in this field and practitioners.

Address for correspondence

Tuncer Fidan
Burdur Mehmet Akif Ersoy University
İstiklal Yerleşkesi, 15030, Burdur
Email: tuncerfidan@gmail.com

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The changing value of college education in Korea: Focusing on its heterogeneous wage returns across birth cohorts (1956-1986)*

Yool Choi
Chung-Ang University, Korea
Harris Hyun-Soo Kim
Ewha Womans University, Korea
Doo Hwan Kim
Duksung Women's University, Korea

Abstract

This study explores the changing value of college education in Korea using the Education and Social Mobility Survey from KEDI. Specifically, it focuses on how the college degree has affected social stratification by examining its heterogeneous wage returns contingent on individual likelihood of college completion. We perform empirical analysis on data consisting of three birth cohorts with two different treatment conditions. The key findings are threefold. First, the average effects of college on wages drastically decreased across the three birth cohorts. Second, the effects of college on wages significantly varied by individual propensity to achieve a college degree, and the patterns of effect heterogeneity changed from negative selection to positive selection across the three birth cohorts. Third, the effect heterogeneity of elite college degree shows negative selection pattern for all three cohorts. The overall implication is that the college degree in Korea has reinforced social reproduction and that the economic benefits of a college degree have diminished significantly for disadvantaged students.

Keywords: College education, treatment effect heterogeneity, educational inequality, South Korea

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That the decision to enroll in college and subsequent graduation are influenced by family background has been much discussed and well documented (for review, see Hout, 2012). In fact, a large number of studies exist underscoring the increasingly tightening link between family context or parental status and children's educational and economic outcomes (Assaad et al., 2018; Bloome & Western, 2011; Chevalier et al., 2013; Duncan & Murnane, 2011; Ellwood & Kane, 2000; Goldrick-Rab & Pfeffer, 2009; Hu & Vargas, 2015; Kim & Schneider, 2005; Reardon, 2011; Torche, 2011). Much less analyzed and understood, however, are the following questions: Are individuals from privileged backgrounds more (or less) likely to benefit from a college degree? That is, are the economic returns to a college degree greater (or lesser) for those who are more likely to obtain a college degree, that is, who come from higher status families?

While many prior studies have examined the heterogeneous effects of a college degree by various factors such as gender, race, citizenship and so on, the heterogeneous effects of a college degree based on the propensity to attend college have been seldom studied empirically (Xie et al., 2012, p. 315). In their pioneering work, Brand and Xie (2010) provide an interesting, if not counterintuitive, answer to this topic. They combine two key questions on higher education simultaneously, *accessibility* in and *effects* of college, to show how the effects of a college degree on earnings differ according to educational accessibility. To examine the effect heterogeneity of college, Brand and Xie (2010) propose a particular methodological approach: the stratification multilevel method.¹⁾ This method uses a counterfactual approach with propensity score matching, and examines interactions between the treatment (i.e., college degree) and the propensity of treatment (i.e., likelihood of achieving a college degree).

Understanding patterns of heterogeneous effects of college yields an important insight into educational policy, as this tells us who are more likely to achieve a college degree among individuals of different backgrounds, as well as who benefits the most from a college degree, given different accessibility to a college education (Brand & Simon-Thomas, 2013). For example, Brand and Xie (2010) demonstrate that individuals who are *least* likely to go to college (e.g., students from disadvantaged family backgrounds) actually benefit *most* from it in terms of earnings in the United States, a phenomenon referred to as "negative selection."²⁾

This finding suggests an important implication to understand how a college degree affects social stratification in the United States. A college degree is found to be most beneficial for those who are least likely to attend college, in many cases those from the most *disadvantaged* social backgrounds, while the most advantaged students benefit least from a college education. In this case, a college degree can be an effective tool for social mobility in society. Furthermore, the negative selection pattern supports the policy of expanding college educations to disadvantaged students, since it maximizes the average effects of a college degree by selectively

targeting those who benefit most from attending college. The opposite pattern, known as “positive selection,” suggests that as the propensity to attend college rises, the college benefit (i.e., earnings) also increases. If we observe the positive selection of the college effect from society, the most advantaged (not disadvantaged) students benefit most from college. In this case, college mainly operates as a social reproduction tool. The patterns of heterogeneous effects of college do not ultimately decide individual social mobility since various routes shape intergenerational mobility (in accordance with the OED model). However, if we focus on the role of college in social mobility, examining effect heterogeneity of college suggests an essential insight as to whether a college degree mainly operates as an instrument of social mobility or social reproduction.

The negative selection hypothesis proposed by Brand and Xie (2010) has not been subject to empirical verification beyond the United States. We do not know, as a result, whether this trend holds in other societies with divergent cultural, political and economic trajectories. As they recognize, “potential heterogeneity in returns is receiving more attention as many countries are experiencing rapid expansion in college enrollment” (Brand & Xie, 2010, p. 294). Yet, this increasing attention has not been backed up by empirical evidence. Our main objective, therefore, is to contribute to the literature by analyzing population-based data on South Korea, a country with the highest proportion of citizens with college education among all OECD members.³⁾ Given the historically unique emphasis placed on academic credentials and their enduring impact on the process of socioeconomic attainment and mobility, testing the heterogeneous effects of college degree in Korea can help shed interesting comparative light on the validity and generalizability of the Brand-Xie hypothesis (Kim & Choi, 2015; Park, 2013).

In addition to offering new comparative findings, we extend this original thesis by considering several key issues previously unaccounted for. First, we explore the heterogeneous effects of a college degree for three birth cohorts of the Korean population: Cohort 1 (born between the mid-50s and the mid-60s), Cohort 2 (born between the mid-60s and the mid-70s), and Cohort 3 (people born between the mid-70s and the mid-80s). Considering that the Korean economy and education system have dramatically changed during the last five decades (Park, 2013; Byun et al., 2013; Shin, 2012), these three cohorts exhibit a great deal of difference in their contextual backgrounds. In particular, the overall enrolment rate of a four-year college education has rapidly increased over time. In 1980, it was only 11.4% (Cohort 1), which doubled to 23.6% (Cohort 2) in 1990 and further increased to 52.5% (Cohort 3) in 2000 (Kim & Choi, 2015). Today, Korea has one of the highest enrolment rates of college education in the world. The expansion of college education can profoundly alter the value and role of college degree in society. By examining three birth cohorts, we show how the heterogeneous effects of college degree has changed by focusing on different contextual backgrounds, especially the

opportunity of college education.

Second, in their original study, Brand and Xie (2010) conceptualize treatment effect (income returns to achieving a college degree) to be heterogeneous, but not the treatment itself. In other words, while they consider the impact of a college degree to vary across propensity to attend college, college education itself is operationalized as a simple dichotomous measure (i.e., going to college = 1, otherwise = 0). Our study offers a more detailed analysis of treatment effect heterogeneity by taking into account different quality of education. In addition to examining the effects of four-year College as a whole, we also investigate the heterogeneous effects of *elite college*. Rapid expansion of higher education has changed educational environments in Korea. This dramatic expansion of college education changes not only the opportunity to attend college but also the value of a college degree in the labor market. Given the universality of a college education, the effects of family background on attending college have increased for institutions in the elite category, without increasing so much for those in other categories; and the effects of college on the labor market have also greatly increased only for elite colleges (Choi, 2015; Kim & Choi, 2015). Given the scarcity of elite college credentials in society, we assume that the role of elite college on social stratification is different from that of a college degree as a whole.

In sum, this study examines the question “who benefits most from college?” in the Korean context. By examining how patterns of heterogeneous returns to a college degree have shifted in Korea from the 1970s to the 2000s in tandem with dramatic changes in education and labor market environments, we aim to understand how the impact of a college degree on social stratification in Korea has changed in the last several decades.

Prior research on the heterogeneous effects of a college education

Education is a decisive factor in social mobility and social reproduction in contemporary society. As such, assessing the determinants of accessibility into college and the causal effects of college on economic outcomes has been a central issue in social stratification studies (Hout, 2012). A great deal of research has probed this topic from various theoretical and methodological angles. Putting aside minor differences in findings, one particular fact emerges with clarity: the likelihood of entering and completing college is powerfully driven by family-based resources that lie over and above individual attendees (Duncan & Murnane, 2011; Ellwood & Kane,

2000; Hout et al., 1993). This raises an important question: Who benefits more from going to college? Do high-propensity college goers enjoy higher returns upon graduation? Or do the low-propensity individuals, i.e., those who are less likely to enter college in the first place?

According to Brand and Xie (2010), at least with respect to the American case, the answer is the latter, that is, children of lower social origins and with lesser cognitive potential. This phenomenon of “negative selection” contrasts sharply with “positive selection,” where higher propensity college goers reap greater benefits from completing their college education. These trends have consequential implications. On the one hand, to the extent that negative selection operates in society, expansion of college opportunity would serve to facilitate social mobility by improving the chances of individuals from disadvantaged backgrounds—those who are unlikely to be college educated, given their observed characteristics. On the other hand, should positive selection be at work, educational system can be said to reinforce social reproduction and possibly exacerbate existing inequality by disproportionately benefitting those raised in families with a higher socioeconomic status.

Arguments put forth in adjudicating between these two patterns of effect heterogeneity have bifurcated along economic and sociological reasoning. Economists, on the one hand, state that those who are most likely to attend college also benefit most from it, hence supporting the case of positive selection (Carneiro et al., 2001; Carneiro et al., 2003). According to the utility maximizing theory, expected economic gains from higher education are the main determinant of selection into college (Becker, 1964; Card, 1995, 2001; Heckman & Honoré, 1990; Manski, 1990). That is, individuals choose more schooling when the expected returns exceed the opportunity cost of education. Positive selection, seen from this perspective, reflects the economic rationality of a selection process that the optimal beneficiaries of college education seek the most. Policy interventions to expand college education to those less likely to attend college, therefore, would decrease average returns to college, since such efforts embrace a subpopulation that is less likely to benefit from education.

In contrast, sociologists emphasize a broader array of factors that can influence selection into college, those that extend beyond the realm of economic rationality (Brand & Xie, 2010; Boudon, 1974; Bourdieu, 1977; Bowles & Gintis, 1976; Coleman, 1988; DiMaggio, 1982). Low propensity to college, in other words, can be attributed to complex circumstances comprising economic, cultural and social elements simultaneously. The negative selection hypothesis starts from the different selection mechanisms underlying low and high propensity college goers. Since the least likely to attend college must overcome various difficulties in doing so, the ones who actually do attend may possess unobserved ability and motivation that place them ahead of those who are more likely to attend college. If those least likely to attend

are more selective, then they may be more driven and dedicated to reap greater benefits from having a college degree.

