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Curriculum renewal in a Small Island State: Stabilization and early recovery phases of reconstruction

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In countries recovering from disaster or conflict, school curriculum renewal is submerged in a plethora of more immediate concerns of a nascent government. Yet, curriculum is the cornerstone of any education system. Using a case study for context, this paper describes a methodology to maximise the quality of the emergent national curriculum. In the first section of the paper, a theoretical curriculum planning and implementation framework is established and, in the second section, the experiences of implementing the framework in the case study context are examined. The paper concludes with a discussion of lessons learnt. This methodology of synthesising, packaging and implementing theories of curriculum, development, change management and leadership in the context of an independent emerging nation is of value to education ministers, project planners, first responders and implementation consultants.

Keywords: assessment; curriculum renewal; education aid; pedagogy; small island state; systems thinking

INTRODUCTION

Curriculum issues in aid recipient countries are a contested field, and claims as to what works needs to be evaluated carefully (Agigo, 2010; D. Evans, 2012; Guthrie, 2011) and is not at all clear (Barrett, Sayed, Schweisfurth, & Tikly, 2015). The underlying caveat is that curriculum artefacts that have currency in Western liberal cultures are not automatic choices for emerging nations (McLaughlin, 2011; Phillips & Schweisfurth, 2014; Pritchett & Beatty, 2012; Tabulawa, 2003). In saying that, Cassity (2008) finds that changes in aid policy are sincere efforts to address curriculum issues. Recent examples of education aid projects indicate that aid donors are seeking improved learning outcomes in students and will support initiatives that are grounded in evidence that achieves this goal (DFAT, 2014a; USAID, 2015).

The audience for this paper includes those who are engaged in renewing an education system in the stabilization and early recovery phase after a disaster or conflict. This paper is especially valuable to anyone involved in curriculum projects in developing countries.

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The paper aims to provide a knowledge base of major curriculum issues and to provide guidance on peripheral issues that could impact on the implementation of sustainable curricula. Those engaged in renewing an education system may not be experts in education, (Kothari, 2005; Riddell, 2014, p. 35) but are often the initial aid personnel on the scene in the post disaster and stabilization phases of development; they establish the foundation for a national curriculum.

No two nations are the same, but the nations that are considered in this paper are relatively small low lying Islands with limited, disjointed economic activity and inadequate capacity to provide a full range of government services from their own resources and rely on donor assistance (Crossley & Sprague, 2014). In one way or another, these nations are emerging from a disaster related to conflict, natural causes, climate change or economic collapse with education being only one of a list of priorities competing for limited funding and government attention. In terms of education, donor assistance includes: host country education budget support; provision of physical assets, such as school buildings; supply of expertise, such as short-term consultants; and in-line expatriates employed in public service positions, such as directors or school principals. The term 'host country' is used in this paper rather than other descriptors in the literature which have hegemonic connotations, such as aid recipient, beneficiary, developing, fragile state or partner country. The Organisation for Economic Co-operation and Development (OECD) recognises 146 host countries (OECD, 2016) of which 39 are classified as Small Island Developing States (United Nations, 2013) – more commonly referred to as Small Island States (SIS). These low-lying coastal countries tend to share similar sustainable development challenges, including small but growing populations, limited resources, remoteness, susceptibility to natural disasters, vulnerability to external shocks, excessive dependence on international trade, and fragile environments. Their growth and development is also constrained by high communication, energy and transportation costs; irregular international transport volumes; disproportionately expensive public administration and infrastructure due to their small size; and little to no opportunity to create economies of scale (United Nations, 2013).

By their nature, SIS do not have the resources or professional capacity to conduct their own research to inform their education system in matters of curriculum, pedagogy, assessment, certification, teacher professional development, school planning, or monitoring and evaluation programs. In place of such research, SIS rely on the literature, foreign aid and expatriate expertise to develop their education systems (Crossley, Bray, & Packer, 2011; Williams, Brown, & Kwan, 2015).

This paper is a case study of curriculum renewal in a SIS in the early stages of recovery after the equivalent of an economic tsunami had devastated its economy. The government had been unable to pay teachers regularly for over two years, schools were in dangerous disrepair, attendance was below 30%, fuel and electricity were severely rationed, the Education Department was the subject of overseas litigation for non-payment of boarders' fees, no school or national exams had been held for over 12 months and education data required to prepare a situational analysis was either non-existent or stored on a computer which had a corrupted hard drive. It was in this situation that a donor funded project to renew the national school curriculum, including Technical Vocational Education and Training (TVET), was launched.

