

Heading for Success: Three Case Studies of School Transformation through Capital Construction

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Abstract

Utilizing capital as a construct to analyze leadership that triggers school transformation is a newly emerged perspective. This study employed the capital theory as the framework to explore how schools undertook the transformative tasks by multi-case study. Three secondary schools in Taiwan were recruited to investigate how leaders constructed the intellectual, social, spiritual, and financial capital and the interplay among the capitals. The findings indicated that despite certain strategies commonly employed by case schools, the ways schools develop capitals as the strategy of school transformation depended on their unique context. One form of capital might be used to facilitate another form of capital. The study applied capital perspective to Asian context has extended its explanatory power and has created the basis for further research in the field of school reform.

Keywords: school capital, school improvement, leadership, Taiwan

1. Introduction

In the literature addressing school effectiveness and improvement, leadership emerges as a key theme. Numerous studies aimed to identify the influence that leadership brought in maintaining a school's competitiveness (Hallinger & Heck, 1998; Lazaridou & Iordanides, 2011; Leithwood, Harris & Hopkins, 2008; Scheerens, 2012). Several theories or models have been developed as lenses or frameworks through which educational leadership is investigated. Beyond the traditional discourses of personality traits, behavioral/style, and contingency (Northouse, 2010; Yukl, 2010), comprehensive and holistic frameworks have been proposed. Five leadership forces, namely, the technical, human, educational, symbolic, and cultural forces, were suggested by Sergiovanni (1984). Bolman and Deal (2003) described leadership in terms of structural, human, symbolic, and political aspects.

Employing a considerably different approach, Caldwell and Harris (2008) conceptualized leadership as the process of capital formation. The use of capital as a construct to analyze the type of leadership that triggers school transformation is a recently developed perspective. Governance is considered the process through which schools build capital to achieve their goals (Harris, Zhao, & Caldwell, 2009). Caldwell and his colleagues employed high-performing schools in six countries, Australia, the United States, England, Finland, Wales, and China to analyze how schools became successful by enacting proper governance and aligning intellectual, social, spiritual, and financial capital to achieve goals (Caldwell & Harris, 2008; Harris, Zhao, & Caldwell, 2009). Because the context in which the school is located influences the required capital, culture may exert a substantial effect on leadership and school improvement (Hallinger & Kantamara, 2000). Additional empirical studies from a different society are warranted.

In Taiwan, schools have experienced radical educational reform, and have thus gained more autonomy. Multiple stakeholders, such as teachers and parents, are allowed to participate in the decision-making process, which creates new challenges for principals, who must balance diverse demands (Chen, 2008; Pan, 2008; Mok, 2004). Like other Asian countries with Confucius heritage, Taiwanese parents pay a considerable amount of attention to their children's education. Comparing schools in the neighborhood and hoping to choose the "best" one for children is commonly observed. In this context, schools face the pressure of competing with their counterparts for student enrollment. The sharp decline of the birth rate, with the number of 305,312 in 2000 decreasing to

229,481 in 2012 (National Statistics R.O.C., 2013), renders school competition more severe. How principals facing this challenge lead to transform their schools and attract students is an issue worth exploring. Three Taiwanese secondary schools were recruited to explore how they underwent the transformative process. Specifically, principal leadership as capital creation and accumulation was examined. Furthermore, the present study investigated the interplay among various forms of capital and compared the findings from other countries. Three research questions were formulated:

- 1) What are the strategies that the principals used to transform the case schools through capital construction?
- 2) How do the different forms of capital interact?
- 3) What is the capital formation pattern of Taiwan comparing with that of other countries?

2. Literature Review

2.1 *The Conceptualization of Capital*

The term ‘capital’ was first narrowly defined as monetary exchange for profit or money used as a loan. However, in the eighteenth century, economists extended the definition of capital to include any resources that could be used to generate future values (Albrow, 1999; Wang, 2003). As capital theories developed, various forms of capital were proposed as theoretical constructs that describe economic, social, or organizational phenomena (Reay, 2004).