Brand and Xie (2010) suggest that the disparate earning prospects between high and low propensity students may also cause negative selection in addition to different selection mechanisms. That is, the pattern emerges not because low-propensity college goers receive higher earnings compared to their high-propensity counterparts but “because low propensity non-college goers earn so little” (Brand & Xie, 2010, p. 293). Prior studies show evidence in support of negative selection: that those less likely to attend college, or individuals who are historically excluded, benefit more when given the opportunity to attend (Attewell & Lavin, 2007; Bowen & Bok, 1998; Bryk et al., 1993; DiPrete & Engelhardt, 2004; Heckman et al., 2001; Hoffer et al., 1985; Maurin & McNally, 2008; Morgan, 2001; Tsai & Xie, 2008).

Based on these contrasting arguments, we investigate the heterogeneous effects of a college degree on wages, according to the accessibility to college, by using nationally representative samples of Korean adults. Our aim is to examine the labor market returns on a college degree for three birth cohorts: Cohort 1 (1956-1965), Cohort 2 (1966-1975), and Cohort 3 (1976-1986) with two different treatments (College and Elite College), given that the value of college credentials in the labor market may change according to contextual backgrounds.

Data, measurements and methods

Data

Our data come from the Education and Social Mobility Survey (ESM) conducted by the Korean Educational Development Institute (KEDI).⁴ Based on a proportional stratified sampling method, the ESM collected data for four years (2008-2011) across four birth cohorts, comprising individuals born during the periods 1943-1955 (ESM 2008), 1956-1965 (ESM 2009), 1966-1975 (ESM 2010), and 1976-1986 (ESM 2011). The enumeration district based on the Population and Housing Census (PHC) was used as the key stratification variable. The ESM constitutes a nationally representative sample for each birth cohort and contains extensive information about the respondents’ family backgrounds, education histories and job trajectories. The survey provides rich information through which to compare the educational structure and social mobility in Korea over multiple cohorts. This study focuses on the data from three cohorts (ESM 2009-2011), given the relatively small sample size for college graduates within the first birth cohort. The sample sizes for ESM 2009, ESM 2010, and ESM 2011 are 2,038, 2,034 and 2,033, respectively, making the merged (pooled

cross-sectional) dataset comprise 6,105 individuals.

To calculate propensity to attend college using pre-college information, we restrict our sample to individuals with a high school degree ($N = 5,631$). We further reduced our sample due to missing values on the outcome variable, i.e., wage at first job ($N = 4,729$). Since the numbers of missing values on other covariates are negligible, we dropped additional respondents from the analysis who do not have complete information.⁵ The effective sample consists of 4,528 individuals in total (1,155 from ESM 2009, 1,681 from EMS 2010, and 1,692 from ESM 2011).

Measurements

The treatment variable for this study is whether or not the individual completed a four-year college degree. Four-year college and two-year college graduates are substantially different in terms of labor market entrance, trajectories and wage levels in Korea. Returns on a four-year college degree are much greater than those on a two-year college degree, and both academic and public interest in higher education in Korea are mainly concentrated on four-year colleges (Choi, 2015). Therefore, we sought to reduce the heterogeneous nature of treatment variable and narrow our focus to four-year college degrees. In this study, the term “college” is exclusively used to refer to *four-year* college. The outcome variable (wage at first job) was transformed by using a log metric due to its skewness. To predict the propensity to college, we utilize a rich array of covariates including demographic, social and educational backgrounds. Demographic variables include gender (male = 1), age, number of siblings, and family composition (1 = if lived with both biological parents at age 14).

For socioeconomic background, three factors are taken into account. Lacking information on the household income level, we rely on two proxy measures: self-reported standard of living at age 14 measured on a five-point scale (e.g., 1 = very low 3 = moderate, 5 = very high). The other is the number of household items age at 14. Along with homeownership, they include having one’s own bedroom, a car, a television, a refrigerator, a washing machine, a telephone, a camera, a VCR, a piano, a record player, a PC, and a CD player. The last family background variable is parents’ average years of schooling.

We also take into account eight individual educational background measures: self-reported academic reputation of high school, measured on a five-point scale (e.g., 1 = low, 3 = middle, 5 = high), whether or not the respondent engaged in shadow education (private tutoring) while attending high school (1 = yes), high school location (1 = metro area, 0 = otherwise), and school type (1 = academic; 0 = vocational). Educational expectations of both respondents and their parents at age

14 are also controlled for, ranging in value from 0 (no further education after graduation) to 6 (post-secondary degree). Finally, a composite score for parental involvement in children's education is constructed based on two survey items. Appendix A presents detailed information on the measurements and definitions.

Although we adjust for various controls in examining the heterogeneous income returns on a college education, limitations remain for reasons of data availability. For example, several measures to predict the propensity to attend college rely on proxy measures such as economic status and academic abilities. Our models also do not adjust for demand-side determinants such as organizational size and industrial sector. In addition, our outcome variable measures respondents' wages from initial employment. Although the transition from school to work has crucial implications in the Korean labor market (Choi, 2015), we acknowledge that it does not necessarily represent one's final economic status achieved.

Methods

Before examining heterogeneous returns to a college degree, we first calculate average treatment effect on the treated (ATT) based on the propensity score matching method. The ATT estimates summarize the average effects of a college degree. We first report unmatched differences between college goers and others and then provide nearest matching estimates with one and five controls.⁶⁾

$$\tau_{att} = E(y^{d=1} - y^{d=0} | d = 1),$$

where $d=1$ indicates individuals with a college degree and $d=0$ indicates all others, including a two-year college degree and non-college students. Next, to examine heterogeneous returns to a college degree based on individual propensity to attend college, we use the stratification multilevel (SM) method employed by Brand and Xie (2010). The SM method consists of four steps. First, it estimates propensity scores for all units for the probability of achieving a college degree, based on various precollege covariates, including demographic, social, and educational backgrounds. Second, based on the estimated propensity scores, the SM method constructs balanced propensity score strata, indicating that the mean value of each covariate and propensity score within the same stratum does not significantly differ. At this stage, the only difference of individuals in the same propensity score strata is whether the individual earned a college degree. Third, using an ordinary least squares regression method, SM examines a stratum-specific effect of a college degree on wages at the first job for each strata. These treatment effects are the level-1 estimates, which depend on the number of balanced propensity

score stratum constructed in the prior step. Last, using a variance weighted least squares regression, SM summarizes linear trends of the level 1 effects (Brand & Simon-Thomas, 2013).

For sensitivity analysis, we use a smoothing differencing (SD) method. The SD method is a fully non-parametric approach and presents heterogeneity patterns of treatment effect as a nonparametric function of the propensity score (Brand & Simon-Thomas, 2013). The SD method consists of the following three steps. First it estimates propensity scores for predicting a college degree based on the precollege covariates. Second, the SD method fits two separate nonparametric regressions of wages on the propensity score for college goers and non-college goers. Lastly, it takes the differences of two nonparametric regression lines between college and non-college goers. The advantage of this method is that it can capture curvilinear patterns of effect heterogeneity across propensity scores, whereas the SM method summarizes the linear trend. The SD method is a fully non-parametric approach and relaxes parametric assumptions of the SM method. Also, the SD method relaxes the assumption of the SM method that the stratum specific effects are homogeneous (Brand & Simon-Thomas, 2013). For these reasons, the SD method effectively tests the robustness of results from the SM method.

By using these three methods, we estimate both average and heterogeneous effects of a college degree on wages, taking into account pretreatment heterogeneity issues. We repeat these analyses for the three birth cohorts and compare the results to see how the average returns on college attendance and the patterns of effect heterogeneity of college have changed in Korea during the last several decades.

Results

Determinants of college attendance and average effects of college on wages

Table 1 shows descriptive statistics. First, when we compare college versus all others, including two-year college and non-college, all the covariates show similar patterns for the three cohort groups. College graduates are more likely to be male, have fewer siblings and have been raised by both parents. They also have better socioeconomic backgrounds in terms of economic status 1 and 2 and parental education. In every aspect of one's own educational background, college attendees also indicate favorable pre-college conditions.

Table 1. Descriptive statistics by cohort: ESM 2009-2011

	Cohort 1 (1956-1965)			Cohort 2 (1966-1975)			Cohort 3 (1976-1986)		
	Total	College ^a	None	Total	College	None	Total	College	None
Demographic background									
Male	.546	.688	.488	.532	.653	.472	.503	.559	.454
Age	54.59 (2.881)	54.24 (2.798)	54.735 (2.903)	45.819 (3.056)	45.574 (3.090)	45.941 (3.033)	35.300 (3.220)	35.153 (3.184)	35.427 (3.246)
N/sibling	4.930 (1.673)	4.625 (1.597)	5.055 (1.688)	3.916 (1.524)	3.637 (1.392)	4.055 (1.567)	2.722 (1.135)	2.568 (.986)	2.856 (1.235)
Family composition	.926	.952	.916	.901	.943	.880	.918	.955	.886
Social background									
Economic status1	2.880 (.802)	3.042 (.849)	2.813 (.773)	2.906 (.763)	3.118 (.772)	2.800 (.737)	2.958 (.657)	3.141 (.634)	2.798 (.634)
Economic status2	4.159 (2.575)	5.122 (2.689)	3.764 (2.419)	5.961 (2.592)	7.054 (2.621)	5.417 (2.400)	8.023 (2.069)	8.749 (1.871)	7.395 (2.027)
Parents' education	6.055 (4.070)	7.740 (4.254)	5.364 (3.783)	7.814 (3.786)	9.331 (3.721)	7.058 (3.588)	10.401 (2.988)	11.345 (2.877)	9.584 (2.840)
Educational background									
Grade	3.629 (.874)	3.973 (.869)	3.488 (.837)	3.490 (.830)	3.848 (.823)	3.311 (.802)	3.408 (.824)	3.687 (.780)	3.168 (.784)
Shadow Education	.177	.292	.129	.217	.358	.146	.453	.577	.345
High school region	.427	.524	.387	.465	.560	.418	.503	.545	.466
High school type	.625	.819	.546	.690	.889	.591	.744	.915	.595
High school reputation	.373 (.930)	4.069 (.890)	3.585 (.910)	3.536 (.857)	3.823 (.823)	3.393 (.838)	3.450 (.815)	3.687 (.803)	3.246 (.769)
Edu/ expectation	5.493 (.925)	6.036 (.540)	5.270 (.957)	5.497 (.890)	6.048 (.471)	5.222 (.921)	5.693 (.747)	6.032 (.455)	5.400 (.823)
Par/ Edu expectation	5.036 (1.093)	5.768 (.822)	4.736 (1.048)	5.217 (1.016)	5.881 (.669)	4.886 (.998)	5.611 (.812)	5.972 (.539)	5.298 (.876)
Par/ involvement	2.001 (.733)	2.168 (.757)	1.933 (.713)	2.197 (.724)	2.440 (.741)	2.075 (.685)	2.491 (.698)	2.657 (.648)	2.347 (.708)
Outcome									
(log) Wage	3.147 (1.117)	3.814 (.936)	2.873 (1.070)	4.404 (.764)	4.781 (.597)	4.216 (.769)	4.870 (.470)	4.999 (.494)	4.759 (.418)
N	1155	336	819	1681	559	1122	1692	785	907

Note. ^a college indicates four-year college degree and none includes two-year college degree and non-college; Numbers in parentheses are standard deviations.