This paper is a study of implementing curriculum reform and, thus, focuses on the theoretical principles of curriculum; however, the focus is through the lens of the principles of development. These principles (OECD, 2012b) will not be discussed in this short paper but they include: do no harm; local stakeholder ownership; scope and time for local leadership to develop; and institutional capacity building. In that respect, this paper differs from curriculum textbooks that focus on curriculum principles from a theoretical perspective alone.

The first section of this paper defines the concept of a curriculum before examining the three phases of a model of curriculum design and implementation. A case study of the application of that model to a SIS is then discussed. Importantly for practitioners in the field, the discussion includes consideration of leadership and change management as factors that influence successful implementation and sustainability. After examining each of the curriculum elements of content, pedagogy, assessment, and certification and embedding the curriculum in the education system, the paper concludes with lessons learnt and advice for host country stakeholders in evaluating curriculum aid packages offered to them.

CURRICULUM DEFINED

A curriculum is defined in this paper as the system framework that aligns four elements of an education system: the content to be taught and learnt in schools; the pedagogy that is employed by teachers to achieve and promote learning of the curriculum content; the assessment principles and systems employed to evaluate learning; and the certification system used to authenticate the judgements made in the assessment process. The literature provides other definitions of curriculum (Acedo & Hughes, 2014; Marsh, 2009, pp. 3-8; Westbrook et al., 2013, pp. 12-15), many of which omit the concepts of pedagogy, assessment and certification (Pinar, 2003) and consider only the content that is to be taught and how to organise that content. Young (2014) provides a succinct, wider exploration of the concept that focuses on a curriculum as a device to select, organise and transmit knowledge, but this paper applies Bernstein's (1990) message system concept of education and describes a curriculum as a system of aligned education elements that ensures that the message is consistent from the curriculum planners' desk to the classroom. This definition of curriculum will inform the curriculum development and implementation methodology that will be examined in this case study.

THEORETICAL CURRICULUM MODELS

Marsh (2009, p. 25) identified eight curriculum models, but provided the caveat that curriculum models can provide useful, detailed perspectives on some particulars of the curriculum in action but not the total picture. Scott (2008) identified eight curriculum ideologies or justifications for the focus and content of a curriculum. These reflect the theorists' view of what constitutes knowledge, which knowledge is worth most and the role of education institutions as either emancipating or insulating the learner. Scott distinguished between theoretical knowledge and practical knowledge, and between economism, conservative restorationists, humanist and critical theorist's justifications for the content of a curriculum.

In the context of this case study, the curriculum development model found to be suitable for most SIS contexts was that provided by Print (1993) with some modifications as shown in Figure 1. Print's model has three phases, the first of which is the presage or a determination of the profile and theoretical perspectives of the people who will be involved in the curriculum development process. This is important because the eventual curriculum framework will reflect the ideology that is espoused by individual stakeholders, especially in relation to pedagogy. Although Print includes a situational analysis in phase two of his model, in this case study it was included in phase one.

