

A Review and Reconceptualization of Experimental School: Implications for Education Reform in Hong Kong

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Recently, experimental school has emerged as a new concept of school establishment in Hong Kong. Experimental schools emerged in the 19th century. They provided the form of education that recognized the diversities of learners. However, the evolution of it has not been explored and discussed. This study aims to review from the literature the background and rationale of experimental schools. It also aims to illuminate issues on experimental schools so as to generate different perspectives and suggest directions for application in the context of Hong Kong.

Common background and characteristics were found from reviewing the literature of experimental schools. The review suggested problems and issues that demand further attention about using experimental schools to promote reform in education. It argues that experimental schools can be a useful means to agitate educational change; however, it should be matched with the attitude

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change of the public so as to achieve the true value. The late development of experimental schools in Hong Kong is discussed, which bridges to the discussion of practical considerations for the setting up of experimental schools in the context of educational reform in Hong Kong.

Key words: experimental schools; alternative education; education reform

Why Review on Experimental Schools

The idea of experimental schools emerged early in the 19th century. This kind of schools combines school practice and research at the policy level to encourage application and testing of educational ideas. There were also other types of schools which carried the same features. However, the rationale and operational functions were still unexplored in the relevant literature.

Furthermore, as education is recognized as the means to facilitate the overall development of a person, especially in this century, the demand for other possible forms of education has been anticipated. The review of the literature on experimental schools is timely to draw individual experience together to speculate future development, especially in the context of educational change.

This review was started by a keyword search on “experimental school” and other related identifiers suggesting similar meaning, such as “laboratory school”, “alternative school” and “model school” through the ERIC index. Literature on school improvement was also traced to identify materials that were related to this topic. There is little English translation of the literature on this topic in the East. Representative cases were selected from the Chinese texts to suggest the common situation, as experimental schools in China and Taiwan were found most prevalent. The search was by no means exhaustive, but was sufficient to gather major documents to generate a critical discussion of the topic.

The search resulted in both theoretical and empirical document, of both primary and secondary sources. Based on the materials collected, the history of experimental schools could be traced and their characteristics defined.

The Origin

Experimental school originated from the so-called laboratory school which appeared in the US in the late 19th century. The specific role of a laboratory school was to provide a normal school setting for student-teachers to “experiment” teaching (Harper, 1939). For this reason a laboratory school contained all the facilities of a public school. The school used for this purpose was usually affiliated to a university and based within the campus. It was also named “normal” or “campus school”. The nature of a laboratory school was clearly stated by Perrodin (1955), in which prospective teachers might “experiment with the curriculum and methods of teaching as professors of science experiment in the laboratory” (p. 5).

The number of laboratory schools sprung in the US in 1840, in different teacher colleges and institutions. In the 1900s, an experimental school was given additional elements that resembled a “learning laboratory” where teachers were free to experiment education. An illustrative description of the function of laboratory school was suggested by William Van Til in 1969:

The laboratory school faculty would be made up of master teachers demonstrating their skills in the art and science of teaching, carrying forward research and experimentation with children and youth, and adroitly inducting observers, participants, and student teachers into the best of all possible educational theory and practice. Their partners in the school would be the college and university professors. The professors would artfully interweave their classroom instruction with extensive observation, participating, and student teaching in the demonstration school by teachers-to-be. The professors also would share in the development of significant research with the experimental school faculty (quoted in Shaker & Kridel, 1989, p. 3).

Along with this development, experimentation and research had been strengthened in laboratory schools. The name “experimental school” became popular with the influence of the Eight Year Study, under the leadership of John Dewey (Antler, 1982). More and more experimental schools were built to test new educational ideas. On the other hand, experimental schools also carried strong political undertone. They have provided a place for actu-

alizing visionary ideas that could not be implemented in ordinary schools. Experimental schools were also named “model schools” to characterize the “demonstration of good practice” (Shaker & Kridel, 1989).