To examine average and heterogeneous effects of post-secondary education, we first estimate the propensity scores for college graduates across the three cohorts. Probit regression results presented in Appendix B suggest that males are significantly more likely to achieve a college degree, as are students with higher economic status and parental education and those who have better initial educational backgrounds. Although some predictors are not statistically significant, the overall results of probit regression are in line with descriptive statistics, that those who have better demographic, social and educational characteristics and resources are more likely to obtain a college degree.

Table 2. Matching estimates of four-year college completion on log monthly wages of first job

Four-year	Cohort 1 (1956-1965)	Cohort 2 (1966-1975)	Cohort 3 (1976-1986)
Unmatched differences	.940*** ^a (.067) ^b	.565*** (.037)	.240*** (.022)
Nearest Neighbor Matching (K=1)	.629*** (.118)	.360*** (.080)	.161** (.048)
Nearest Neighbor Matching (K=5)	.638*** (.126)	.329*** (.066)	.145*** (.039)

Note. ^a $\dagger p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. ^bStandard errors in parentheses

Based on the estimated propensity scores, we then examine the average effects of a college degree. All the estimates of unmatched and matched models are statistically significant. The most notable pattern is that the average effects of a college degree drastically decrease from Cohort 1 to Cohort 3. For example, the nearest neighbor matching estimate with five controls of Cohort 1 suggests that wages of college graduates are higher than those of non-college graduates by about 64 percent. For Cohort 3, the difference is 15 percent. This pattern confirms earlier findings that emphasize the decreasing benefits of a college degree in Korea (Kim & Choi, 2015). The role of a college education in determining one's occupational success, in other words, has declined in Korea over the last several decades. However, if the effects of a college degree vary by social background, then the observed modest college effects may underestimate the impact of a college degree on Korea's social stratification.

Heterogeneous Returns to College

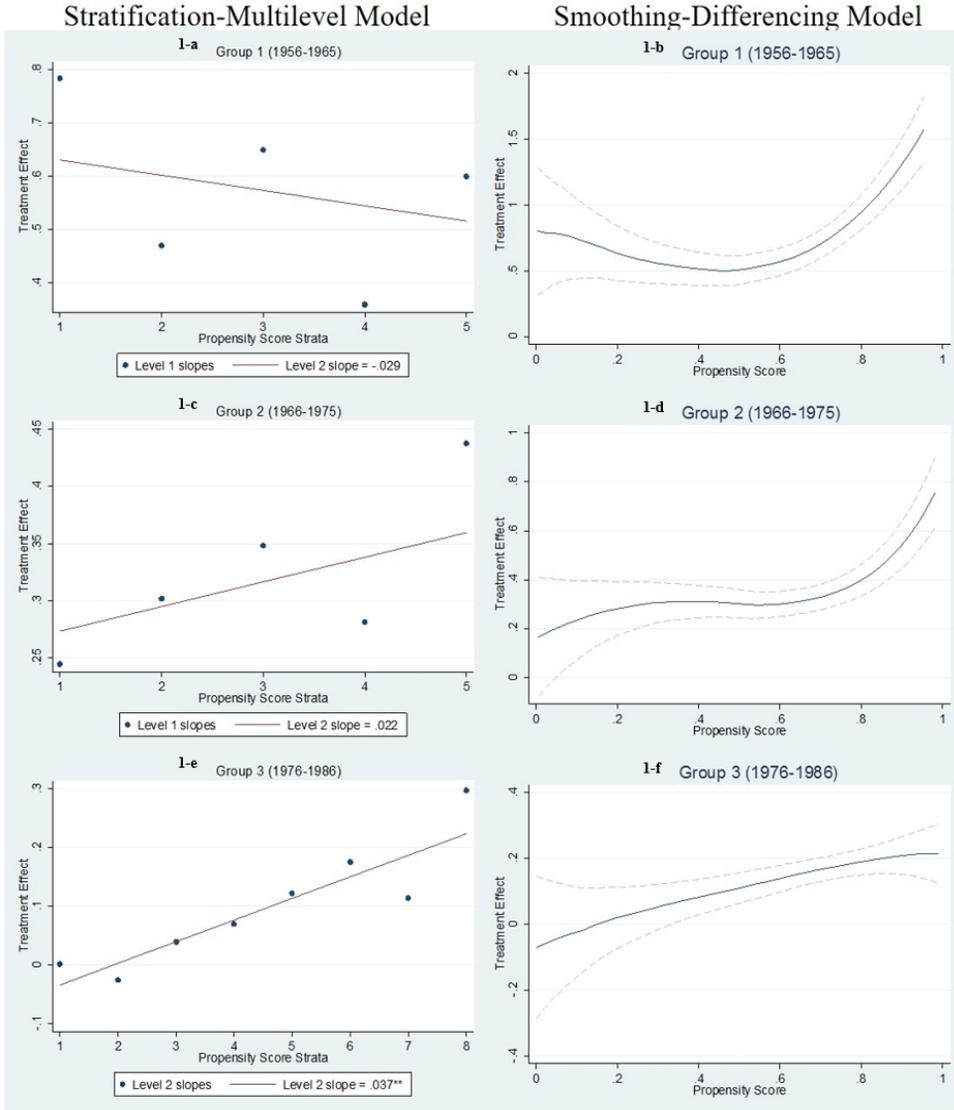


Figure 1. Stratification Multilevel (SM) and Smoothing-Differencing (SD) methods for heterogeneous treatment effects: Four-year college vs. anything else (including two-year college and non-college)

To verify heterogeneous returns to a college degree based on propensity to attend college, we use the SM and SD methods. Figure 1 shows the results of these methods for the three cohorts (Appendix C presents every level-1 and level-2 coefficient and significance of the SM method for each cohort). In the graph, the small dot is the propensity stratum specific coefficient and the red line is the linear trend of college benefit across the propensity score distribution. The x axis is the propensity score strata and the y axis is the coefficient of college benefit. First, Figure 1-a shows a negative selection pattern for Cohort 1, which shifts to positive selection for Cohort 2 (Figure 1-c) and become more reinforced for Cohort 3 (Figure 1-e).

More specifically, the level-2 slope for Cohort 1 (Figure 1-a: $-.029$) suggests that a unit change in stratum rank is associated with about a 3 percent reduction in the college effect on wages. This negative selection indicates that those who are least likely to attend college benefit the most from it. This negative selection does not indicate that students from the lower propensity score stratum earn more wages than students from the higher propensity score stratum. The counterfactual approach examines differences in wages for the same propensity scores. This means that college and non-college students' wage differences for the same propensity score is greater for the lower propensity score stratum than that of the higher propensity score stratum. In contrast, the level-2 slope for Cohort 2 (Figure 1-c: $.022$) suggests that the wage level rises about 2 percent as a function of one stratum rank increase. Therefore, those who are most likely to attend college benefit most from it. Lastly, the level-2 slope for Cohort 3 (Figure 1-e: $.037$), which is steeper than that for Cohort 2, indicates that a one-unit increase in propensity stratum leads to a 4-percent wage increase.

One of the key differences between group 2 and group 3 is that the coefficient of the lowest propensity strata in group 2 is $.25$, which means that college graduates earn about 25% more wages than non-college graduates among the most disadvantaged group. However, the coefficient of the lowest propensity strata in group 3 is close to zero. This suggests that there is no wage difference between college graduates and those who did not attend college among the most disadvantaged group. In sum, college operates as a social mobility tool in group 1, and it changes to social reproduction in group 2 and 3. Especially, in group 3, the college benefit for the disadvantaged students greatly diminishes, while the advantaged students still earn significantly more wages than those who didn't attend college.

Although we observe the changing patterns from negative to positive selection, the level-2 slopes of the first two groups are not statistically significant. For the sensitivity test, we use the SD method to see the patterns of effect heterogeneity without the linearity assumption. First, group 1 shows a u-shape pattern while it is a negative selection in the linear trend. It is negative from the lowest propensity

scores to the middle points, but it changes to positive from the middle to the highest propensity scores. So, college operates in two ways in group: it plays a significant role in social mobility for the disadvantaged students, and it also operates as a social reproduction tool for the advantaged students. However, the curvilinear pattern of groups 2 and 3 confirm the results of linear trends. Both groups show positive selection. While group 2 has some flat trends in the middle points, the college benefit continuously increases from the lowest to the highest propensity scores in group 3. So, college is an effective tool for social reproduction in groups 2 and 3. Another important point in the curvilinear pattern is that the most advantaged students always benefit most from college in Korean society. This result may be attributed to strong college hierarchy in Korea. Advantaged students are more likely to attend elite colleges, and the benefit of elite college has not changed much during the last 30 years. However, the benefit of non-elite college has greatly diminished.

