

Original Paper

Origins and Effects of Education System Transplantation: A Literature Review

Yuewei Shi^{1*}

¹ College of Education, Auburn University, Auburn, Alabama

* Yuewei Shi, Department of Education Foundations Leadership and Technology, College of Education, Auburn, Alabama, USA

Received: January 29, 2021 Accepted: February 17, 2021 Online Published: February 23, 2021

doi:10.22158/wjer.v8n2p1

URL: <http://dx.doi.org/10.22158/wjer.v8n2p1>

Abstract

This article reviews the literature on educational transplantation, which discussed three related issues: what is the definition of educational system transplantation, what are the typical models of educational system transplantation and what are the effects of educational system transplantation associated with exporting and receiving countries. The literature suggests that educational system transplantation expands the choices for education reforms and promotes the internal regime innovation for the receiving countries. Empirical cases reflect the educational system transplantation encountered the issues on cultural adaptability and compatibility among different education regimes and highly relied on the cultural context differences and suitable power operations.

Keywords

education system, education reform, cultural context

1. Introduction

Since the continuous advancement of globalization, the frequency of mutual exchange and reference among different educational systems has increased. Educational systems shape and normalize individuals and organizations within an educational context. Individuals who are regarded as educated are shaped by educational systems, and their behavior and ideological values are influenced by educational systems (Cossa, 2011; Tomlinson, 2005). Moreover, the educational system also normalizes organizational structures, maintains education policy, and orders proper execution (Clark, 1986; Cossa, 2011). In a globalization era, many countries establish or develop their own educational system through absorbing and transforming the advantages of educational systems from other countries.

In recent years, there is rich and increasing research exploring comparative education issues. Education transplantation is one of the phenomenological and theoretical topics in this field. As a result, many educational theorists and practitioners have studied the feasibility and the potential effects of educational systems transplantation from one country to another (Hummelsheim & Baur, 2014). In this study, the definitions of education system transplantation will be explored and developed, and the literature about the typical models of educational system transplantation, the dynamics that affect education system transplantation as well as the effects of education system transplantation for exporting and receiving countries will be reviewed and evaluated. It seeks to find the definitions, origins, and effects of educational system transplantation as a guide to enrich the theoretical frameworks on the comparison of international education.

2. Definition

There were different terms or descriptions to define educational system transplantation. However, there has not been any consensus as to which term best summarizes the phenomenon of education system transplantation from one country to another country. Some educational researchers have used alternative terms, including appropriation, assimilation, transfer, transplant, and importation to define this educational phenomenon (Clark, 1986).

When it comes to the educational system transplantation, some researchers mentioned the policy of transplantation. For example, Phillips and Ochs (2003) used “borrowing” to identify the five stages of “borrowing” an educational policy, which includes cross-national attraction (impulses and externalizing potential), decision, implementation, internalization/indigenization, including impact on the existing system, the absorption of external feature, synthesis, and evaluation. In addition to the “borrowing” of policy, Boyd, and King (1947) added subjects, teaching methods, and teaching materials into the education system transplantation and explained that the idea of schooling came to many countries from Greece. Institutions in many countries have borrowed not only the subjects and methods of Greek schools, but also the course materials to fit their specific environments and needs (Boyd & King, 1947). Thus, the content of an education system transplantation could cover the micro-scopic elements, such as education methods, subjects, and teaching materials. The education thoughts also could become one of the components of educational system transplantation. Some researchers have studied how specific educational pedagogies are transplanted into other countries. For example, Lu, and Ares (2015) have studied how Teaching English to Speakers of Other Languages (TESOL) methods are transplanted into China and argued that “a truly liberating pedagogy should be carried out within a dialogical relationship between policy-makers, teachers, and students. This liberating pedagogy also requires a collaborative effort among TESOL educators from all over the world” (p. 124). The education thoughts were transplanted and developed through dialectical discussion in different countries. Therefore, based on the statement of Phillips and Ochs (2003) and the supplemental case descriptions of Boyd and King (1947) and Lu and Ares (2015) about educational system transplantation, this education phenomenon

could be defined as any transplantation of educational regime or policy, curriculum and instruction methods, educational thoughts and concepts borrowing from one country to another in this study.