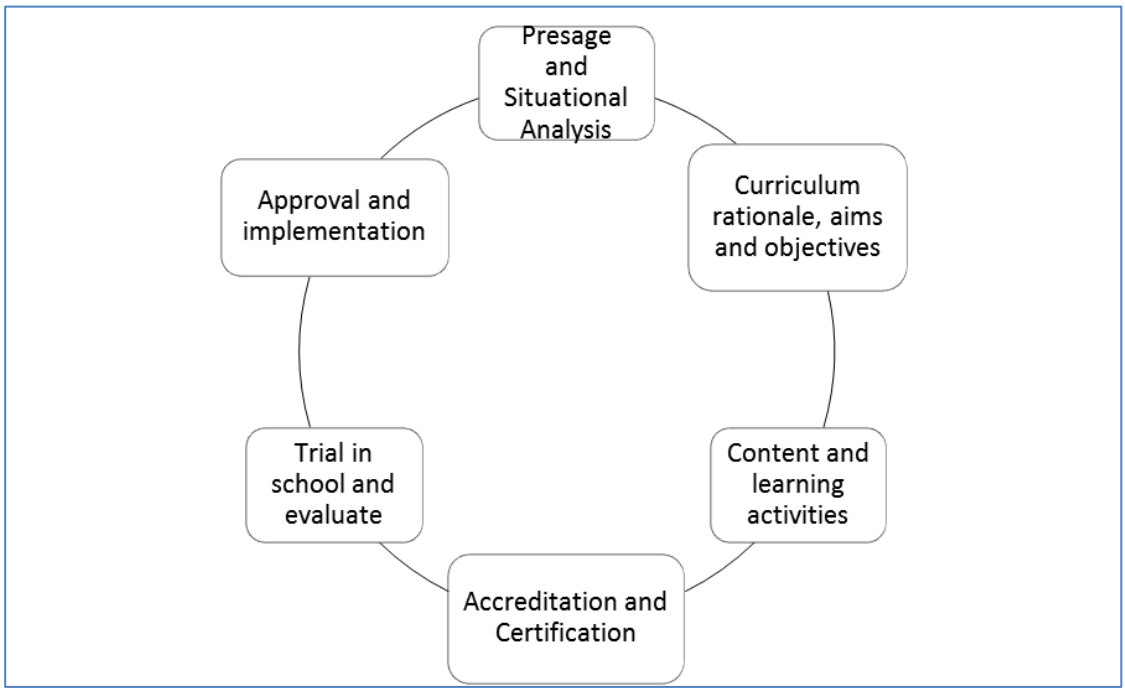

Figure 1: Stages in case study curriculum renewal

Phase two of Print's model is where the technical and professional work of operationalizing the theory is done. After reviewing the situational analysis, the next task is to obtain agreement among stakeholders on the curriculum rationale, aims, goals and objectives before moving onto the approval of the content and learning activities. Finally, the modes of assessment of students' learning, labelled as 'instructional evaluation' in Print's model, are determined. By this stage in the process, the various elements of the curriculum are in place. However, this process usually occurs over a lengthy period of some years, with changes in personnel, government policy, impact of technology and emergence of latent forces all exerting an influence on what were previously agreed curriculum elements. Consequently, an evaluation of the process to date will be required to ensure that the original rationale, goals and aims permeate the completed framework and, importantly, that the various elements are aligned. Although not described in Print's model – but included in this paper's definition of a curriculum – is the requirement to develop an accreditation and certification system of student learning to authenticate student learning and provide the student with evidence or certification of their achievement.

In the third phase, the curriculum is introduced into the classroom where, inevitably, modifications will be required following the emergence of various peripheral issues such as the existing textbooks, science laboratory design, or school-imposed timetable

structures not being aligned with the proposed curriculum learning objectives or learning experiences. Depending of the severity of these issues, as revealed by a continuous monitoring and evaluation process, the curriculum may need to be reviewed. Assuming that there are no major impediments, the time taken from conception to implementation in the classroom for a system wide curriculum is at least six years.

With that model as a framework, the implementation of the curriculum renewal project in SIS will now be described.

APPLYING THE MODEL

One of the first tasks in implementing the model in the SIS was to conduct an evaluation of the current curriculum. There are various curriculum evaluation tools available and the choice of which one is applied will depend on the outcome sought and reliability of available data. Schmidt and Houang (2003) use the results of Trends in International Mathematics and Science Study (TIMSS) as an evaluation criteria, but this data may not be available or suitable for all SIS. In such a situation, a self-administered tool, such as the curriculum module of UNESCO's General Education Quality Analysis/Diagnosis Framework (Marope, 2012) or Stufflebeam's (2003) context, input, process and product (CIPP) evaluation model will be more useful. The CIPP package provides samples of evaluation checklists which can be adapted to suit the SIS context. Assuming that the data is available, a technical evaluation process grounded in statistical analysis of system data and detailing the types of research designs that are suitable is provided by the US Agency for International Development (USAID) (Bureau for Policy Planning and Learning, 2013). Specific subject evaluation tools for SIS and aid recipient countries are available for curriculum effectiveness in mathematics (USAID, 2014a) and reading (USAID, 2014b).

In general, the evaluation process involves three stages. The first is identification of the purpose for the evaluation and its audience. The second is an evaluation design strategy and the collection of data. After analysis of this data, the third stage is analysing and synthesising the data into a report and presenting it to the audience. The nature and extent of the data collected and the subsequent report will be determined by the audience; for example, it will be different for a science faculty evaluating the curriculum on the criteria of its science components compared to an aid donor evaluating the same curriculum on the criteria of the effectiveness of their funding in achieving improved student learning.

However, the use of Western curriculum evaluation tools in SIS needs to be judicious. As Courtney (2008) points out in her evaluation of a teaching and learning project in Cambodia, the 'monitoring tools that introduce easily measurable and observable criteria may identify the desired outcome for a project, but can fail to identify unintended consequences and may mask aspects of critical importance and overall project impact' (pp. 558-559). This was demonstrated in an impact evaluation of the Curriculum Reform Implementation Project in Papua New Guinea (Evans et al., 2007) conducted by international consultants who declared the curriculum project a success. However a subsequent re-evaluation of the project (Agigo, 2010) found serious problems in its implementation and questioned its national impact and sustainability, finding it made a negligible contribution to improved student learning.