Last, we ran additional models to examine the variation of elite college effects based on the likelihood of receiving an elite college degree. The purpose of this analysis is to see how the quality of college could differentiate the patterns of heterogeneous effects of college. If everyone attends college, university education loses its value as a scarce resource. Recent research points out that while the effects of family background on attending college have waned, they have actually become stronger when it comes to elite colleges (Kim & Choi, 2015). In carrying out the analysis, we constructed a new treatment variable indicating elite schools. We used the top 30 colleges for each birth cohort, since the dataset has too few observations on individuals who graduated from the top 10 schools. The top 30 colleges of group1 and group2 are determined based on average SAT scores of the colleges, and those of group 3 are based on college rankings published by Joong-Ang Daily, which has one of the largest circulations in the country.

Figure 2 shows the results of the SM and SD methods for heterogeneous returns to an elite college degree. The treatment variable is elite college degree and non-treated cases include other college degrees and those who did not attend college. The results clearly suggest a negative selection pattern in both the SM and SD methods for all three cohorts. Cohort 1 shows the strongest negative selection with significant level-2 slope (-.276). The other two cohorts both show negative level-2 slopes that are smaller in magnitude and not statistically significant. On the other hand, all results based on the SD method confirm the negative selection pattern for the three cohorts.

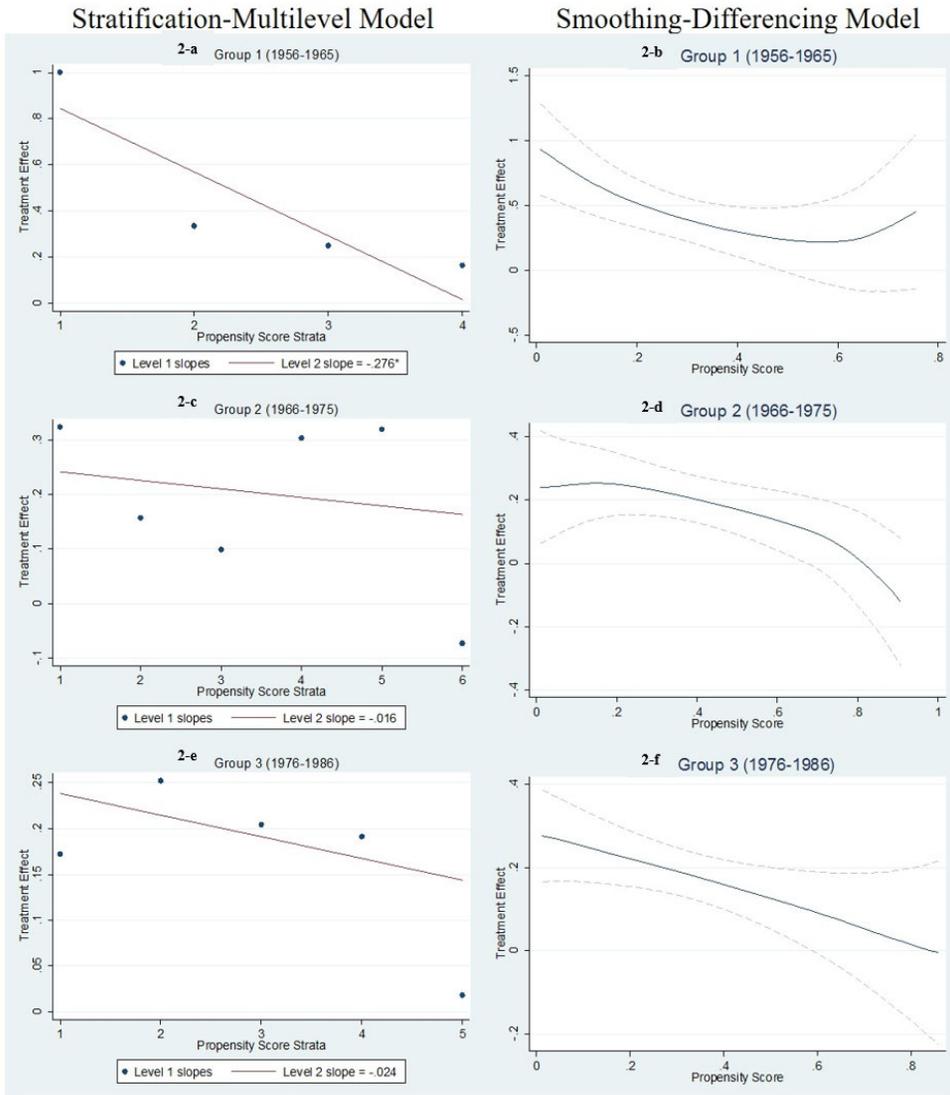


Figure 2. Stratification Multilevel (SM) and Smoothing-Differencing (SD) methods for heterogeneous treatment effects: Top 30 college vs. anything else (including other college and non-college)

Discussion and conclusion

The main motivation of our study was to shed new light on the argument originally proposed by Brand and Xie (2010), who examined the differential returns to college education, and showed that those who are less likely to attend college benefit more from doing so in the US, a phenomenon referred to as negative selection. We tested whether negative selection is peculiar to the US or a more general trend. Our aim was to address this issue, which shows whether expanding college education for disadvantaged students can facilitate social mobility or reinforce social inequality. To that end, we turned our attention to the case of South Korea, a country that has undergone a rapid and enormous expansion of college education. Specifically, we ask the following questions: Does negative selection prevail in Korea, as is the case with the US data? Or does the Korean case exemplify a new and divergent trend in return of a college education? Second, we add to the extant debate by using a subdivided measure of college attainment: elite versus non-elite schools. This allows us to offer a more nuanced empirical analysis. This is especially important in Korea, where a significantly large portion of high-school graduates has gone on to enroll in college in the most recent decade. Thus, the issue we address is not simply getting a college degree but the quality of the credential.

The key findings are as follows. The average effects of college on wages fell sharply from the 1970s to the 2000s. This was mainly due to rapid and massive provision of college educations. The effects of college on wages significantly varied by individual propensity to attend college in each cohort, and the patterns of effect heterogeneity have changed from negative selection to positive selection across the three cohorts examined. More specifically, college students from disadvantaged family backgrounds of Cohort 1 enjoyed higher returns to their college degree once they completed college, compared with those with similar family backgrounds. This means that the college degrees of Cohort 1 (1956-1965) played a critical role in promoting social mobility. However, with expanded provision of college education and succeeding decrease of average returns on a college degree over time, the pattern of wage returns to a college education became favorable for those from better-off family backgrounds (students with higher propensity to attend college).

Another main finding is the curvilinear pattern of effect heterogeneity of a college degree. Unlike the linear trends, the SD results show that the college effects on wages according to propensity to attend college are U-shaped for Cohort 1, where cohorts 2 and 3 have strong positive selection patterns. These results indicate that most advantaged students have always benefitted the most from a college degree in Korea, which deviates from the negative selection reported by Brand and Xie (2010) with the US data. In addition, the pattern of negative selection was clear when we use differentiated measures of college attainment — elite college versus non-elite

college. The pattern of our additional analyses informs us that for disadvantaged students to use higher education as the most effective means for upward mobility in Korea, they have to attend an elite college. However, the problem is the cost involved in preparing for elite college. Prior research using the same data shows that the effects of family backgrounds on attending elite college went up during the same periods (Kim & Choi, 2015). If the probability of attending a few elite schools is much greater for more advantaged students, we can infer that college education in Korea may have played a significant role in social reproduction rather than social mobility.

To sum up, the negative selection thesis by Brand and Xie (2010) does not demonstrate universal applicability, at least not to Korea. Their thesis, if warranted, can support the policy of college for all. However, our study suggests that simply providing higher education on a massive scale does not necessarily promote social mobility. A few important observations and policy implications flow from the results of our study. First of all, the unique experiences of the oldest cohort (Cohort 1) vis-à-vis the younger two cohorts point to the fact that higher education has lost its edge in “leveling the playing field.” Decades ago, it was more likely for someone of a lower family background to take advantage of labor market opportunities afforded by a college education. As more and more people decided to go to college in Korea, the economic advantages of a college education have dwindled. Today, as indicated by the experiences of the younger cohorts in our dataset, those less likely to attend college no longer reap greater benefits, as they once did. Put another way, the educational apparatus serves to maintain the status quo of inequality rather than provide chances of upward mobility for underprivileged members of Korean society.

One of the central features of contemporary educational systems is that they sort people into stratified categories, which differentially shape their life chances (Domina et al., 2017). Korea is no exception in this regard. It has been shown repeatedly that, “where you go to school largely determines where you will end up in life.” And the rate of returns on educational investment has become increasingly higher for more privileged segments of society. Currently, there is a tight link between family background and elite college attendance in Korea. Considering the observed negative selection pattern of elite colleges, one possible policy implication is to provide more opportunities for disadvantaged students to gain better access to them. Affirmative action programs are not a cure-all. And adjusting college admissions rules are politically sensitive and socially costly. Nevertheless, the status quo, if left undisturbed, would only further allow college education to serve as a channel for social reproduction (Kim & Choi, 2015).

In conclusion, given the enormity of the tasks involved, there is no easy solution. Moreover, with inherent power struggles between social classes to achieve an educational advantage, it is particularly challenging to form a national consensus to design and implement any egalitarian policy measures. If the current positive selection

pattern continues, however, Korea's higher educational system would only worsen the already widening domestic income gap, further minimizing the economic value of a college education for the disadvantaged. Clearly, reversing the patterns of effect heterogeneity of a college degree should be a top public policy priority. This is a tall order, but stakes are too high not to undertake the challenges involved for a more equitable distribution of material rewards not only in Korea but the world over.