3. The Typical Models of Educational System Transplantation

The process of modern historical evolution indicates that the trend of the frequent interactions between different nations is becoming an unreversed wave and has substituted the previously closed-door world. Ruellan (1972) noted that “The blocked society secretes a blocked educational system which in its turn maintains and perpetuates the blocked society by the conditioning of the young which it imposes” (p. 87). However, the traditional blocked education system was disintegrated and replaced by an opened education system under the globalization wave. The educational system transplantation that relies on the cultural exchange and integration between different countries exhibits a trend of openness (Ashby, 1974; Raffe, Howieson, & Tinklin, 2007). The educational system transplantation is possibly triggered in two situations: 1) the education system lags behind socioeconomic development, 2) the current education system is incapable of providing an effective plan for further education advancement or is merely able to offer limited administrative support under the new social conditions (Phillips, 2000). The development of globalization made the education system transplantation became common and feasible. Clark (1986) described the phenomenon of the educational system transplantation as one country exporting their education system into another country by force or with willingness and making the country accept the characteristics of the exporting country’s education system as part of its own education system. According to the description of Clark (1986), education system transplantation can be categorized into two models that are driven by external forces from exporting nations or the internal willingness from importing nations.

3.1 The External Force

The expansion of colonialism is one of the dynamics that promotes educational system transplantation. Many countries under the domination of colonialism have experienced the educational system transplantation through the external force. For example, Great Britain and France brought their education systems into numerous colonies at the end of the 19th century (White, 1996). From a school education perspective, the characteristics of the education system within colonies remained consistent with Great Britain and France, which includes the power of self-determination for schools and colleges in appointing faculty, liberal education, and even classical education, which affected the thoughts of education administrative officials and educators (Clark, 1986). From a governance perspective, the structural governance features are also established through the transplantation of the French educational system in some African colonies, which is represented by the establishment of a unified and centralized administration system such as strengthening the power of education ministry (Bleich, 1998). Clark (1986) found that the transplantation of educational systems also accelerated the pace of the backward local education system reformation under the influence of the expansion of colonialism and established the modern education system in some developing countries.

The education reform of eastern European countries in the 1950s is another example that represents the educational transplantation by an external force. After World War II, the eastern European countries were established the communist system began under the Soviet Union (Godoń, Jucevičienė, & Kodelja, 2004). The Soviet Union educational system was transplanted to the eastern European countries and exhibited new communist characteristics under the influence of the Soviet Union. As claimed by Clark (1986), “under heavy Soviet influence as well as that of the new ‘native’ communist regimes, contemporary systems of the German Democratic Republic, Poland, Czechoslovakia, Hungary, Rumania, and Albania have added such features as the dual control of party apparatus and state administration, the explicit use of criteria of political loyalty, the separation of much research from the university into a separate academy of science, and a strong commitment to manpower planning and a correlated “rationalization” of the university for practical results” (p. 228).

However, not all of the eastern European countries indiscriminately imitated the Soviet Union educational system. Some countries have combined with the historical tradition of the local education and communist features, thereby creating a complex structure of the modern education system (Phillips, 2000). For example, the universities in the German Democratic Republic had several hundred years of modern educational development history and constructed their special higher education traditions, such as scientific research having a significant position, and the instructors having incomparable position and power before they transplanted the Soviet Union model (Welsh, 2009). These education traditions were added into the new transplanted education system of the German Democratic Republic. As a result, some Eastern European nations evolved their complicated and combined educational systems during the transplantation process under the influence of external force.