Based on a sociological perspective, Lin (1999: 29-30) divided theories of capital into “classical” and “neo-capitalist” theories. The classical theory corresponded to Marx’s notion of capital: the surplus value gained by capitalists through the production and consumption processes. Based on the neo-capitalist theories, which comprise human capital, cultural capital, and social capital, the definition of capital was extended to include the investment in technical skills and knowledge (human capital), internalization or misrecognition of dominant values (cultural capital), and investment in social networks or in mutual recognition and acknowledgment (social capital). The concept of human capital was used to supplement classical Marxist capital theory and contributed to the discussions of economic development. Cultural and social capital, which exerted a mediating influence on student academic achievement and class reproduction, stirred sociologists’ academic imagination (Bourdieu, 1986; Coleman, 1988; Katsllis & Rubinson, 1990; Parcel, & Jufur, 2001). In addition to the four forms of capital mentioned previously, other forms of capital, such as intellectual, symbolic, and emotional capital were proposed (Hargreaves, 2001; Hutchison, 2012; Kelly, 2004; Stack, 2010).

The constructs of capital are used in various research fields. However, the definitions of capital are not consistent. Social capital research provides an example of these inconsistencies. Hargreaves (2001), proposing a theoretical model of school effectiveness and improvement explained by capital theory, defined social capital by using two components. The cultural aspect of social capital referred to the level of trust among people and the norms of reciprocity and collaboration. The structural aspect concerned the networks in which people are embedded by strong ties. In empirical studies, Plagens (2003) tested the linkage of school performance to social capital at the local level in North Carolina in the United States. He defined social capital in terms of the number of associations and voting turnout in each county. Tedin and Weiher (2011), focusing on the relationship between social capital and parents’ behavior when choosing charter schools, divided social capital into general social capital and education-related social capital. The general social capital category included parents’ participation in any of the following organizations: (a) church groups, (b) sports groups, (c) youth groups, (d) garden or hobby clubs, (e) political groups, (f) national or ethnic groups, (g) neighborhood or civic groups, and (h) other groups. Education-related social capital comprised the following six indicators: (a) attended a Parent-Teacher Organization (PTO) meeting, (b) performed voluntary work for the school, (c) attended a school board meeting, (d) participated in school curriculum decisions, (e) assisted in school fund raising, and (f) attended parent-teacher conferences.

As aforementioned, the definitional differences of capital constructs and their operational indicators could be identified in the past literature. The indicators selected in each study may vary according to the specific context and the research focus. In other words, although each definition of capital may have fundamental elements in common, the specific definition or indicators of capitals can be defined based on the unique setting of the study.

2.2 *Leadership Reframed Based on the Capital Perspective*

In the field of education, the majority of research that uses capital constructs has its emphasis on the connection between capital and student learning or performance (Anderson, 2008; DiMaggio, 1982; Dumais, 2002; Huang, 2009; Tramonte & Willms, 2010; Yamamoto & Brinton, 2010; Zarycki, 2007). Except for the studies that focus on theory or concept construction (Hargreaves, 2001; Kelly, 2004), only a few empirical pieces have related

capital to leadership or school transformation.

Two approaches were used to probe the capital and the leadership. The first one featured itself on determining how capital supports or affects leadership. Spillane, Hallett, and Diamond (2003) examined how teachers construct others as leaders based on their perception of the various forms of capital, including human capital (skills, knowledge, and expertise), cultural capital (ways of being), social capital (networks and relations of trust), and economic capital (material resources), that school administrators and their colleagues possessed. Zacharakis and Flora (2005) found that community development projects tended to replicate existing leadership structures because of the effect of cultural reproduction.

The second approach is characterized by determining how capital develops through leadership and causes school transformation. Caldwell and his research team provided the most comprehensive findings (Caldwell & Harris, 2008; Dinham, Anderson, Caldwell, & Weldon, 2011; Harris, Zhao, & Caldwell, 2009). They proposed the framework of leadership as capital formation. In the *International Project to Frame the Transformation of Schools*, the linkage of leadership and school transformation in six countries was inquired. In the project, intellectual capital was defined as the level of knowledge and skill of those who work in or for the school. Social capital referred to the strength of formal and informal partnerships and networks related to the school and all individuals, agencies, organizations, and institutions that have the potential to support and be supported by the school. Spiritual capital was defined as the strength of moral purpose and the degree of coherence among values, beliefs, and attitudes about life and learning. Financial capital was the money available to support the school. Governance was considered the process through which the school builds and aligns these forms of capital to achieve its goals (Caldwell and Harris, 2008).