Other forms of schools appeared in the literature also suggested similar idea of experimental schools. These schools defined themselves as alternative, providing education for diverse needs, in relation to socio-economic and ethnic backgrounds. They were named by different terminology such as “magnet schools”, “mini schools”, “schools-within-schools”, “satellites” or “separate alternatives” (Raywid, 1984; Frumin, 1996). Together with experimental schools, these schools could be generally regarded as providing alternative education.

Influential Initiatives

The following table illustrates examples of experimental schools. The schools selected claimed their nature to be experimental. Typical examples representing the general situation of experimental school development in different countries are cited in the review. Although this has not been a representative review, it was broad enough to grasp major innovations in different contexts.

Common Characteristics

The review suggested both positive and negative experiences. While direct comparison is not appropriate; some common characteristics can be identified irrespective of the outcomes.

Research in Practice

The integration of research in practice was a strong element of experimental schools. In fact, research on teaching could be facilitated in the experimental school setting. This has made a difference from the state-owned schools. Most of the schools were affiliated with cooperating universities

Table 1 Examples of Experimental Schools

Country	Reference	Leader(s)	Name of School (Time)	Rationale(s)	Funding Status	Affiliation	Comment
US	Perrodin (1955)	Horace Mann	Horace Mann School (1887)	experiment with curriculum design and teaching	national	Teachers College	laboratory for student teachers to experiment teaching impressive academic record
UK	Searby (1989)	Cecil Reddle, Edward Carpenter	Abbotsholme New School (1889-1960s)	develop a rational person through physical exercises games/and practical skills draw school experience nearer to life by applying scientific concepts/ methods to work	private	university professors and school headmasters	strong network of teaching development on progressive education
US	Yeomans (1986)	John Dewey, Francis Parker	Over 30 Laboratory Schools (Eight Year Study)(1890s)	experiment teaching	national	University of Chiago, Progressive Education Association	laboratory of teaching for student teachers
US	Harper (1939)	Speyer	Speyer School (1889-)	provide education to students of illiterate families	state	Teachers College	—evolved as a typical method of teaching in the world; more than 100 schools were operated with this idea by 1912
Italy	Antler (1982)	Maria Montessori	Montessori's School (1900-)		national	unspecified	—Montessori Public School Consortium was established to provide research and support
Israel	Raywid (1984)	David Idelson & Yehuda Polary	Active School (1921-23)	develop human culture	national	Teachers Association	fused the labour movement; compromised progressive principles with traditional life
US	Antler (1982)	Lucy Sprague Mitchell	Play School (1916-21), Bank Street (1930s)	study children's growth	national	Bureau of Educational Experiments	strong impact on child-centred education
US	Morris (1991)	Myles Horton Jim Dombrowski	Highlander Folk School (1932-)	—empower the oppressed —fight against racism, class and gender domination	state	Labor Party	—political background of working class labor party; promote democracy
Denmark	Chamberlin & Chamberlin (1993)	5 teachers in Denmark	Tvind Schools (Traveling Folk High Schools)(1970s)	learn through communal life by experimentation in	private		—Tvind Corporation set up to recruit teachers to contribute

(Table 1 cont'd)

Country	Reference	Leader(s)	Name of School (Time)	Rationale(s)	Funding Status	Affiliation	Comment
US	Greenberg & Lieberman (1981)	Arthur Greenberg, Janet Lieberman	LaGuardia Middle College High School (1975-)	residential base; students maintain close interaction and develop self governance enhance education of students and prepare them for work or college	national	LaGuardia Community College	salary to support Tvind Schools --initiate projects to offer help in world level --cooperation between Board of Education and Board of Higher Education --internship in government agencies and institutions, community agencies and business --successful in fitting students to workplace --developed talents of individual students through different forms of participation --tremendous academic growth --developed student to be productive resources for society
US	Weintraub (1985)	Robert Weintraub	Lowell's City School (1980s)	apply idea of micro-society in school; students develop own legislation and system in a participatory effort	national		
US	Schlemmer (1981)	Phi Schlemmer	Zoo School (1973-present)	environmental and global educationa focusing on life --relating education to daily life --independent thinking development promote equal opportunity; stimulate social awareness	local authority	Grand Rapids Board of Education (leader as developer of the school while acting as an intern in the Indiana University)	
Netherlands	Creamers & de Vireos (1982)	Unspecified	Comprehensive School (1975-)		national		--isolated --lack of support --weak research output conflict of interest between federal and local positions
US	Sahkin & Egermeier (1992)	Unspecified	Experimental schools in 18 communities in Massachusetts (1980s)	comprehensive education for the poor and minority	local authority		
US	Sizer (1986)	Theodore R. Sizer	Schools operated under Coalition of Essential	handle essential skills and develop knowledge in different areas	national and private	Brown University	--developed Nine Common Principles to be adopted by schools within the support network --academic results were comparable to conventional schools