3.2 The Internal Willingness

The educational system transplantation with internal willingness is another important model. Fowler (2004) found that countries face various types of pressure from global competition and are willing to improve their own competitive ability in establishing systematic knowledge continually. Thus, the states have the responsibility of spreading knowledge and educating citizens (Westheimer & Kahne, 2004). In some sense, nations have the internal motivations to develop or reform their educational system. The U.S. higher education system is an ideal example, because it has been influenced by the English reform in the 18th century and the English culture brought about by new immigrants (Cohen & Kisker, 2009). As Gagnon (1988) noted, “the first settlers did not sail into view out of a void, their minds as blank as the Atlantic Ocean. Those who sail west to America came in fact not to build a new world but to bring to life in a new setting what they treasured most from the old World.” (p. 67). Following with the immigration wave, some scholars and reformers who came from Europe introduced the German model in the process of building the U.S. modern education system (De Wit, 2002). Thus, the establishment and reformations of the U.S. modern education system is impacted by the internal willingness to absorb the advantages of the German education system.

In addition to that, the educational system transplantation by external force could transform the willingness of exporting nations to individual internal needs and expectations of the local people. Clark (1986) cited the instance of western higher educational system transplantation in African countries and showed that the education system transplantation could be used to “accentuate the already serious cleavages in society by separating students from their social background, conditioning, them to an alien life style” (p. 231). Clark (1986) found that the most universities in Africa were established through European higher education models at the latter colonial period, and regulations, management structure, and instruction were imitated according to the thoughts and willingness of the exporting countries. Some local people have been educated under the colonial education system and defend the rationality and legitimacy of the educational system from colonial mother countries.

4. Contextual Dynamic in Education Institutional System Transplantation

Some educational scholars have problematized the educational system transplantation by taking into consideration of specific context in the importing countries. Specifically, Ochs and Phillips (2002) showed concern about the complex significance of context, the “embeddedness” of aspects of educational approaches, and provision in the locally prevailing culture and other conditions. Along the same line, Carnoy and Rhoten (2002) discussed the process of “re-contextualization” and acknowledged that context affects the interpretation and implementation of such ‘borrowed’ policies in importing countries. Additionally, Raffae, Howieson, and Tinklin’s (2007) study revealed that the significance of the path-dependence of national education and training systems, and the need to see policy initiatives in the national context.

Raffae, Howieson, and Tinklin (2007) consider that a flexible, unified education and training system may look permeable on paper, but in practice, progression and transfer may be limited by epistemological, institutional, or political barriers. How the new education system introduced from abroad matches with the local education tradition regardless of the transplantation mode has been a subject of intense discussion (Clark, 1986; Lu & Ares, 2015; Phillips, 2003). The major problem of matching comprises two factors, namely, (1) “force, wholesale transplantation” and (2) “countries differing radically in social structure and culture” (Clark, 1986, p. 230). As Holmes (2018) stated, in addition to attempting to understand the rationalities of policy and regime transplantation and cross-national attraction, it is also necessary to examine the degree to which contextual factors impact the process of policy and regime transplantation and cross-national attraction.

5. The Power Operation in Educational System Transplantation

Educational system transplantation generally involves power. In some colonial and developing nations, the exporting nations force them to accept the new education system through their powerful influence on politics, economics, military, and foreign relationship (Nye, 1990). Similarly, Clark (1986) also reflected that the promoters from exporting countries normally have various forms of power to push the

reforms of education systems, and they introduced the new education system by force in a rapid way and may ignore the existence of adaptation issues as they are familiar with the operating measures of the entire education system in importing nations. However, external forces and consideration of local interests within the education system may need to be measured by the importing nations in the transplantation process of accepting a new education system.