From the findings, strategies used to develop capital were unique to each school (Harris, Zhao, & Caldwell, 2009). However, 10 common practices were identified that transcended contextual differences and were evident in all successful schools. These practices are listed in Table 1.

Table 1. Common practices from successful schools in six countries

Domain	Common practices
Intellectual capital	<ul style="list-style-type: none"> • The schools select staff to reflect local needs. • The schools share a strong focus on continuing professional development for staff, particularly in-house sharing of knowledge and skill.
Social capital	<ul style="list-style-type: none"> • The schools have strong relationships with other schools, particularly feeder primary schools, to share knowledge and skills. • The schools have developed relationships with organizations other than schools.
Spiritual capital	<ul style="list-style-type: none"> • The schools have clearly defined values. • Student well-being is held as a priority
Financial capital	<ul style="list-style-type: none"> • The schools receive government funding. • The schools seek funding from other sources.
Governance	<ul style="list-style-type: none"> • The schools have developed leadership structures appropriate to their contexts and are led by valued and visionary leaders. • Schools have high levels of freedom for day-to-day management.

Source: Caldwell and Harris (2008).

Based on the review of the past literature, we chose the perspective of leadership as capital formation and adopted the constructs of capital framed by Caldwell and Harris (2008). In our study, school capital refers to four types of capital, including intellectual, social, spiritual, and financial capital, which a school possesses. To broaden the knowledge base, in addition to investigating how schools transform and improve within their specific contexts, we examined the interplay among the forms of capital and compared the findings with experiences from other countries.

3. Research Methods

3.1 Research Design

Because of its strength in answering “how” and “why” questions (Yin, 2003), we used the case study approach to inquire how schools facing challenges gained or sustained their competitive advantages by developing school capital. Using purposeful sampling with reputational criteria (Lichtman, 2010; Patton, 2002), three schools (School A, B, C) recommended by government officers and retired expert principals in Taipei were selected. They all faced challenges resulting from parents’ distrust and/or teachers’ insecurity regarding the school, but now have prestigious reputations.

In Taiwan’s capital city, Taipei, parents are often active in choosing the “best” school for their children. Because of the decline in the birth rate, schools that can sustain stable enrollment or even increase enrollment are those having gained parents’ recognition. The three case schools all meet this criterion. In addition, the size and location of the three schools varied, which was helpful in understanding the common practices used to transform schools in diverse settings.

3.2 Data Collection and Analysis

We used interviews and documentary analysis to collect data. Seventeen interviews were conducted to enable the perspectives of principals, school administrators, teachers, and ex-principals to be represented. To manage the data, verbatim of different interviewees were coded according to their schools and posts. For example, in the code “Interview B-A1”, B represented School B and A1 represented the first administrator; in the code “Interview C-P”, C symbolized School C and P stood for Principal C. The semi-structured interviews focused on two issues: (1) the strategies that the principals used to build capital to transform their schools, and (2) the interactions among the different forms of capital.

Documents related to the case schools, such as enrollment statistics, data from school websites, and school brochures, were collected to enhance researchers’ understanding about the context and facilitate the analysis.

All interviews were transcribed, coded, compared, and then analyzed to develop the themes and story lines of each school. Quotations were used to illustrate the phenomenon presented in the text. Member check and different data sources (i.e., the principal, administrators, and teachers) were used for triangulation and advancing the trustworthiness of the study (Patton, 2002). In addition, the researchers regularly discussed the research findings to clarify and stimulate possible perspectives for analysis during the research period (Miles, Huberman, & Saldana, 2013).