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- 1) For a critical perspective on this argument and related methodology, see Breen, Choi and Holm (2015), which suggests that the conventional selection bias may be mistaken for heterogeneous treatment effects.
 - 2) This negative selection does not mean that students from the lower SES family backgrounds earn more wages than those from the higher SES family backgrounds. The counterfactual approach by Brand and Xie (2010) first investigates differences in wages between college and non-college students within the same propensity score to attend college. Then it compares the size of this difference between strata of propensity score to attend college. When this gap is greater for those in a lower propensity score to attend college than those in higher propensity score to college, they define it as negative selection. And the opposite is positive selection.
 - 3) An OECD report (2012) states that from 1997 to 2010 the percentage of Korean people (between the ages of 25 and 64) who had not attained an upper secondary education dropped by 18 percentage points (from 38% to 20%), in comparison with the 11 percentage-point decrease across OECD countries. During the same period, the share of tertiary graduates in Korea doubled (from 20% to 40%), the largest increase among all OECD countries. As of 2011, Korea also has more tertiary graduates working in science-related fields than any other OECD country. According to the latest information source from OECD, 69 percent of young Koreans in the 25-34 age bracket have received tertiary education (2-year college diplomas, BAs, MAs, PhDs, etc.) in 2015, while the OECD average was 42 percent.
 - 4) For more information about ESM data, please visit the KEDI web site (<https://www.kedi.re.kr/khome/main/research/selectSurveyDBForm.do?lqSequ=110>)
 - 5) The missing cases of the most variables are less than 1%. The variable with the largest missing cases is parents' educational expectations for their children (67 or about 1.4 % of the sample)
 - 6) Nearest neighbor matching is one of the major matching solutions. This method constructs the counterfactual for each sample case using the control cases that are closest to the sample case on an estimated propensity score. The control case could be one or multiple cases. Matching more control cases to each sample case lowers expected variance of the treatment effect estimate but also raises the possibility of greater bias caused by the poor matched cases (Morgan & Winship, 2014).

Address for correspondence

Doo Hwan Kim

Department of Sociology, Duksung Women's University
33, Samyang-ro 144-gil, Dobong-gu, Seoul, 01369, KOREA
Email: dhkim@duksung.ac.kr

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Appendix A. Measurement of variables ($N = 4,528$)

Variables	Description	Mean	Standard Deviation
Demographic Background			
Male	Male = 1, Female = 0	.525	
Age	Survey year age	44.126	8.220
Number of siblings	Continuous variable	3.729	1.678
Family composition	Living with both biological parents at age 14 1 = yes	.914	
Social background			
Economic status1	Self-reported levels of standard of living at age 14. 1:very poor 2:poor 3:middle 4:rich 5:very rich	2.919	.736
Economic status2	Numbers of items in household of age 14 including 1) homeownership 2) one's own room 3) car 4) TV 5) refrigerator 6) washing machine 7) telephone 8) camera 9) VTR 10) piano 11) record player 12) PC 13) CD player	6.272	2.846
Parents' education	Parents' average years of schooling	8.332	3.987
Educational background			
Grade	Self-reported levels of grade in high school. 1: low rank 2:low to middle rank 3 middle rank 4: middle to upper rank 5: upper rank	3.495	.843
Shadow Education	Engagement in shadow education during high school 1: yes	.295	
High school region	1: metro city 0: small city and rural area.	.470	
High school type	1: Academic high school, 0: other high school	.694	
High school reputation	Self-reported levels of high school 1: low rank 2: low to middle rank 3 middle rank 4: middle to upper rank 5: upper rank	3.552	.868
Educational expectation	Educational expectation at age 14	5.569	.854
Parents' educational expectation	0: None 1: Elementary school 2: Middle school 3: High school 4: 2 year college 5: 4 year college 6: Master's degree and above	5.318	.995
Parents' involvement in education	Two questions are used to construct a new composite variable (a four-point scale): 1) Parents help children's school-related activities 2) Parents know well about children's school life and friends.	2.257	.743

Appendix B. Probit regression estimates for models predicting four-year college completion

	Cohort 1 (1956-1965)	Cohort 2 (1966-1975)	Cohort 3 (1976-1986)
Demographic background			
Male (0/1)	.643**** (.104) ^b	.380*** (.084)	.366*** (.075)
Age	-.059** (.017)	.009 (.014)	.001 (.012)
Number of siblings	-.022 (.029)	.003 (.029)	-.028 (.036)
Family composition (0/1)	.135 (.190)	.229 (.144)	.216 (.150)
Social background			
Economic status1(1-5)	.008 (.073)	-.075 (.062)	.051 (.071)
Economic status2 (0-13)	.008 (.025)	.043* (.020)	.070** (.024)
Parents' education	.039** (.014)	.026 [†] (.013)	.030 [†] (.015)
Educational background			
Grade (1-5)	.316*** (.061)	.378*** (.053)	.415*** (.052)
Shadow Education (0/1)	.406** (.123)	.381*** (.098)	.181* (.078)
High school region (0/1)	.222* (.101)	.073 (.083)	.027 (.077)
High school type (0/1)	.521*** (.111)	.540*** (.100)	.826*** (.099)
High school reputation (1-5)	.146** (.057)	.057 (.051)	.124* (.051)
Educational expectation (0-6)	.441*** (.075)	.624*** (.066)	.535*** (.067)
Parents' educational expectation (0-6)	.312*** (.056)	.333*** (.053)	.303*** (.063)
Parents' involvement on education (0-4)	-.059 (.070)	.068 (.062)	.015 (.061)
LR chi2	458.03	756.68	751.00
Prob > chi2	.000	.000	.000
Pseudo R2	0.3288	0.3539	0.3214
N	1155	1681	1692

Note. ^a [†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. ^bStandard errors in parentheses

Appendix C. Stratification Multilevel (SM) estimates of four-year college education on wages of first job

College Completion	Cohort 1 (1956-1965)	Cohort 2 (1966-1975)	Cohort 3 (1976-1986)
Level-1			
Stratum1	.784*** (.266) ^b	.245 [†] (.135)	.001 (.117)
Stratum2	.471* (.225)	.302** (.093)	-.026 (.094)
Stratum3	.649*** (.161)	.348*** (.075)	.039 (.060)
Stratum4	.360* (.166)	.282** (.088)	.070 (.074)
Stratum5	.600*** (.140)	.437* (.177)	.122 [†] (.067)
Stratum6			.176** (.062)
Stratum7			.114 (.077)
Stratum8			.297** (.113)
Level-2	-.029 (.061)	.022 (.041)	.037** (.014)
<i>N</i>	1155	1681	1692

Note. ^a [†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$, ^bStandard errors in parentheses

Internationalization by English-Medium Instruction? Professors' decoupling behaviors to EMI policy in Korean higher education

Jae-Eun Jon
Hankuk University of Foreign Studies, Korea
Young Ha Cho
Kyung Hee University, Korea
Kiyong Byun
Korea University, Korea

Abstract

The purpose of this study is to understand the complex phenomenon between the coercive implementation of EMI policy and professors' strategic responses to it in Korean higher education. The concept of decoupling is applied to explain professors' behavioral patterns. We collected data from interviews with 13 Korean professors at two private universities in South Korea. We found that their perception of EMI was largely negative and EMI even made some professors question their professional identities. Nevertheless, professors used a variety of strategies to continue to teach EMI courses and fulfill their roles as teachers. In this process, they attempted to separate their practice from institutional policy, in other words, decoupling, to maintain flexibility. The future development of EMI policy and implementation need to consider these decoupling behaviors as well as the educational purpose of EMI policy.

Keywords: English-Medium Instruction, decoupling, internationalization of higher education, internationalization policy, Korea

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The importance of English as a lingua franca has increased with the intensification of globalization. Accordingly, in many non-English speaking countries, English-medium instruction (EMI) in higher education has become a new policy trend to accommodate and facilitate the growing inflow of international students (Byun et al., 2011; Chang et al., 2014; Hu et al., 2014; Wächter & Maiworm, 2014). In the East Asian region, including China, Japan, and South Korea, governments have pushed higher education institutions to adopt and increase EMI through various measures (Aizawa & Rose, 2019; Byun et al., 2011; Hu & McKay, 2012). In China, the Ministry of Education included the number of EMI courses in evaluating higher education institutions (Gu & Lee, 2019; Hu & McKay, 2012; Yuan et al., 2019). In Japan, the Top Global University Project by the Ministry of Education emphasized the importance of EMI in Japanese higher education (Aizawa & Rose, 2019; Rakhshandehroo & Ivanova, 2020). In Korea, the Ministry of Education used the proportion of EMI courses as the indicator for internationalization for its major funding programs until a recent date (Korean Educational Development Institute [KEDI], 2011; Ministry of Education, 2013).

Among these East Asian countries, particularly the case of Korea is noteworthy in that the EMI policy and related phenomenon have been driven not only by the government but also by a private newspaper company. These two driving forces impelled Korean universities to adopt EMI for their survival from government funding as well as for the reputation game based on university ranking results by a private organization. In other words, Korean universities implemented an EMI policy by a coercive measure from the government but they also semi-voluntarily adopted it in competition with other universities for domestic rankings. In this process, professors and students seem to have agreed with the necessity of EMI in Korean higher education, but it is also true that they have dominantly expressed difficulties with and the ineffectiveness of, its implementation (e.g., Byun et al., 2011; Jang, 2012; Kim et al., 2017). A good number of studies from China, Korea, Japan, and Taiwan have focused on students' difficulties with EMI (e.g., Chang et al., 2014; Chu et al., 2018; Gu & Lee, 2019; Jang, 2012; Kim et al., 2017) and confirmed challenges that both students and professors experienced (Aizawa & Rose, 2019; Byun et al., 2011). However, little scholarly attention has yet been given to what professors experience and how they respond to an EMI policy and its implementation on campus.

While a few studies described professors' strategies and responses to an EMI policy, they only briefly sketched how they think of the policy and behave in their class without further investigating their experiences in the context of the dynamics of policy implementation at the institutional level. For example, Hu et al. (2014) described in their Chinese case that professors lowered the level of content, limited the content of teaching to that of textbook only, or codeswitched from English to a

domestic language. Ariffin and Husin (2011) also noted that instructors used code-switching and code-mixing between English and Bahasa for their EMI teaching in Malaysia. However, these studies lacked an explanation of how professors chose to use such behaviors as responses to an EMI policy implementation at the institutional level. While a few studies in East Asia (Aizawa & Rose, 2019; Hu et al., 2014) addressed a gap between EMI policy and practice, they did not incorporate an organization theory to explain professors' responses to it as decoupling. The current study aims to understand professors' EMI experiences in relation to the EMI policy and how their strategies for EMI and EMI policy can be decoupled at the institutional level.

As mentioned above, institutional coerciveness is the nature of an EMI policy in Korean higher education. In addition, most Korean universities carried out an EMI policy in existing programs, which have exclusively depended on Korean language among Korean professors and students. Hence, the Korean case specifically can help to uncover the dynamics between the coercive implementation of an EMI policy by a university and professors' strategic responses to it in their teaching of EMI courses. Accordingly, the Korean case can add the distinctive patterns of professors' experiences with EMI to the body of knowledge on EMI in a non-English speaking country.