Phillips and Ochs (2003) studied the risks involved in imitating or adopting the new policies that originated from other nations and concluded that policy makers may have to evaluate the potential threats in order to avoid any quick decision-making based on a sudden enthusiasm. The education system transplantation has limited capacity in a cross-national scale and needs to measure the potential risks in power operation. For example, Raffae, Howieson, and Tinklin (2007) examined credit transfer in Scotland across three interfaces: between general and pre-vocational learning and Vocational Education and Training (VET); within VET; and between VET and university degrees. Their study showed that the significance of “distinguishing among different types of credit system and the limitations of credit and qualifications frameworks as agents of change in the face of the institutional logistics of national education and training systems” (Raffae, Howieson, & Tinklin, 2007, p. 366). It seems like that the education system reformers should measure whether these thoughts from other countries’ education system contradict the local interests before they decide to make any slight adjustments to make these thoughts or ideas being a part of the local education system.

Furthermore, as the power dynamics are embedded in the process of educational system transplantation and having limited operation capacity, the inappropriate power operation would deconstruct the current management structure and aggravate the concerns for the local education system. Oleinik (2012) described that Russia attempted to replicate western institutional arrangements and organizational structures since the 1990s and focused on the transplantation of the High School of Economics (HSE) as a model for reforming the system of science and higher education in Russia and its subsequent evolution. Pospelov, Kal’nei, and Oleinik (2011) Oleinik (2012) critiqued that Russian education governors choosing the policies for preventing and managing conflicts of interest are omitted when developing the Higher School of Economics (HSE) from western countries to Russia and proposed the selective importation model in education policies transplantation. Along the same lines, Birol, Dagil and Silman (2010) supported that most Russian universities have a hierarchical model of management characterized by “a centralized and unilateral procedure of decision making, so when they adopt a northern American university system, they create an atmosphere of fear and anxiety” (p. 47).

Therefore, it is assumed that the importing nations may not serve an active role unless the new education system model meets the cultural, social, and individual development needs for the native environment of education system transplantation. Although the model of education system transplantation by force has been lessened, the power still plays a significant role in education system transplantation in 21st century (Raffae, Howieson, & Tinklin, 2007).

6. The Cultural Tensions and Adaptation between “Local” and “Foreign”

Education institutional systems are diversified and rooted into different cultural contexts. As a result, culture plays an important role in the establishment of educational systems. Some nations may face unexpected resistance in educational transplantation unless it is extremely compatible at the beginning stage (Clark, 1986; Fowler, 2004). The educational transplantation would trigger conflicts between the original education cultural environment and the new system. Caruso (2004) investigated the cases of Spain and Germany where they transplanted the popular British Bell-Lancaster monitorial educational system, which is promoted to encourage teachers to give more autonomy to children and make class became student-centered in the 19th century and claimed that a strong “tension between two social and cultural tendencies” existed in educational system reformation (p. 76). This study revealed how the specific cultural background should be taken into consideration in educational system transplantation. Indeed, educational system transplantation deconstructed the original education cultural ecology (Dlouhá, Glavič, & Barton, 2017). Some opinions supported that the most important function of a social system is to maintain stability, which is a conservative social force (Parsons, 2013). Hence, reforms may not always be beneficial for current social systems, especially in educational system transplantation. Based on this argument, the frequent improvements of an education system are unable to stabilize authority for a nation and probably threaten the current established social expectations that the original education system guaranteed (Gallacher, Ingram, & Reeve, 2012).

However, any reform or evolution of educational systems would not occur without any internal tension. For example, Hummelsheim, and Baur (2014) have studied how the German vocational system was transplanted into other countries, including Great Britain and some Asian countries, and found that the successful cases of transplanting the German “dual system” of vocational education and training into English and Chinese education environments are not simplified to copying the entire German education regime. For those successful case studies of Asian countries, Hummelsheim and Baur (2014) claimed that the successful educational transplantation requires a “very strong ownership in the partner country, clearly defined responsibilities within the partner institutions, and a strong commitment by the enterprises” (p. 290). Similarly, Great Britain has adopted the German vocational system as a theoretical stimulus for change in its vocational education and training instead of directed copying it because the educational system is fundamentally different in these two countries, especially in “the class connotations, educational provision at different age levels, and social situations” (Tomlinson, 2005, p. 137; Phillips & Ochs, 2003). These cases illustrated that “the transfer must reflect the existing conditions of the receiving country and must be adapted to its unique social, cultural, and economic objectives” (Hummelsheim & Baur, 2014, p. 280). In the other words, the new education system that is introduced from abroad could be absorbed and integrated when it fits the social culture and education tradition of the importing nations.