US	Finn-Stevenson & Stern (1977)	James Comer, Edward Zigler	Schools operated under Comer-Zigler Program	optimal development of children through child care private	national and private	Yale University	<ul style="list-style-type: none"> -comprehensive school plan -staff, students, parents participated in administration -lower income family as targets -small school size -intake of at-risk children, e.g. Latino -promoted a family school ethos
US	Martinez, Perez, & Cook (1998)	Martinez, Perez, & Cook	Gardendale Elementary School (Gardendale Family) (1995-present)	develop sense of community, promote family involvement, and help students to gain authentic experience	education fund	Carnegie Foundation for the advancement of teaching; development support from University of Texas unspecified	<ul style="list-style-type: none"> -acquired intake comparable to normal high schools -developed graduation projects -student achievements comparable to those of conventional high schools -developed Learning Activity Package to encourage self learning -developed as a standard high school -recruiting pupils from all areas -academic results above average -raise the importance of knowledge development on ecological concepts -in need of active agents as teachers
US	Langberg (1983)	Arnold Langberg	Jefferson County Open High School (Mountain Open High School) (1975-present)	students achieve personality development through self-development study	local authority		
US	Doremus (1981)	Unspecified	Nova High School (1964-)	laboratory teaching for all subjects	national	Nova University	
USSR	Zheibanova (1990)	Krupskaja	Experimental schools of the Buriat ASSR	-develop consciousness towards work and labor -learn through laboratory work, practical production, and agricultural experimentation	national	Scientific Research Institute of Labor Training, Vocational Guidance of the USSR Academy of Pedagogical Sciences	

(Table 1 cont'd)

Country	Reference	Leader(s)	Name of School (Time)	Rationale(s)	Funding Status	Affiliation	Comment
US	Clinchy (1989)	Lauran Resnick	High School in the Community, New York City--As-School	<ul style="list-style-type: none"> –promote contextual learning –develop sense of community–cognitive development 	national	University of Pittsburgh, Columbia University, American Federation of Teachers	<ul style="list-style-type: none"> –developed home based school –connected students of different community sites
US	Minneapolis Public Schools Program Evaluation (1989)	Minneapolis District Officers	Minneapolis elementary schools (1971-)	provide individual-based teaching to students at risk	local authority	external evaluation service	<ul style="list-style-type: none"> –low teacher–student ratio –student performance improved –budget for teacher development
Finland	Rask (1992)	Sauli Rask	Kukkala Lower Secondary School (1994-)	promote self directed learning using IT within an open learning environment	local authority	University of Jvaskyla University	<ul style="list-style-type: none"> –work closely with university to provide training and support for teaching staff –adopt effective school concept
New Zealand	New Zealand National Commission for UNESCO (1980)	Unspecified	Whanau House (1977-)	provide lively and relevant learning, aiming at educational and social needs of serving the community	national	Massey University	<ul style="list-style-type: none"> –small population –schools expanded by "house" –student socialization and responsibility strengthened –teacher training needed –individualized learning objectives due to flexible curricula –rich resource investment enormously to furnish the learning environment –teachers work cooperatively –regular review
China	Cui (1999)	Unspecified	Fu Gian Experimental Primary School	promote quality learning in terms of school environment, atmosphere, and learning context	local authority		
China	Cui (1999)	Unspecified	Tian Jin Second Teacher College of Education	student-centred education, focus on group learning and individual-based learning	local authority	Tian Jin Second Teacher College of Education	
China	Cui (1999)	1994-present	Primary School Liao Ning Experimental School	constructivist learning	local authority		<ul style="list-style-type: none"> –teachers develop materials and curricula –teachers work towards a common goal