4. Research Findings

4.1 School A: Spiritual Capital Served as a Significant Precondition for Intellectual Capital

School A, which faced competitive pressure from a nearby school, was an old school, and most of its senior teachers lived in the neighborhood. “*These senior teachers were committed to the school and were willing to assist and support new colleagues*” (Interview A-A1). Some senior teachers became administrators or leaders, which was conducive to shaping a harmonious and diligent school culture. A statement of Ex-principal A embodies the strong spiritual capital in School A:

One very precious quality is that the teachers in School A work harmoniously. They are earnest about teaching, committed to their work, and willing to cooperate with administrators. They want the school to be better. In this aspect, they are the best compared with the teachers in all the other schools I have ever worked at. (Interview A-Ex-P)

Ex-principal A observed that, spiritual capital was abundant with teachers being devoted to teaching, and teachers did have adequate knowledge of mentoring or professional development. Even so, she joined every department meeting to become acquainted with the teachers (Interview A-T2), which reinforced the connection between the leader and the followers. To accumulate more intellectual capital, one of the strategies the principal used was to encourage teachers to participate in the Teacher Evaluation for Professional Development (TEPD) program, an influential policy launched by the Ministry of Education (MOE) to advance teacher growth through formative evaluation. Besides, both Ex-principal A and Principal A reinvigorated teachers to form professional learning communities (PLCs) (Interview A-Ex-P, Interview A-P), which was another policy initiative of the MOE.

In a nutshell, teachers in School A had high intellectual capital before the initiatives were enacted. The instructional leadership exerted by Ex-principal A created more platforms for teachers to share knowledge. It was observed that students’ academic achievement was enhanced and behavioral problems were reduced. Moreover,

teachers' profession was increasingly recognized by the community. However, the success demanded a substantial amount of extra effort from the school members. A teacher who just joined the staff at School A was still in the process of accommodation. She was somewhat overwhelmed by being asked to do additional work (Interview A-A2). By contrast, a teacher working at School A for more than 10 years was proud of the quality and enthusiasm for teaching shown by her coworkers. She mentioned:

I feel that teachers in my school are of higher quality than teachers at other schools. At least we are more devoted to professional development. Taking the professional learning communities as an example, we have seven communities. I teach math, and we math teachers, especially those who teach eighth graders, get together every Friday afternoon to discuss the curriculum. (Interview A-T1)

Although the additional work that assisted teachers to enhance intellectual capital was sometimes exhausting, the solid base of spiritual capital facilitated the development of intellectual capital in School A.

4.2 School B: The Introduction of Social Capital Facilitated the Development of Intellectual Capital

The transformation of School B was spurred by the crisis of low student enrollment since a new school was established in the neighborhood (Interview B-T1; Interview B-T2). Facing the difficulty, all the teachers were pressured to brainstorm and collaborate to move the school forward, which consolidated their commitment and willingness to change. With the developing spiritual capital as the base, teachers' professional development activities and school-based curriculum innovation were initiated. As the chief of curriculum and instruction said:

At the beginning, teachers wanted to improve themselves because of the crisis. Our school started to hold in-service lectures or workshops and teachers participated as much as they could. (Interview B-A2)

Regarding curriculum innovation, some teachers spontaneously proposed their ideas to activate the existing curriculum. A biology teacher started a course of observing the nature that connected biological knowledge with the natural environment of School B. It provided students with a deeper understanding of the subject. Listening to an English teaching program during the self-study time in early morning, creating an extra English course that grouped students according to their abilities and interests, and rearranging the eighth-grade classes to provide versatile student clubs were other examples of the curriculum changes. Furthermore, all teachers joined the TEPD program, which provided additional opportunities for professional interaction among teachers (Interview B-P; Interview B-T2).

Because School B was of modest size, consisting of only 33 teachers, searching for resources outside the school was necessary for reform. Donations from parents despite not sufficient were used to employ student club directors (Interview B-Ex-p). The scout association, led by a military teacher in a university nearby, was the largest student club in the school. Some teachers did not believe that they could successfully support the club at the beginning, witnessing the contribution of social resources to the school afterwards. A number of parents also supported school activities or even entered the classroom to help English teaching of the competence-based English class. Owing to the development of social capital, the courses and student clubs were transformed and teachers' motivation for professional growth was provoked. According to a director, the social resources provided teachers with various stimuli for teaching. It was fun to apply different methods in the classrooms (Interview B-A1). Principal B further deliberated the influence of parental involvement in English teaching.