Clark (1986) summarized that the reasons for the unsmooth transplantation process are usually caused by the “local” interests of importing countries. The “local” interests are able to challenge the new

education system establishment and urged the “local” interest groups to maintain their local educational features. However, Clark (1986) also mentioned another situation where the local education also encountered “cultural reliance” when the exporting and receiving nations belonged to the same cultural group. In other words, the education system transplantation would become smooth when the cultures of the importing and exporting countries are similar, which means that “knowledge and skills—and entire forms—may then be transferred and circulated with a minimum of nationalistic barriers and with few worries about cultural domination and dependence” (p. 232).

7. Conclusion

In summation, the educational systems transplantation expands the choices of education systems reference in a globalization era. To some extent, for the receiving nations, the educational system transplantation accelerated the pace of internal regime innovation and saved the social cost for education reforms through importing other nations’ regime. However, the educational system transplantation also has faced the problem of cultural adaptability and compatibility among different regimes. A transplanted education system may be inapplicable to the importing country, and the beneficial productions of the education system transplantation highly rely on the degree of cultural context differences and the appropriate power operations. The proper imported education system should be established in an acceptable and tolerable cultural environment or with a similar degree of cultural differences and correct power operations in the transplantation process.

8. Limitations

While some researchers have conducted studies on different education development levels and cultural settings, little has been implicated in that what common strategies for all importing countries to eliminate the negative effects and to establish an applicable and adaptable educational system in educational system transplantation. Although the previous scholarly literature on educational system transplantation has made limited contributions to the exploration of a common model, the education reformers and practitioners have offered different empirical cases on the education system transplantation in specific areas, such as education reform, organizational administration, curriculum design, and teaching pedagogy. Further studies may seek a common strategic model for all importing nations to reduce the effects of the cultural tensions in education system transplantation.

Additionally, most of the existing literature focuses on the transplantations from European countries into less developed African or Asian countries, and take the importing countries and exporting countries into a cultural group comparison. Further research should investigate the educational system transplantation comparison into the homogeneous cultural group among developing nations in 21st century, and shed light on the theory construction of educational system transplantation among the developing nations which are in the same culture groups.