The evaluation of the case study SIS' existing curriculum found varying degrees of compliance with the criteria being evaluated. The early childhood sector had a well-organised work program but the primary sector had an uncoordinated collection of syllabi from three different sources. The lower secondary years taught a collection of subject syllabi from another country, and the upper secondary had a mix of two matriculation courses while the vocational education courses had ceased due to a fire destroying the TVET centre and its resources. There was no evidence of a curriculum policy, that the curriculum content was localised or that there was a rationale provided for studying any of the subjects. When these findings were put in the context of the other difficulties that had befallen the education system, the report to the donor and the SIS Education Minister concluded that a major program of curriculum renewal was required.

To ensure that the curriculum program proceeded in a systematic way and was aligned with other elements of the education system's reform package, the curriculum program was incorporated into a series of sector wide strategic plans. The first strategic plan, Footpath I, was designed to stabilise the education system over a period of two years and the second, Footpath II, was for three years (DFAT, 2014b). In the event, Footpath I took three years and Footpath II, predicated on the success of Footpath I, took five years to be fully implemented. Although the additional time taken for the strategic plans delayed the curriculum timetable, considering that education is a system and the curriculum segment of the education system needs to keep in lock step with other segments of the system, it was realised that it was a waste of resources to attempt to implement a curriculum if it could not be fully integrated into the system.

To ensure consistency with the definition of a curriculum being the cornerstone of an education system, the conceptual pivot for the strategic plans was the curriculum renewal program that was grounded in an expanded and modified Print model. The first phase of planning the curriculum program consisted of three steps: situational analysis, awareness raising of the need for reform, and consultation with stakeholders. The three steps in the second phase of developing the curriculum consisted of: achieving consensus on a curriculum framework, developing courses of study around the curriculum content organisers, and trialling the curriculum in schools. The third phase involved: preparation for full implementation and consisted of a major review; responding to the review; establishing an assessment and certification regime; and submitting the curriculum to the Minister for Education for legislative endorsement.

Driving any curriculum program requires sustained leadership which involves considerable consultation and negotiations with stakeholders, such as donors, Cabinet budget committees and the parliamentary drafting office. Also required is experience in resourcing projects and ability to manage consultants. The overarching requirement is a theoretical knowledge of curriculum, especially the elements of content, pedagogy, assessment and certification, and the application of change management principles. It is this aspect of the curriculum implementation program that this paper now will turn to by describing the process of implementing each of the three phases.

Phase one: Planning

Having established the existing situation with the evaluation exercise, and in the absence of other compelling factors, the rationale comes next in planning a curriculum (Posner & Rudnitsky, 2006). In this case, the rationale, approved by a process of consultation, for

the curriculum was to deliver a 'sustainable economy and environment achieved through national human and social capital capacity development' (DFAT, 2014b). The goals of the curriculum were:

1. Students enter employment, further education, or society and life with confidence.
2. Students leave school as literate and numerate citizens who can participate in, and contribute to, a complex, networked national and international community and economy.
3. The curriculum documents show what every child is learning at every level of education and training system.
4. The curriculum delivers the knowledge, skills, attitudes and values expressed in the Constitution and National Sustainable Development Strategy (pp. 4-5)

A national curriculum requires a legislative head of power to legitimise and enforce its provisions; an *Education Bill* that contained a section on curriculum was, therefore, prepared. At the same time Fullan's work on introducing change in education (Fullan, 2003) and Senge's work on leadership (Senge, 2006) – in particular his advice to develop a shared vision in all stakeholders of the education community – was considered. Consequently, as one strategy to build this vision, a 'Frequently Asked Questions' pamphlet about the proposed *Education Bill* was published. That document essentially was a vehicle to outline the rationale for many of the proposed curriculum changes and to provide a practical manifestation of the abstract vision for education.

As well as promoting the clauses of the *Bill* to build a vision, a poster of the proposed curriculum structure was developed. In the earlier curriculum consultative meetings, participants emphasised the centrality of literacy and numeracy and these elements feature prominently in the poster. Also included in the poster was a reference to the innovative curriculum content organiser and assessment device of rich tasks. Earlier consultation meetings had noted that there was some resistance to the use of rich tasks by the community, who were concerned that they were an experimental replacement for traditional subject areas. Thus, in the poster, although the rich tasks were present, they were not dominant. Additionally, the use of rich tasks such as 'Grow for Me', 'Identify Crisis', or 'Environment' as content organisers instead of the traditional subjects, such as English, Maths and Science, required extensive professional development for teachers. The engagement of teachers in these professional development activities was facilitated by invoking the ownership principle of development and the curriculum workshops focused on teachers themselves devising and authoring the rich tasks rather than presenting them with a finished product for their approval. Over 25 quality rich tasks for years one to ten were eventually approved and implemented.