and educational organizations, for which strong academic support for school development was maintained, such as the Horace Mann School, Abbotsholme New School, Speyer School, LaGuardia Middle College High School, Kukkala Lower Secondary School, Whanau House, and Tian Jin Second Teacher College of Education. Yet some of them operated quite independently, such as Tvind Schools, Lowell's City School, Minneapolis elementary schools. In the latter situation, external evaluators were employed to assist in doing research, as in the example of Minneapolis elementary schools.

Legitimacy

The survival of experimental schools suggested the importance of professional legitimacy. The status of these schools was established partly by prominent educational leaders who acted as significant icons for the schools. Many educational ideas and pedagogues of these schools had made impressive influence on the development of education, such as the progressive idea of John Dewey, the Montessori method by Maria Montessori, Essential Coalition of the Sizer, Co-Zi concept of Comer and Zigler, etc.

Moreover, the expectancy of funding relied greatly on the status of the schools. The above examples of experimental schools were funded in a number of ways such as national money, education grants, private support, and charitable contributions. Most of the schools were funded by the central government, or the so-called state or local authorities. In order to secure funding, some of them had tried to maintain high competitiveness with the ordinary schools, such as Jefferson County Open High School.

Broad Educational Aims

The earlier effort of laboratory school catered for practical purposes. Attempts after the fifties were usually operated in response to an expressed need of certain group in the community. The needs identified were related to some global concepts such as equal opportunity, cultural or community awareness, open learning, parental involvement. Some schools served the needs of specific groups such as the minority or young delinquent students,

such as the Minneapolis elementary schools. Others provided comprehensive or community education, such as the experimental schools in 18 communities in Massachusetts. They all had specific educational goals and curricula which were different from those offered by traditional schools.

Curriculum Flexibility and Unconventional Pedagogues

Since experimental schools sought to achieve alternative, ambitious educational aims, they can only be achieved by strong professional backup and flexible administration. It was observed that most of the experimental schools had developed their own teaching materials, syllabuses, and evaluation devices. Innovative pedagogues were invented and experimented in both large and small scales, notably in the form of project study (Jefferson County Open High School, Nova High School), cooperative learning (Tvind Schools, Active School), team teaching (Highlander Folk School, Whanau House), open learning (Kukkala Lower Secondary School), problem-based study (Comprehensive School, Coalition of Essential Schools, Liao Ning Experimental School) and residential life (Whanau House, Tvind Schools, Zoo School). Community collaboration could be promoted. To match with these goals, special arrangements in terms of class size, modules, and physical environment were accommodated.

The school life of students in experimental schools was enriching. Most of their school experience was integrated with real life. The common ideology of studies in school, in most cases, was to help students learn how to learn and to gain understanding by themselves. However, not all of these schools were properly evaluated. It turns out to be an interesting issue that many schools, like Nova High School, which claimed to provide alternative education to students were striving to acquire higher academic standard compared to ordinary schools.

Multiple Roles of Teachers

To keep up with the ambitious aims, experimental school teachers were assigned a multitude of roles and responsibilities. They had to be the managers of the school. Simultaneously, they were also the janitors, social

workers, counselors, curriculum developers, evaluators and researchers. The life experience of a teacher was determined by the ideology of a particular school. There was a strong demand for teachers to be dedicated. As a result, a life-work integration was identified as the specific nature of their career.

Cohesive Collegiality

The leadership and commitment of the staff of experimental schools have tightened the operation network of the school. The strong educational beliefs geared to the development of school, and the persistence developed within had resulted in a united force. Since schools were experimental, they were risky. The reviewed cases proved that the schools were working with enduring commitment upon common interest.