Therefore, this study aims to understand the complex phenomenon that emerged between the coercive EMI policy implementation and professors' strategic responses to it in Korean higher education. For this purpose, the following research questions will guide our analytical process: (1) How do Korean professors perceive the implementation of an EMI policy on campus? (2) How do they respond strategically to the policy demand in their situations?

The case of Korea

Along with the global trend of increasing EMI, universities in Korea have greatly expanded the number of EMI courses offered over the past two decades (Byun et al., 2011; Cho, 2012; KEDI, 2011). For example, major private universities in Seoul increased the proportion of EMI teaching, 20% to 40% in 2011, and some of them still maintain its proportion at 30-40% (Jang, 2012; Nam & Kwak, 2019). This growth of EMI courses in Korean universities can be attributed less to their desire to achieve intended educational goals but more to the extrinsic motivation of securing government funding and gaining higher rankings on university evaluations. For example, the Ministry of Education funding programs in Korea, such as the Educational Capacity Building Program for Korean Higher Education Institutions

and the Brain Korea (BK) 21 Plus Project, explicitly included the overall proportion of EMI courses as an indicator to evaluate the internationalization of a university (KEDI, 2011; Ministry of Education, 2013). In addition, the university evaluation by a newspaper company such as *Joong Ang Daily* used to include the proportion of EMI courses as an indicator until 2014 (Joong Ang Ilbo Educational Development Institute, 2013, 2015). This evaluation system was controversial for its reliability, expertise, and issue of rating universities leading to competition (Lee, 2008). Although universities had resistance to it, they had no choice but participate in evaluation, because it is open to the public, which can affect university reputation and their graduates' career paths in Korean society (Lee, 2008). As domestic university ranking results became a major concern even for top-ranked universities considering their reputation in the Korean society (Collins & Park, 2016), the proportion of EMI courses was included in the list of the evaluation indicators that universities need to manage, even with high expense. Moreover, not only do Korean universities compete with each other domestically for their reputation and government funds, they have also tried to increase their global presence to attract both domestic and international students. Korean universities have been facing financial difficulties due to the government's policy of freezing tuition, which has lasted over a decade now, as well as the imminent crisis of student recruitment from the rapid decrease of school-aged population (Kim, 2018). Accordingly, a number of universities in Korea have inevitably raised the proportion of EMI courses so that they can increase the likelihood of winning government grants (Cho, 2012) and attracting international students.

In responding to external pressures as explained above, Korean universities have strategically relied on administrative interventions to adopt and increase EMI courses. In that, they chose compulsory policy implementation to promote EMI, which consequently infringed on the voluntary will from professors and students. Specific measures to expand EMI courses at each university have included mandating professors to teach EMI courses and requiring students to take a set number of EMI courses for graduation (Byun et al., 2012; Cho, 2012; Nam et al., 2018). In comparison with other East Asian countries, it is interesting to note that this coercive administrative measure has spontaneously generated Korean professors' various strategies to deal with it in their classrooms, particularly in relation to their scholarly identity. As they were required to conform with the top-down EMI policy, they responded differently to it, trying to keep their scholarly identity as a professor in their classrooms.

Against this background, this study will explore the gap between policy and practice of the EMI policy implementation on Korean campuses by focusing on the perceptions and behaviors of professors' who teach EMI courses in their classrooms.

Theoretical framework

The analytical strategy adopted in this study is based on the concept of decoupling. With the growing uncertainty in the modern society, social organization has shown the tendency to establish and institutionalize their official structures based on external legitimacy (Meyer & Rowan, 1977). Organizations have become homogenous and isomorphic when many individual organizations choose to follow a structure that has proven to be normatively acceptable (Meyer & Rowan, 1977). DiMaggio and Powell (1983) explained that such isomorphic processes occur through three processes: coercive, mimetic, and normative. Importantly, not all organizations take the form of rational bureaucracies, and members within subordinate organizations preserve some form of autonomy (Glassman, 1973). Conflicts occur when the specificity and rationality of an organization appear incompatible with the values endorsed by externally originated structures during its pursuit of acquiring external legitimacy through isomorphism; institutions may accept a legitimate structure as a sign of complying with external pressures, while simultaneously separating their actual structures and practices from official ones (Meyer & Rowan, 1977).

This is called decoupling in organization theory that action can be decoupled from the structure for action (Boxenbaum & Jonsson, 2017). Organizations do not merely either adopt or refuse the external demand from environment, but they can also adopt it externally, while controlling it internally so it does not cause excessive confusion to their practices (Byoun, 2012). In other words, organizations can seemingly implement a new policy without significant impact on internal practices. With the decoupling process in an organization, for example, "activities are delegated to professionals," "program implementation is neglected, and inspection and evaluation are ceremonialized." (Meyer & Rowan, 1977, p. 357). This phenomenon of decoupling can occur when organizations receive strong evaluative pressure for change (Seidman, 1983). It can also occur in diverse ways (Boxenbaum & Jonsson, 2017). Namely, at the organizational and individual level, different strategies can be used to maintain internal practices and survive from change caused by a new policy. Decoupling may be viewed negatively because it separates official policies from the originally intended ones. However, recently the positive views of decoupling have emerged as a survival strategy to secure external legitimacy while

maintaining technical efficiency, and also as transition time to inspire future change and recoupling effects (Rasche & Gilbert, 2015).

Therefore, decoupling can be a useful framework in this study to understand Korean professors' strategic responses to an EMI policy that has been implemented coercively by external pressures. While they may have no choice but to teach EMI courses, seemingly or substantially, they can take different strategies to preserve their scholarly identity for teaching or to protect student learning. While a few studies on EMI have addressed a similar issue as the gap between policy and practice in China and Japan (Aizawa & Rose, 2019; Hu et al., 2014), they gave little consideration of EMI policy as institutional pressure and professors' behaviors as decoupling responses from the perspective of organization theory.

This study hypothesizes that the behavioral patterns of professors who are obliged to teach EMI courses regardless of their own will can be explained through the concept of decoupling. Figure 1 illustrates the conceptual framework of this study.

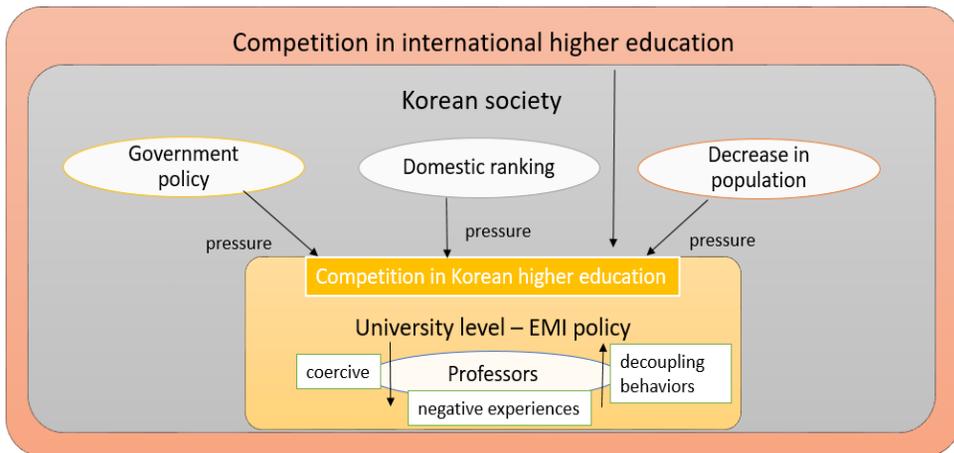


Figure 1. Theoretical framework: EMI policy and professors' decoupling behaviors in Korean higher education

Method

Research site

We collected data from two private universities located in Seoul, Korea University (KU) and Kyung Hee University (KHU). These universities are considered as representative examples of internationalization as well as EMI in Korean higher education. We also selected case universities because they include a wide spectrum of academic majors, from humanities to science and engineering. This can help us observe and investigate the various policy implications related to EMI across different disciplines. In addition, the analysis of at least two cases can yield more robust findings for the topic of this study than using a single one (Yin, 2014).

Both KU and KHU are similar in size and located close to each other. KU and KHU had 21,165 students and 26,430 students in 2019, respectively, and the size of the international student population was 4,184 and 4,727, respectively in the same year (Higher Education in Korea, 2019a, 2019b). KU and KHU have been ranked in the top range of Korean higher education according to the Joong Ang Daily, with KU recording 5th and KHU 6th in 2019 (Joong Ang Ilbo, 2019). Their level of internationalization has also been ranked high: 4th and 6th for KHU and KU, respectively in 2014 (Joong Ang Ilbo Educational Development Institute, 2014). Since 2015, the Joong Ang Daily has included internationalization indicators, such as the proportion of international professors, that of international students, diversity among international students, and the proportion of exchange students in the category of educational environment (Joong Ang Ilbo, 2018). The proportion of EMI at KU increased from 26.22% in 2006 to 35.72% in 2011, and it was 38% in 2019 (Jang, 2012; Nam & Kwak, 2019). The proportion of EMI at KHU rose from 5.43% in 2006 to 42.10% in 2011, but decreased to 15% in 2019 (Jang, 2012; Nam & Kwak, 2019).

With regard to EMI policy, KU has a relatively long history of promoting EMI courses, beginning in the early 2000s. In 2005, it announced the goal of increasing EMI courses in its institutional vision for the next step, celebrating the centennial anniversary (Korea University 100 Years Publication Committee, 2008). From 2000, KU's EMI policy has mandated that all departments offer at least one course in English, with exceptions for the Korean language and literature department, for instance. Undergraduate students are required to take a minimum of five courses in English as a graduation requirement, which can vary by college. Professors hired since August 2003 are obligated to teach all courses in English based on their contract. Recently, KU has allowed the exemption of EMI teaching for some professors as long as their department maintains the equivalent proportion of EMI classes as before. Similarly, KHU requires newly hired professors to teach an EMI course in their department or one in general education. Undergraduate students need to take a minimum of three EMI courses in their academic major for

graduation. KHU has a distinct policy called the partial EMI. Whereas the full-EMI courses are taught only in English for the whole semester, the partial-EMI courses can mix Korean and English in various ways. For example, an instructor can allow both languages to be used for speaking, or choose a textbook in English but converse in the classroom in Korean. Currently, KHU plans to improve its EMI policy, including conducting full EMI courses only, without the option of partial EMI.