Phase two: Curriculum framework

Referring to the curriculum renewal program, the first three steps of the phase of preparation for curriculum reform have been covered, and the next phase is the development of the curriculum. Unlike phase one, which was more the preserve of change experts, phase two is the preserve of curriculum specialists. Consistent with the definition that a curriculum is a system framework whose purpose is to provide consistency and alignment of the system elements, the curriculum's four specialist's areas of content, pedagogy, assessment and certification will now be considered.

Curriculum content

Some curricula do not refer to curriculum content as what a student needs to learn but describe content as 'what teachers are expected to teach' (Australian Curriculum Assessment and Reporting Authority, 2013, p. 18). This view indicates the impact of competing pedagogical philosophies, but in a SIS, as in most classrooms, the semantics will escape classroom teachers and they will interpret the content in a curriculum document as what the student needs to learn.

The selection of content in a curriculum is a contested area. The past practice in the case study SIS was to implement a syllabus from another country and purchase the textbooks that most closely matched the content of the syllabus. However, there are structured approaches, grounded in curriculum and learning theory, that provide guidelines for the selection of content and for the scaffolding, or division of that content, into year and juncture levels.

In this respect, Print (1993) describes the seminal work of Tyler, who structured curriculum around four question: what is the purpose of education (the objectives); what learning experiences (content and pedagogy) will achieve these objectives; how would these be organised; and how would a student be assessed. Stenhouse (1975) regarded objectives as being too content specific and restricted teachers in what they taught while Apple (1993) questioned the choice of content, asking 'whose content?'. Others, such as Delors (1998), questioned the emphasis on knowledge, suggesting development of a futures orientated process model, while Luke et al. (2013) saw a more critical role for curriculum content. In addition to questioning what is included as content, Scott (2008) suggests that reasons should be given also for excluding some content and consideration be given as to how items are arranged, what bodies of knowledge are to be taught, what arrangements in schools are suitable for delivery of the curriculum, what is the degree of insulation or separation between the teachers and students, and which epistemological view of knowledge is endorsed.

Luke et al. (2000), in considering the question of content, suggested that most curricula are driven by managerial and system imperatives and not from a student perspective. They suggested that:

> Instead of trying to describe everything that students need to know, it begins from three key knowledge questions:
>
> 1. What are the characteristics of students who are ideally prepared for future economies, cultures and society?
> 2. What are the everyday life worlds that they will have to live in, interact with and transform?
> 3. What are the valuable practices that they will have to 'do' in the worlds of work, civic participation, leisure, and mass media? (p. 37)

In the curriculum renewal consultations, the view was expressed often that SIS students needed to be prepared for a globalised, networked, technological world; therefore, the search for an appropriate curriculum initially led to the futurist four pillars curriculum framework of Delors (1998) and the New Basics approach of Luke et al. (2000). Luke et al. rejected the Tylerian learning objective curriculum model preferring the reconceptualist model arguing that:

> Curriculum can be built by envisioning the kinds of life worlds and human subjects that the education system wants to contribute to and build. In this way, a reconceptualist approach to curriculum is better suited to addressing a futures orientation than the Tylerian approach, which by definition tends to reproduce existing categories, knowledges and skills rather than build new ones. (p. 30)

Content can describe not only knowledge and the students' ability to recall it, but also the students' ability to manipulate that knowledge or demonstrate some skill – usually in the terms of Bloom's taxonomy. As an example, one curriculum system for senior students describes its content in terms of 'elements' and the system has 49 'common curriculum elements' (CCE) across 95 syllabi (Queensland Curriculum & Assessment Authority, 2016). The CCEs include calculating, compiling lists, empathising, comparing and justifying. A SIS is not expected to have such an extensive range of syllabi, although the Education Quality Assessment Program (EQAP) of the South Pacific Community has 13 prescriptions (syllabi) available for their Year 13 courses (Education Quality Assurance Program, 2016). While the 49 CCEs are worth considering across all year levels in any curriculum, Pritchett and Beatty (2012) found that less is more and that, paradoxically, learning improved when the amount of content in a curriculum is reduced. The authors also found that the failure of some curriculum reforms in aid programs is due to overambitious targets.