We have a supplementary English class called "Around the World with Books." Because students' English competence varies drastically, we use the class to group students into at least three subgroups, including an English novel group and an English comics group. Some parents in our school have master's degrees, graduated from prestigious universities, or obtained their degrees in foreign countries. They are willing to help. English teachers gain help and are motivated. They also feel invisible pressure to strengthen themselves. Some teachers transferring from other schools might not become acclimated to the pressure. (Interview B-P)

In summary, the consolidation of spiritual capital was the starting point of principal leadership in School B. Based on the strong foundation, teachers' intellectual capital was enhanced through their in-service training and involvement in the curriculum innovation. To support the curriculum transformation, additional social resources were introduced to the school. In addition to playing a supportive role, social capital in School B stimulated teachers to promote their profession. In other words, the introduction of social capital facilitated the development of intellectual capital.

4.3 School C: From the Promotion of Intellectual Capital to the Consolidation of Spiritual Capital

Located in a high socio-economic area, School C bears high expectations from the community. However, because the rate of substitute teacher turnover was high and the administrative operation was unstructured, the

school was considered unstable, which aroused parents' distrust (Interview C-P; Interview C-A1). Upon becoming a principal, Principal C started to make every effort to reform the school. In the first 2 years, she leased the swimming pool and parking lot to acquire additional revenue for supporting school-based activities, which facilitated the constant construction of intellectual capital (Interview C-P).

Parents become part of the social capital in some schools; however, it was not the case in School C. Teachers felt that parents were more like customers than resource providers who gave both administrators and teachers pressure for school management (Interview C-T1, Interview C-T2). As an administrator mentioned, "*Some parents are used to giving school pressure by utilizing their relationship with legislators or the Bureau of Education*" (Interview C-A1). Consequently, high professional performance was requested from teachers. Although Principal C sought to develop all four forms of capital simultaneously, intellectual capital was the most urgent.

First, I feel that intellectual capital was very important. Teachers' profession had to be seen by the community, so I encouraged them to join contests relating to teaching or the teaching profession. I joined the contests with them. (Interview C-P)

Principal C encouraged teachers to join city-wide contests and attend the TEPD program. She also encouraged each department to develop distinct features of the curriculum. To solve the severe problem of the high teacher turnover rate, Principal C negotiated with the Bureau of Education to allow them to recruit more tenure teachers. As an administrator said, "*because the teacher recruitment process was highly competitive, our school was able to hire highly accomplished and committed teachers*" (Interview C-A2). When the faculty composition stabilized, School C began to win awards in several contests. Not only did the parents recognize the improvement but teachers were also proud of the achievements and the transformation. In addition, student behavior and academic performance in the high school entrance exam improved. School C became a new brand that symbolized an elite status in the city. Teachers, students, and parents all recognized and were proud of this new identity. The growth of intellectual capital promoted the consolidation of spiritual capital.

5. Discussion

5.1 Strategies for Capital Construction and Interaction among the Four Forms of Capital

Based on the study, the forms of capital that the three case schools initially possessed were different. Therefore, the approaches they used and the priorities they set to develop school capital varied according to their specific context. Because one form of capital may influence or interact with another (Colman, 1988; Caldwell & Harris, 2008; Harris, Zhao, & Caldwell, 2009), we specify the interactions and analyze the strategies used by case schools.

First of all, certain strategies were commonly employed by the three schools. Concerning intellectual capital, encouraging teachers to join the TEPD program, forming PLCs, or developing a school-based curriculum were prominent strategies that the three principals executed. Teachers in the case schools were also reinforced to participate in city-wide contests and won awards. Principal C's attending contests with teachers distinguishes her from the other principals. Secondly, because the three schools all faced challenges that resulted from competitive pressure, either the establishment of new schools nearby or the distrust from parents, the principals used the threat to increase teachers' awareness of the crisis and their commitment to the school. It is critical to the construction of spiritual capital. Regarding financial capital, all schools in Taiwan received subsidies from the government and donations from parents. A special strategy that Principal C adopted was to lease the swimming pool and parking lot to create extra revenue. In School A, the principals maintained a cooperative relationship with the city government and received extra budget by applying for government initiatives or helping to hold government activities. School B had no facilities to lease, but used donations from parents for activities relating to student learning and teacher professional development. In other words, parents and government, which are aspects of a schools' social capital, offered financial capital and even expedited intellectual capital. Finally, the three schools all built partnerships with stakeholders and other organizations. School B used social resources to support school activities and courses. This strategy was based on social capital. However, the strategy indirectly stimulated teachers' motivation to strengthen their profession, which benefited intellectual capital.