Experimental schools was supposed to maintain a close relationship with university professors who acted as researchers, supervisors, or critical friends. In most cases, this relationship could facilitate school development. Moreover, the school development activities had made strong implications to enhance the incentive and motivation of the working staff. This was especially significant in the home-based programs in which the teaching staff were accommodated within the location of the school. The spiritual and physical adjustment could help develop the cohesiveness between members.

On-Job Professionalization

Experimental school, as the characteristics described, can help promote the growth of professionalism of teaching. The reflective norm of thinking was promoted through on-job experience as functional research was strongly integrated in the life of practitioners. This was proved successful especially in the cases mentioned by Antler (1992) and Rask (1992).

Difficulties and Problems

Maintaining Survival

The major problems encountered by experimental schools were the tension among the interests of the cooperating agent, the public, and the educa-

tional goals promoted by the schools. This was coupled with the problem of finance. It was because funding agent was usually directed by market demand which was considered as the indicator of success. For example, the original idea of the curriculum may shift due to disagreement of the parents or the public. The student intake also determined the success of the schools. The schools were conscious in providing evaluation report that satisfied the interest of the public. This was typical in the case of the Netherlands.

Continuous Development Support

Another point was the weak performance in research. As seen from the examples, the staff of experimental schools usually had heavy workload. It was difficult for them to spend time on research. Apart from that, the cooperating organization might not provide enough support to schools in this aspect. All these problems may handicap development of the schools. The situation is most revealing in the cases of the experimental schools of the Buriat ASSR in USSR and the Comprehensive School in the Netherlands.

Implications for Education Reform in Hong Kong

The above review suggests that experimental schools is a possible way of implementing alternative educational aims. In this part, implications are drawn to the education reform scenario in Hong Kong to argue that effective reform can only be facilitated by changes in both the philosophy and organizational structure of the education system.

In Hong Kong, the proposal for education reform has initiated hot debates recently. In fact in 1999 and 2000, the Education Commission (1999, 2000) has put forward a progressive educational idea that aims to promote individuality and personal development of young people. The top down reform advocates a new learning environment. However, the existing schools are built on traditional concepts and values, thus, much is left to be changed before the new education can take shape.

Sashkin & Egermeier (1992) suggested that in order to change school,

comprehensive restructuring of schools must be accommodated. Their suggestion of changing schools recalls the elements of an experimental school as described in the review: widening educational aims, empowering teachers and students, enlarging the school community, and inducing professional development for teachers working in the field. It suggests that innovative educational ideas are possible to be developed within a non-restrictive space.

At present, there is a pressing need in our society to care about the academic under-achievers in different aspects. There is also a perceived concern to cultivate a wider range of talents on young people. Experimental schools is a possible solution according to the school-based concept promoted by the Education Commission of Hong Kong (1999, 2000). I have pointed out that certain conditions are key to the survival of experimental schools. The very basic requirement is that the system should allow schools to exist in different forms and structures that are specific to the needs of the potential groups in the society.

With the sponsorship of the Quality Education Fund (QEF), schools nowadays are able to launch different special programs to achieve alternative purposes other than the academic. To list a few, the “multi-skill development program for students”, “an art a child learning scheme”, and “teachers and parents cooperate to improve pupils’ learning ability after school” are programs funded by the QEF recently. These programs, initiated by individual school teachers, may not have actual impact on the administration and policy making of the schools. There may not be any fundamental change at the whole school level relative to the program. While launching some special programs, these schools should adhere to rules and regulations stipulated by the government, and to compromise with the official educational aims. Hence, they cannot claim to be experimental, regardless of the fact that the bottom up initiatives within the school could be influential in the long run. The international schools in Hong Kong, while bearing different educational aims, can neither claim to be experimental. These schools are governed by models and systems that are specific to the affiliated countries. As far as rules are concerned, as the review concludes,

experimental schools should indicate some specific features in administration and governance which are backed up by strong educational ideals different from those of the main stream. They are run in the way that is unique to their own ethos. Experimental schools, “alternative” to those existing in the main stream in the society, are therefore conceived as “experimental” in the eyes of the public.