Curricula content is not taught as an amorphous collection of facts, principles and theories, but is grouped around an 'organiser'. Common organiser terms used are Subjects, Disciplines, Key Learning Areas (KLAs), Learning Areas, Prescriptions, Syllabi, Pillars, Rich Tasks or just 'organisers'. In those that use subjects or KLAs as an organiser, a general grouping of some subjects into 'strands' such as The Arts, Humanities, Sciences, Maths, Health and Physical education or others can be found. The SIS decided to use rich tasks as organisers after the evaluation process showed that Luke et al.'s New Basics concepts, as argued in a technical paper (Luke et al., 2000), best suited the SIS' contemporary needs. In terms of Lovat and Smith's (2003) curriculum discussion, the rich tasks provide a 'critical curriculum' (p. 133) with the added benefit of providing the futures focus of Delors (1998).

The situational analysis conducted earlier in the renewal process had detected a sense of change fatigue in the teachers and it was acknowledged that attempts to introduce rich tasks through a lecture based in-service program would produce only surface acceptance by the teachers. To plan for a fundamental acceptance of the change to rich tasks, a twelve-month detailed work program in which teachers, rather than content, were the focus, was prepared. Although the reason for selecting rich tasks was grounded in curriculum theory, the choice of something novel, such as rich tasks as an organiser, provided a device to engage teachers, develop their ownership of the curriculum and overcome the sense of change fatigue. The decision to focus on teachers was not universal, with a strong case made for a focus setting out content in a more traditional organizational form, such as English, Mathematics and Science. The approach adopted in the work program was to select content on the basis of 'just in time', in terms of fulfilling the requirements of the particular rich task being prepared, rather than the 'just in case' nature of content in traditional subjects.

After the selection of the content, the next dimension in curriculum development was to consider how to scaffold or build and connect the level of the knowledge to be learnt

across the various year levels. Some curricula achieve this by providing the percentage of class time or number of hours to be devoted to the subject at each year level as a guide to school administrators and teachers in preparing their program (Australian Curriculum Assessment and Reporting Authority, 2013). Another device is to group school based curricula into Early Childhood, Basic or Primary, and Secondary. Secondary curricula can introduce Technical Vocational Education and Training (TVET) as an additional strand. Some curricula achieve scaffolding by applying the principle of backward mapping where, for example, in planning Primary curricula the initial step is to examine the Secondary curricula and work backwards ensuring that a student exiting Primary is fully prepared with the necessary prior knowledge to study the first year of Secondary. In some education systems, the Secondary curricula is backward mapped from first year university courses (Education Quality Assurance Program, 2016) and some Secondary TVET certificate training programs provide exemption for graduates in higher TVET courses after leaving school.

Curriculum pedagogy

Although pedagogy may not be specified in curriculum documentation (Scott, 2014), the curriculum outcomes or learning experiences and the forms of assessment of curriculum learning outcomes will indicate if it is student or teacher centred or a combination of both. Pedagogy in developing countries is another contested area (Schweisfurth, 2015) with research favouring the traditional teacher-centred model over the child-centred model (Guthrie, 2011; Tabulawa, 2003; Westbrook et al., 2013). In evaluating a teacher certification program in Indonesia that espoused the child-centred pedagogy, Chang et al. (2014) found that 'compared with 2007, Indonesian teachers in 2011 tended to use much more exposition' (p. 133) in their teaching practices, despite the aim of the certification being to reduce the pedagogy. The terminology used to describe the pedagogy that is inherent in a curriculum varies with the project and donor, but common terms in SIS projects include: student centred, discovery learning, active learning, project based, didactic or teacher directed, and, in the case of TVET courses, competency based. In the SIS, the rich tasks were student centred, while the formal secondary courses that were assessed by external exams were teacher centred that closely followed a set text book or subject prescription.

Curriculum assessment

Assessment is a specialist area where there must be an alignment between the assessment regime and the curriculum rationale, aims and objectives. Assessment terminology includes continuous, formative, summative, criteria referenced, standards based, normative, competency, high stakes, school based and external assessment. Assessment feedback to students is an important element of the assessment process as is the reverse case of student feedback to teacher via their assessment results (Nicol & Macfarlane-Dick, 2006). The rich task assessment regime that was employed in the SIS is an example of authentic assessment as described by Newmann, Marks and Gamoran (1996) and Sambell, McDowell and Montgomery (2013). In the Pacific, SIS have access to assessment professionals at the Education Quality Assurance Program in Suva and the Pacific Regional Education Laboratory in Hawaii. On a global scale, the World Bank provides focused student learning assessment services (Liberman & Clarke, 2011).