According to the examinations of three case schools, we determined that, in addition to the common practices found in successful schools (Caldwell & Harris, 2008; Harris, Zhao, & Caldwell, 2009), schools in different contexts face different challenges that affect their adoption of strategies and priorities regarding capital construction. The challenges, strengths, and the development of four forms of capital, as well as the interaction among four forms of capital in the schools are summarized in Table 2.

Table 2. Comparison of capital construction strategies in three schools

	School A	School B	School C
Challenges	A new school nearby was set up	A new school nearby was set up	High rate of substitute teachers; parents' over involvement
Capitals originally possessed	Spiritual capital resulted from family-like culture	Spiritual capital resulted from school crisis	Intellectual capital
Initial focus	Intellectual capital to further develop teachers' profession	Social capital as a stimuli and resource	Financial capital as the basis and intellectual capital to promote school
Main strategies	Joining department meetings; encouraging teachers to participate in TEPD and form PLCs; focusing leadership on instruction and learning; striving for extra budget from city government	Introducing resource people from outside to help school activities and stimulate teachers to learn; encouraging and facilitating school-based curriculum innovation;	Leasing swimming pool and parking lot to get extra revenues; encouraging teachers to join city-wide contests and TEPD; encouraging each subject department to develop distinct features in the curriculum; asking for more tenure teacher;
Relations among capitals	Spiritual capital supported intellectual capital	Social capital facilitated intellectual capital	Intellectual capital strengthened spiritual capital

5.2 Comparing Findings from the Cases with Those from Cases in Other Countries

Compared with research that adopted the four forms of capital to analyze school transformation in six other countries, several strategies were considerably similar in Taiwan. For example, they all valued school-based professional development, developed relationships with other organizations, received government funding, and sought funding from other sources (Caldwell & Harris, 2008). However, in addition to these common practices, the research revealed three notable issues.

First, in different cultural contexts, the concepts of the four forms of capital may take on different meanings (Harris, Zhao, & Caldwell, 2009). However, the influence of culture on the conceptualization of capital has not been clearly defined. In Caldwell and Harris' cross-national study, 10 indicators of each capital were developed as the operational definitions. The top two indicators illustrated in each school in the six countries were "The values and beliefs of the school are evident in the actions of the students and staff" and "Parents and other stakeholders are active in promoting the values and beliefs of the school (Caldwell & Harris, 2008, p. 141)." In contrast, the findings in the three Taiwanese schools do not have apparent indication of the two indicators of spiritual capital. The common denotation of intellectual capital is based on a simple collective belief "We want our school to be better," even when no shared understanding or common ground exists about how to improve the school. It could be observed in School A's family-like atmosphere, which enhanced teachers' willingness to devote themselves to the school; in School B's effort not to be closed or merged with another neighborhood school; and in School C's pride that their school was regarded as a brand.

Second, although the value of each capital was recognized, the role of intellectual capital was specifically emphasized (Caldwell & Harris, 2008). In this study, we also found that, when developing intellectual capital, spiritual capital must be addressed beforehand. Without spiritual capital, extra work that enhanced teachers' professional development at the three schools could not have been implemented smoothly.

Third, spiritual capital was abundant in School A because several senior teachers lived in the surrounding neighborhood treating the school as a family. Ex-principal A strengthened the atmosphere by maintaining a close relationship with teachers in private and providing a pleasant work environment (Interview A-A2). The family-like image formed a harmonious and supportive school culture, which was the foundation of the spiritual capital at School A. This type of interpersonal bond is a unique trait of Chinese society (Farh & Cheng, 2000; Lin & Cheng, 2012). This finding indicates the great influence of culture on the operation of school capital,

which is a crucial dimension for future studies.

6. Conclusion

We used the framework of leadership as capital formation, a newly developed perspective, to analyze the processes of capital construction and the interaction among different forms of capital in three schools. The findings pinpoint that the schools' strategies of developing capital to facilitate school transformation were diverse and based on their respective contexts. We also delineated the interplay among various forms of capital that one form of capital might be used to facilitate another form of capital. It has not been extensively examined in the past. The study applied capital perspective to Asian context providing information about principal's leading school transformation. Moreover, it extends the research to the topic of the interaction of various forms of capital, enriching the existing literature and forming a basis for further research in the field of school reform.

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