Another point I have to argue is that except the general factors on resources, the success of trying out educational experiments is also dependent on how they could match the ideology of the society. It is certain that the interest of the dominant group in society determines the forms of schools to survive. The situation of Hong Kong is a typical example. The concern of education for the public cannot eliminate the influence of the elitist model, of which explicit output, reward, and achievement are still the chief expectation. Under these circumstances, schools may easily lose sight of the actual aims of education.

The reform policy put up by the Education Department in widening the educational aims and focusing on developing a person, may suggest a hidden function of desegregation and decentralization of power in our society. Experimental schools can be used as a means to decentralize power, as suggested in the case of the Essential Coalition (Sizer, 1986). However, the unsuccessful experience of experimental schools drawn from this study also warns us that the legitimacy of the program is largely governed by the political situation. It is common for educators to strive to attract clients by conforming to the expected standard, rather than fighting for educational ideals.

So the immediate and important thing to do regarding education reform should be the change of our concept about education. Florander (1984) suggested that the condition in Denmark did not need a top-down policy for introducing change because their system was more flexible and open which favoured individual innovations to take place. In China, the diversities in educational aims are found and the government invests in experimental schools in several major areas in the country, for the experimentation of

educational initiatives and teaching practice of student teachers (Cui, 1999). As discussed, the case of Hong Kong is not the same. The education system is still centralized and school managements are subject to mandatory rules. The education structure provides little space for experimentation.

Recently, both The Hong Kong Institute of Education and the Hong Kong Baptist University have proposed to build their affiliated schools. Both of the initiatives, as claimed, will provide to students quality education; in which educators, in-service teachers, and student teachers are involved. Furthermore, the proposed schools can be acted as a place for teaching practice for student-teachers and a field of research for university professors ("Baptist University opens," 2000), which is consistent with the original idea of setting up experimental schools in the past. So far, the experimental nature of these schools in providing alternative education is yet to confirm, although they are claimed "experimental schools" ("Baptist University initiated," 2000). The focus of development of these schools is on the "through road" concept, that is to say to enable students to carry on education in the same family of schools, that will be connected to the university belonging to the same family ("Institute of Education" 2000). In fact, the anticipated affiliated schools, with sufficient academic and educational back up, can act as pioneers of experimental schools in Hong Kong. They are in a favourable position to demonstrate to the public that schools can provide meaningful education to young people. School education nowadays opts for effectiveness and efficiency, because the market economy ideology and human resources perspective of education have rooted in the thinking of the government officials. It is envisaged that the universities concerned should reconsider the aims and principles of the affiliated schools in the agenda, to create visions and dedication to the proposed schools in this reform scenario. In this way it is hoped the centralized, monotype education system is to change so as to allow diversities. It will be disappointing for educators to see that the proposed affiliated schools could only live in the shadow of the prevailing elite schools.

Furthermore, in order to reform, organizational change is also essential.

It is crucial that the Education Department should revise the rules and regulations that govern school administration and curriculum to avoid restrictions that may hinder the development. They should allow autonomy for school based development and management to accept the diversities of education. Otherwise the reform can only remain as lip service. On the other hand, our school system and educational fund providers should fine-tune the policy to enable teachers who have educational insight and willingness to make innovation in their own situation by giving support to them, so that the effort to reform can be mobilized.

At last, it is important to stress the accountability of experimental schools. I would suggest a partnership system to link up experimental schools with the education faculties in universities or institutes of education; this may ensure a professional support that is beneficial for school development. Furthermore, meaningful evaluation should be made continuously. To ensure equal education opportunities, experimental schools should make themselves accessible to all. A mechanism for assessment of needs and referrals should be developed in aiding students in making the choice of school. The school team should maintain the quality of the program so as to prove credibility. Dissemination of school reports should be introduced regularly. Fostering commitment to ever improving the program is necessary for teachers. All these may fulfill the ethical obligation of schools and promote the right of students in the experimentation.

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