Participants

We interviewed a total of 13 Korean professors, seven from KU and six from KHU (see Table 1). Among the 13 participants, six were from social sciences, two from the humanities, and five from the sciences. Four were female and nine were male. As shown in Table 1, most of the professors obtained their doctoral degrees from overseas institutions, except for four in science. Among nine professors with doctoral degrees from overseas institutions, one studied in a non-English speaking country. Two professors hold doctoral degrees from Korean universities, and the other two received postdoctoral training or lived in an English-speaking country after earning their doctorates in Korea. All participants had experience teaching undergraduate EMI courses at their institutions. Additionally, we interviewed three

Table 1. Interviewee information

	Institution	Pseudonym ¹	Gender	Major	Doctoral degree from an English-speaking country
1	KU	B	Male	Social science	Yes
2	KU	I	Male	Social science	Yes
3	KU	PA	Male	Science	No ²
4	KU	PB	Female	Social science	Yes
5	KU	EA	Female	Social science	Yes
6	KU	HA	Male	Humanities	No ⁴
7	KU	EB	Male	Science	No ²
8	KHU	C	Male	Science	No ³
9	KHU	A	Male	Science	Yes
10	KHU	HB	Female	Humanities	Yes
11	KHU	M	Male	Science	No ³
12	KHU	F	Female	Social science	Yes
13	KHU	PC	Male	Social science	Yes

Note. 1. Initials in parentheses indicate the pseudonyms for interviewees; 2. Received postdoctoral training or lived in an English-speaking country; 3. Obtained in Korea; 4. Obtained from a non-English speaking country

international professors from both institutions who teach EMI courses. We also conducted interviews with 20 undergraduate students in total, 10 from each institution, who were sampled by gender and major. All study participants had taught or taken classes in English. The interview data with students and international professors were used to triangulate with that from Korean professors.

Data collection and analysis

We conducted semi-structured interviews with the professors individually, using an interview protocol developed based on the previous literature (Byun et al., 2011; Jang, 2012). Our interview questions included interviewees' opinions on the purpose of EMI policy, its achievements, individual experiences with EMI implementation, advantages and difficulties related to EMI, and suggestions. All interviews were digitally recorded, with participants' permission, except for one interview. For this interview without recording, two interviewers took notes during the interview and organized them together after interview. Recorded interviews were transcribed verbatim.

For data analysis, we initially used evaluation coding (Saldaña, 2013) which focused on EMI policy for its purpose, effectiveness, criticism, and implications. As our analysis developed, however, important themes emerged regarding professors' experiences and perceptions of EMI, as well as their strategies in response to EMI policy. In order to understand these themes, we analyzed the interview data based on the theoretical framework of decoupling, exploring professors' perceptions and responses to EMI policy. We categorized codes using pattern coding and restructured them to show professors' perceptions towards EMI and their decoupling behaviors (Glesne, 2016; Miles & Huberman, 1994; Saldaña, 2013). The interview data of professors and students from KU and KHU were compared to cross-validate the results of analysis from each university, which were subsequently synthesized by each theme (Miles & Huberman, 1994; Yin, 2014). We also compared and contrasted the themes that arose in the professors' interviews with those from the student interview data. The student data supported and added their experiences and views on the professors' EMI perceptions and strategies. Students' observations and sharing the diverse cases of EMI courses complemented the data from professors, especially on EMI courses that students evaluated negatively. Interviews with international professors were also analyzed for data triangulation, which supported consistent findings with Korean professors on EMI.

Findings

Professors' perceptions of EMI policy: Institutional pressure, Grin-And-Bear-It

The following findings show how professors in this study experienced institutional pressure for EMI policy in their EMI classes. Some discussed its positive aspects, such as internationalization on campus, international student recruitment, recognition from outside the campus, and contribution to increasing students' confidence in and lowering barriers to English. Students particularly agreed that EMI policy could help their English skills and confidence. Nevertheless, professors' experiences and perceptions of EMI policy were overwhelmingly negative.

I am teaching in English, but it is educational for students?

Nearly all of the professors deplored that they could not teach as well in English as they could in Korean. In many cases, students' lack of English competence was an issue. Some students could not submit assignments because they could not even understand in English that they had assignments. Students could not solve problems in a test even when a professor emphasized as important the same problem five times in class. Especially in science and engineering classes, students were at risk of being unable to learn the basic knowledge in their majors because basic courses in the first year were taught in English.

"Students' level of involvement is low. I know 100 but cannot teach all 100, because I either run out of time or I need to keep explaining due to the lack of students' understanding. And surprisingly, I told them, 'this is important' five times in English, but they cannot solve it if it is included in a test. In other words, they could not understand that statement itself." (PA, KU)

In addition, professors highlighted the lack of flexibility and leverage from teaching in English. They complained that they could not joke or talk as freely as they could in Korean, although they wanted to use jokes, metaphors, and spontaneous speaking to intrigue their students, wake them up, and help them understand the subject matter.

"Teaching in English becomes monotonous. Use of various metaphors can help students understand. But if I use diverse metaphors [in English], students cannot understand them. In courses I teach, it [teaching in English] is certainly a minus. I can guarantee it." (M, KHU)

Moreover, professors felt that Korean students' tendency not to ask questions in classrooms became worse in EMI classes. Korean students were reluctant to respond to professors' questions in class, which created intermittent pauses and breaks during the class. Instead, they rushed to the front of the classroom after class to ask their questions in Korean. Students were nervous about missing out on content and even recorded lectures. Both Korean professors and students also felt awkward and tense by using English in the classroom.

In this regard, one KU professor pointed out that EMI that impedes the student-faculty interactions in classroom is not educational. By the same token, even a Korean professor who was as fluent in English as a native speaker denounced EMI: "When students who are poor at English are delivered [the content] by professors who are also bad at English, it is a total collapse of education" (I, KU). Similarly, even professors who were confident in and good at English felt teaching EMI courses was stressful. One professor at KHU confessed that she felt sandwiched between the university's EMI policy and her students' difficulties in English and also between Korean and international students. She did not want to exclude her international students by mixing the Korean language in class, and nor did she want to isolate Korean students who struggle with English. This double bind made her unable to satisfy either group of students.

The EMI policy makes me question my scholarly identity as a professor

The EMI on a Korean campus is not limited to the issues of teaching and learning in the classroom. The EMI policy requires professors to teach in English regardless of their competence in English or the characteristics of a subject. These circumstances make them question professors' scholarly identities in teaching their academic majors. They felt that their scholarly identities disappeared and were even replaced with the role of teaching a foreign language—English. One professor criticized:

"We are supposed to teach academic studies, not English. I need to teach my major, for example, from page 1 to page 100. I can go further or deeper, teaching at least 100 pages. But [with EMI] I can teach only 80 pages, and I cannot even have students understand those 80 pages as well as I want. I think that this is the delinquency of duties." (M, KHU)

Some of the interviewees said that teaching in English is not rewarding, but rather made them feel stressed and even miserable. They felt ashamed that they could not adequately perform their roles in class. A professor in a foreign language

department pointed out that the EMI policy infringed his scholarly identity by forcing him to teach in a language irrelevant to his expertise:

“My first foreign language is [an Asian language other than Korean], and French became my second foreign language... After my hire, I asked the Office of Academic Affairs if I could teach my class in [an Asian language other than Korean]. They replied that I could not, because [Korean] students cannot understand [it]. Without any choice, I am teaching in English ... The characteristics of professors lie in their expertise, but I cannot share my expertise. Many problems occur from this.” (HA, KU)

Students also noticed professors’ EMI-related stress in class. Some students were considerate of professors who struggle with English when they formed good relationships. Otherwise, students did not focus in class or some students even acted disrespectfully to professors experiencing difficulty in English. One student reported, “There are cases where an international student offends and degrades a Korean professor intentionally because a Korean professor is not good at English” (Student I, KU).

I am overburdened by EMI, in vain

The EMI policy has also added a burden to professors, in addition to the variety of their duties on campus. One professor said, “the university wants a superman, not a professor. Nowadays, professors are asked to teach EMI courses well, run university programs, write academic papers, and advise students” (A, KHU). For EMI courses, professors end up spending more time and energy preparing for and teaching EMI courses than teaching in Korean:

We need to make two to three times more effort to prepare for the course than other courses... At least, I have to pay more attention to making class materials. I need to make enough scenarios about how to explain some part when I put those materials in front of students. That way, I can express myself in a timely manner. This was really very painful. It was not the matter of your fluency and competence in English but that of how to deliver this effectively to students. (C, KHU)

To assist Korean students’ understanding in EMI courses, some professors made extra efforts. They attempted to engage and motivate their EMI students and help them outside of class through additional sessions. Professors also used office hours to help students who needed supplementary study:

As soon as the class ends in English, my final comment is, “Those who could not understand my class, I have four open office hours every week. Because I cannot teach you everything from beginning to end, visit me... Whether you come in groups or not, I will share four hours with you. Whether you book a classroom or ask me to come somewhere, I will go there. I can do it in Korean too.” (PC, KHU)

However, in spite of professors’ efforts to teach well in English, students’ difficulties in understanding the content and their lack of response frustrated professors. They felt that students were not learning either the content of course or the English language as much as they expected. They even noted that students were dissatisfied with EMI classes. This all meant that they were trying hard to teach EMI classes, with limited success.

It consumes substantially lots of my time. But what do we gain from it? ... I think that we have lost more, like having the in-depth discussion that we can do at the level of university classes. Memorizing a few English words without being able to do it would not be that meaningful. (HB, KHU)

Professors’ decoupling behaviors to EMI policy

Based on professors’ perceptions of EMI described above, we found that they chose various behavioral strategies to cope with EMI policy. The main feature was decoupling between an institutional policy for EMI and the actual practice for it in a classroom. The ideal that EMI policy pursues was shown divorced from reality.

Mixing Korean language with English

EMI is supposed to mean teaching and learning in ‘English.’ However, some professors who tried to address difficulties in teaching EMI courses strategically chose to mix Korean language with English in their classrooms. We also found that the university policy on EMI is silent about this. The professors who adopted this strategy used Korean to explain what students could not understand in English. In addition, some professors shared supplementary materials written in Korean to facilitate students’ understanding. In many cases, Korean professors spent the first or the last ten minutes of the class to review the prior or the present class in Korean. In one case, a professor held review sessions in Korean before examinations.