In the SIS the moderation process for assessment of rich tasks in the primary years was introduced. In this process, students' work is awarded a grade by the classroom teacher

based on how well the student met a standard in each of a number of criteria provided in the rubric for that rich task. Representative samples of each of the grades awarded in one school are then sent to a moderation committee for validation and alignment of grades awarded by other schools for the same rich task. Being a novel assessment strategy, moderation engaged teachers in relevant professional development and encouraged their ownership of a curriculum element.

High stakes assessment is that which has a major influence on a student's future with regard to further study or graduating from a course of study. This issue of high stakes assessment driving what is taught in schools is seen by some as distracting teachers from covering all the content of the curriculum and concentrating only on what will be in the summative assessment (Harlen & Crick, 2003) or imposing a neoliberal agenda on schools' curricula (Lingard, 2014; Thompson, 2014). However, this aspect of assessment can be managed by a process of school-based continuous assessment which does not require students to sit for a set of mandated end of year summative external exams and thus avoids the need to teach to a test. Mir, Hai Wei, Daly, & Boland (2014) can find no difference between external exams and school based assessment in predicting the likely success of students from either system in their first year university studies while Chang et al (2014) ask if teaching to the test could 'lead to better learning' (p. 140).

However, this debate on teaching to the test masks a fundamental purpose of assessment. Indeed, the literature refers to assessment not just 'of' learning, but also 'for' learning (Earl, 2013; Wiliam, 2011) and 'as' learning (Torrance, 2007) and is seen as a pedagogical tool as well as a certification process. The issue of assessment underlines the importance of the systems thinking approach in defining curriculum. As Biggs (2012) points out, an assessment program is one component of an education system and it needs to be constructively aligned with the learning objectives of the course being assessed – a view endorsed by Westbrook et al. (2013, p. 28).

Phase three: Curriculum program review and approval

The third phase of curriculum implementation occurs after the curriculum has been endorsed and trial results are available. In the SIS, the trial included production of teaching and learning materials, teacher training, resource purchases, redesigning learning environments to support the espoused pedagogy and budget support. In the third phase, the curriculum trial is formally evaluated; an assessment and certification authority established; a decision reached to proceed to either full implementation, continue the trial or abandons the project; and, if approved, the Minister is requested to introduce curriculum legislation.

Early in the curriculum renewal program in the SIS, a critical friend was engaged to monitor the curriculum development program. Three years after commencing the program a major review chaired by the critical friend was conducted. The review involved international curriculum experts who provided keynote addresses at a conference attended by the donor and ministers. The review allowed teachers to showcase their rich tasks, perform model lessons, engage in peer assessment of their work and extend their knowledge of teaching and learning. The review also provided the opportunity to reinforce the curriculum vision and for the donors to see the outcomes of their support. The review identified some areas for improvement, but overall the curriculum trajectory

was endorsed and development extended to address the needs of secondary and tertiary students.

In pragmatic political terms, any education and training curriculum, apart from any other consideration, needs to prepare a graduate for a globalised, networked, complex society and economy. On this basis, the signature of an endorsed curriculum is the acceptance of the graduates' certificate by higher education institutions or business, if not internationally, at least regionally. Instead of establishing a national certification authority to achieve this, the SIS negotiated partnerships with regional accreditation bodies. This decision was not taken lightly because a possible interpretation of such a partnership is that it is a surrender of sovereignty rather than a pragmatic recognition of globalisation. This tension of either surrendering sovereignty or retaining sovereignty and investing in a national curriculum accreditation system needs to be resolved by individual SIS; sustained funding for either alternative will be a major consideration.

LESSONS LEARNT

Despite the best efforts of curriculum designers to mandate what happens in a classroom, as Westbrook et al. (2013) found, what is in the curriculum may not be what occurs in the classroom. One response is to legislate in an attempt to ensure that the endorsed curriculum is delivered in the classroom. However, in an emerging SIS, the legislative agenda is usually very heavy and the work load of the Cabinet and parliament drafting office is dominated by urgent issues of reconstruction, conflict resolution, governance or development planning and budgeting. In the SIS' case, although the Minister accepted the draft *Bill*, it was two years later that the *Bill* was enacted.