References

- Ashby, E. (1974). *Adapting universities to a technological society*. Jossey-Bass.
- Birol, C., Dagli, G., & Silman, F. (2010). Usage of Knowledge Management Tools: U.K. and Canada versus Russia and Turkey in a Comparative Study. *Eurasian Journal of Educational Research (EJER)*, (38).
- Boyd, W., & King, E. J. (1947). *The history of western education*. London: Adam and Charles Black.
- Bleich, E. (1998). From international ideas to domestic policies: Educational multiculturalism in England and France. *Comparative Politics*, 81-100. <https://doi.org/10.2307/422107>
- Carnoy, M., & Rhoten, D. (2002). What does globalization mean for educational change? A comparative approach. *Comparative education review*, 46(1), 1-9. <https://doi.org/10.1086/324053>
- Clark, B. R. (1986). *The higher education system: Academic organization in cross-national perspective*. University of California Press.
- Cohen, A. M., & Kisker, C. B. (2009). *The shaping of American higher education: Emergence and growth of the contemporary system*. John Wiley & Sons.
- Cossa, J. (2011). System Transfer, Education, and Development in Mozambique. *International Journal of Education Policy and Leadership*, 6(2), 1-15. Available from <http://www.ijepl.org>
- De Wit, H. (2002). *Internationalization of higher education in the United States of America and Europe: A historical, comparative, and conceptual analysis*. Greenwood Publishing Group.
- Dlouhá, J., Glavič, P., & Barton, A. (2017). Higher education in Central European countries-Critical factors for sustainability transition. *Journal of Cleaner Production*, 151, 670-684.
- Fowler, F. C. (2004). *Policy studies for educational leaders: An introduction* (2nd ed.). Upper Saddle River, NJ: Merrill, Prentice.
- Gagnon, P. (1988). Why Study History?. *Atlantic*, 262(5), 43-47.
- Gallacher, J., Ingram, R., & Reeve, F. (2012). Are vocational qualifications vocational?. In *The future of vocational education and training in a changing world*. New York: Springer.
- Godoń, R., Jucevičienė, P., & Kodelja, Z. (2004). Philosophy of education in post-Soviet societies of Eastern Europe: Poland, Lithuania and Slovenia. *Comparative Education*, 40(4), 559-569. <https://doi.org/10.1080/0305006042000284547>
- Holmes, B. (2018). *Comparative education: Some considerations of method*. Routledge.
- Hummelsheim, S., & Baur, M. (2014). The German dual system of initial vocational education and training and its potential for transfer to Asia. *Prospects*, 44(2), 279-296. <https://doi.org/10.1007/s11125-014-9311-4>
- Lu, S., & Ares, N. (2015). Liberation or oppression?—Western TESOL pedagogies in China. *Educational Studies*, 51(2), 112-128. <https://doi.org/10.1080/00131946.2015.1015348>
- Nye, J. S. (1990). Soft power. *Foreign policy*, (80), 153-171. <https://doi.org/10.2307/1148580>
- Oleinik, A. (2012). Institutional transfers in the Russian system of higher education: A case study. *Journal of Economic Issues*, 46(4), 881-908. <https://doi.org/10.2753/JEI0021-3624460403>

- Pospelov, A. S., Kal'nei, S. G., & Oleinik, T. A. (2011). The Third-Generation Educational Standards: The View from the Higher Educational Institution. *Russian Education & Society*, 53(4), 3-22. <https://doi.org/10.2753/RES1060-9393530401>
- Phillips, D. (1989). Neither a borrower nor a lender be? The problems of cross-national attraction in education. *Comparative education*, 25(3), 267-274. <https://doi.org/10.1080/0305006890250302>
- Phillips, D. (2000). Learning from elsewhere in education: some perennial problems revisited with reference to British interest in Germany. *Comparative Education*, 36(3), 297-307. <https://doi.org/10.1080/713656617>
- Phillips, D., & Ochs, K. (2003). Processes of policy borrowing in education: Some explanatory and analytical devices. *Comparative education*, 39(4), 451-461.
- Parsons, T. (2013). *The social system*. Routledge.
- Raffe, D., Howieson, C., & Tinklin, T. (2007). The impact of a unified curriculum and qualifications system: the Higher Still reform of post-16 education in Scotland. *British Educational Research Journal*, 33(4), 479-508.
- Simon, H. A. (2013). *Administrative behavior*. Simon and Schuster.
- Tomlinson, S. (2005). *Education in a post welfare society*. McGraw-Hill Education (U.K.).
- White, B. W. (1996). Talk about School: education and the colonial project in French and British Africa (1860-1960). *Comparative Education*, 32(1), 9-26. <https://doi.org/10.1080/03050069628902>
- Welsh, H. A. (2009). Higher education reform in Germany: Advocacy and discourse. *German politics and society*, 27(1), 1-23. <https://doi.org/10.3167/gps.2009.270101>
- Westheimer, J., & Kahne, J. (2004). What kind of citizen? The politics of educating for democracy. *American educational research journal*, 41(2), 237-269. <https://doi.org/10.3102/00028312041002237>