Sometimes there is a concept that I believe students must understand anyhow, but I cannot explain it by using English only. Then I emphasize it shortly, even for five minutes [in Korean]. I give detailed explanation once [in Korean]. Then I go back to speaking in English. (*M, KHU*)

In one class, a professor spoke half in Korean and the other half in English. The professor said that students do not seem to understand the class at all and spoke in Korean, apologizing to international students for speaking in Korean. But Korean students asked about what had just been explained again, 'why is this so?' They ask it when the professor had just explained it. I realized, ah, they really did not understand it. (*Student J, KU*)

There is no reason that Korean students do not welcome the mixed use of Korean in the EMI class. One KHU professor said that students clapped their hands with acclamation when he said that he is going to explain a certain part in Korean. Sometimes, students requested the use of Korean in an EMI class. Professors often allowed students to use Korean in asking questions: "If a student asks me whether asking a question in Korean is allowed, it is better than not asking anything. So I let them do it and answer in English" (*PA, KU*).

Teaching easy or teaching less

To accommodate Korean students' level of English proficiency, Korean professors also tried to use as simple English as they could so that their Korean students follow the class without substantial hardship. For example, they selected easy expressions, spoke slowly, and provided repeated explanations. One student said that he liked classes where professors used easy vocabulary to explain the content for students' understanding. One international professor at KHU said that he dummed down his English in class. Another Korean professor explained almost jokingly that with his attempt to use easy expressions for students, he can now only use basic English, having forgotten difficult expressions.

In doing so, however, professors sometimes had to compromise the level of class. One professor said, "The level of quality is not at that of a university. If this were in the U.S., it would be the level of middle school, at best. I feel no reward [for teaching] at all, and am very skeptical. I think that students should not be treated like that, either" (*HB, KHU*). Alternatively, professors ended up teaching less than planned due to students' lack of competence in English.

My course has difficult parts to teach, even in Korean. I need to teach such parts strategically for students' understanding and reflection on them because they can lose interest otherwise. But it is almost impossible to do it in English. So when I prepare for EMI courses, I deliver the least with the easiest content. I cannot choose what to teach. It is difficult for a professor to deliver them, but students also experience difficulty understanding them. Accordingly, I skip difficult content. It is almost impossible to teach at the advanced level. (HA, KU)

In this vein, some professors changed their syllabi according to the level of students' English early in the semester. They adjusted the number of topics and made other compromises between their course goals and the reality available to them:

Professors cannot finish the whole content of the class. It's difficult... Some chop the syllabus in half from what was originally prepared... In one class I took, a professor asked how much students could listen, how much they could speak, how much they could express themselves [in English]; and the professor changed the syllabus to the students' level. The professor tried to change it little by little, within the basic frame of the class. (*Student H*, KHU)

Shape up or ship out: Teaching students selectively or my way anyway

The decoupling strategies discussed above can be seen as efforts for professors to engage and assist Korean students in EMI courses. However, some professors who had no problem teaching in English believed that EMI must be performed properly by using English fully. In that, their strategies to implement the EMI policy varied.

For example, some professors attempted to teach only students who were competent in English, given the potential difficulties for both professors and students. One professor decided to announce for her class that everything will be conducted fully in English and those who do not have confidence in English are encouraged to drop the class. She felt stressed about mixing Korean in an EMI course, potentially marginalizing international students who do not speak Korean and violating the university policy to teach in English only. She believed that she should teach an EMI courses intensively and only for students who had the necessary English skills. The student interviews also supported this finding.

Some professors from courses in general education tell us to drop their classes if we don't think that we could do presentations in English. Yes, at the beginning of class. (*Student M, KHU*)

Some professors who lack of competence in English also insisted teaching in English only, abiding by an institutional policy for EMI. However, this resulted in losing students' understanding in class.

When a certain professor is not competent enough but that person is compelled [to teach in English], that person will be literally reading PowerPoint slides the whole time; it is not helpful for students at all. To professors, EMI time will be miserable and a hell of a time, most of the time. I don't think that anyone is enjoying teaching like that. (*PC, KHU*)

One student complained that professors literally read a book in an EMI course without other pedagogical effort. He continued that this makes them study on their own, separately from taking the course.

As confirmed in our interviews, many professors taught in English as best as they could, using their own personal strategies to complement student learning. However, some professors who were not particularly good at English imposed the role of teaching on students, by leaving students to do team projects or presentations with little instructor involvement.

This may sound rude. But among professors, those who are not a bit confident in English, if they receive questions, if students are really good at English, there are professors who look a bit perplexed. And there are professors who let students do team projects or presentations without taking their own responsibility even when it is a course in which a professor needs to give lectures a lot. (*Student P, KU*)

One student summarized professors' various strategies to the EMI policy as below, including a case where a professor supposedly teaches in Korean only.

It is an EMI course in title only. There are few courses taught 100% in English... However, due to the limitation of expression or lack of students' understanding, some professors who are good at English summarize class for five to ten minutes in Korean as soon as class starts and then teach in English. Some professors just teach in Korean if there is no international student because it does not appear on the class evaluation. Or some teach in English very hard, but nobody understands them. It varies by professor. (*Student F, KU*)

Discussion and implications

With the increasing significance of internationalization in Korean higher education, external forces by the government and a private newspaper company drove Korean universities to strategically consider and actively adopt EMI. Consequently, EMI became one of the critical indicators for Korean universities to manage. In implementing an EMI policy, coerciveness was one of the strategies that universities employed to force professors and students to comply with it. In our research process on EMI policy in Korean higher education, we identified an intriguing aspect from two case universities, which is decoupling, the strategic separation between the original intent of the EMI policy and the actual implementation. This can indicate some level of institutional resistance to compulsory EMI.

How our case universities and professors strategically responded to the EMI policy helped us understand the underlying dynamics of the decoupling process in Korean higher education. The EMI policy of our case universities undoubtedly aimed to increase their international competitiveness, but their institutional coerciveness regardless of professors' will and students' English proficiency created a decoupled phenomenon. In other words, professors in our case universities attempted to separate their formal processes from actual institutional operations to maintain flexibility. In this sense, the decoupling in our cases served two key roles, as observed by Meyer and Rowan (1977, p. 357): (1) to maintain and legitimize the formal structures of the universities and (2) to vary the EMI implementation in response to practical considerations.

Although our case universities chose to conform to EMI policy, our qualitative results indicated that professors struggled with conflicting and inconsistent feelings regarding the EMI policy and their own internal values, for example, educational effectiveness, professional autonomy, and scholarly identity. These conflicts led professors to resort to decoupling behaviors such as those suggested by Oliver (1991). In the context of neo-institutional organizational theories, Oliver provided a sophisticated account demonstrating that decoupling is a strategic response to a process that organizations implement as a result of institutional pressure to conform (p. 142). Specifically, she termed the response as acquiescence, compromise, avoidance, defiance, and manipulation (Oliver, 1991). In this study, the professors' decoupling behaviors can be categorized as: (1) simply moral hazard and deviation (e.g., virtually abandoning teaching duty by shifting the teaching role to students; secretly teaching EMI courses in Korean language in pact with students); (2) making inevitable choices for survival in the absence of confidence in teaching in English (e.g., reading PowerPoint slides for entire classes; mixing in Korean despite the English-only policy; only teaching students who are competent in English; making teaching easy regardless of preset curriculum goals); or (3) productive attempts to

improve educational effectiveness under the pressure of an official policy (e.g., taking additional time and effort to engage students; refusing to teach EMI courses when it is considered neither educational nor professional).

Importantly, these varying decoupling behaviors primarily relate to the English proficiency of professors (and surely students), and to their commitment to teaching in research-oriented universities. Moreover, the decoupling behaviors can be considered as a struggle for survival, whereby particularly professors who were hired despite their lack of English capability had to adjust inevitably to EMI. From the institutional perspective, such cases in this study can be seen as the decoupling phenomenon that naturally occurs in the process of preserving organization's essential function and value under external pressures, as suggested by Rasche and Gilbert (2015).

Based on the findings in this study, we come to the conclusion that the decoupling behaviors revealed in this study can be regarded as strategic responses to maintain organizational effectiveness and internal efficiency at institutional and individual levels. However, it should be noted that, if this situation continues, the overall quality of education is likely to drop considerably and accordingly fall short of students' expectations for higher education. Some professors in this study have even undergone hardships such as feelings of fatigue and frustration, leaving aside the harm to their scholarly identity and dignity as university professors. Therefore, the recent change to add flexibility or consider the revision of EMI policy at the case universities in this study can signal a positive sign for the future development of EMI policy.

Nevertheless, EMI policy has been largely neglected for its reconsideration and improvement in many universities, unless it is discontinued. Although the Joong Ang Daily removed the EMI indicator from its university evaluation, EMI practices in many Korean universities have remained little changed. The gap between EMI policy and practice still exists, which requires careful attention to individuals involved in the implementation of EMI (Aizawa & Rose, 2019; Hu et al., 2014). Moreover, inequality can perpetuate in learning experiences and linguistic capital, depending on students' different levels of English proficiency (Hu et al., 2014).

Therefore, university administrators and policy makers need to understand what aspects of EMI policy, which were mainly coerciveness and insufficient language ability in this Korean case study, prompt professors' decoupling behaviors. Suggestions for the EMI implementation in the literature to date have been limited to pedagogical prescriptions, such as clarifying qualifications for teaching, managing classes by students' English ability, and providing supporting services (e.g., Byun et al., 2011; Lee, 2014). However, we need to consider behavioral responses from professors also students, and more importantly the educational purpose of EMI policy in designing EMI policy and its implementation. For example, in our case

universities, EMI policy and its practice could be recoupled or aligned together when coerciveness and language issue are addressed appropriately from the perspectives of professors and students. In addition, universities could allow a certain range of decoupling behaviors, as long as they serve the educational purpose of the EMI policy and contribute to internal efficiency at the organizational level (Rasche & Gilbert, 2015). In future research, students' behavioral responses, and research in different contexts, such as the types of universities and their location, as well as from different countries, need further examination to advance our understanding of the EMI policy and implementation in non-English speaking countries.

Address for correspondence

Jae-Eun Jon
 Assistant Professor
 Teacher Education Program, College of Education
 Hankuk University of Foreign Studies
 107, Imun-ro, Dongdaemun-gu, Seoul, 02450, Korea
 E-mail: jejon@hufs.ac.kr

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