If a national curriculum program is delivered through an aid facility, the four principles of aid effectiveness contained in the *Busan Declaration of Aid Effectiveness* should govern the program. The principles are a focus on results, partnerships, transparency and shared responsibility (OECD, 2012a). However the literature provides examples of education aid projects introducing education paradigms without regard to their goodness of fit and suitability to the culture and context (Guthrie, 2011; Nguyen, Pilot, Elliott, & Terlouw, 2009; Tabulawa, 2003; Webster, 2013, pp. 20-21) resulting, in what Pritchett and Beatty describe as, 'isomorphic mimicry' (2012, p. 48). In light of these findings, and given that the function of project planning tools, such as log frame analysis or theory of change, is to test and approve the assumptions used to justify funding links between a project activity and improved student learning (Vogel, 2012), more research is needed to improve the validity and reliability of project planning strategies (Office of Development Effectiveness, 2014; Zia, 2013). Such emerging research to determine the attribution of an activity to any learning or education improvement by a project is available (Befani, 2016; Davies, 2004; Mayne, 2008) and of relevance to SIS researchers to measure the attribution of cause and effects in small samples sizes (White & Phillips, 2012). Data on the theoretical impact of various education interventions is also available from the World Bank (Rogers & Demas, 2013) and in donor funded reports (Krishnaratne, White, & Carpenter, 2013; Westbrook et al., 2013). There is some evidence that the lessons of goodness of fit are being incorporated into education project planning (DFAT, 2014a).

In the context of foreign aid, the implications for curriculum initiatives are that some of the steps described earlier in the implementation framework are either avoided, given a minimal examination or imported from other systems. The advice of this paper is that

education is a system of which curriculum is a sub system and, as Senge (2006) emphasises, ignoring one element of a system can have a dramatic and unexpected leveraged effect on another element of the system. The lesson learnt is that, for developing education systems, each element of the system needs to be constantly evaluated so that one element does not become out of alignment with the others.

Curriculum theorists attempt to teacher-proof their prescriptions. This was attempted in this case study by adopting the development principle of ownership, crowding the curriculum with local content, providing extensive professional development and resources, providing autonomy to school principals and supporting the curriculum by legislation. However, advisors who were appointed after the curriculum program was completed, reverted to the importation of a foreign curriculum package and minimised the use of rich tasks. In 2013, UNESCO prepared an assessment report on aspects of sustainable development in SIS, finding that, in the case study SIS, in the area of education, there was a need to strengthen cultural education, including the local language, and there was a lack of environmental and health awareness programs in the schools (Deiye, Limen, Jacob, & Campbell, 2014). This is despite these topics being heavily embedded in the discarded rich tasks prepared by SIS teachers, and their writing and publishing of 20 local language readers for students in years one to three.

In concluding this case study review, the pragmatic management regime applied by the donor to the program needs to be recognised. Education aid projects are 'wicked problems' (Batie, 2008; Jordan, Kleinsasser, & Roe, 2014; Krause, 2012) where there are multiple possible responses to a problem that has multiple unrelated and unpredictable causes. Mandating performance indicators and milestones in such an environment is unlikely to be effective. Flexible management performance indicators in the monitoring and evaluation schedule of the project, with improved student learning being the dominant indicator of the effectiveness of the program, will be more effective.

LIMITATIONS

One of the limitations that a study of education in host countries has is access to reliable data (Befani, 2016; Winthrop, Anderson, & Cruzalegui, 2015). In particular, the literature is missing the voices of SIS in discussions on education with much of the direction and issues being set by larger countries (Coxon & Cassidy, 2011; McGrath, 2012; Schweisfurth, 2011; Verger, 2012). This paper aimed to provide some balance to the literature in this regard and supports the works of authors, such as Di Biase (2015a, 2015b) and Crossley and Sprague (2014), who write on education in SIS. More generally, a review of the literature of 'what works' to achieve improved learning outcomes in school students in all host countries is not at all clear (Barrett et al., 2015). This limitation in providing SIS with access to knowledge on curriculum reform or renewal in their country is confirmed by a number of systematic studies which find difficulty in generalising the results reported in the literature to other contexts (Evans & Popova, 2015; Glewwe, Hanushek, Humpage, & Ravina, 2011; Krishnaratne et al., 2013; Westbrook et al., 2013).

CONCLUSION

The curriculum is the control program for an education system that aligns the elements of content, pedagogy, assessment and certification. This paper has attempted to provide workers and officials, including Ministers, in Small Island State (SIS) host countries with a primer of curriculum theory and implementation in their context. The primer has given these stakeholders, who are the ones that will be in-situ long after the curriculum project is completed, some guidance in evaluating curriculum packages and proposals put to them. It has advised SIS governments that curriculum renewal or reform is a complex project that requires expertise not only in the four elements of a curriculum but also in systematically evaluating curriculum proposals to ensure alignment with all other elements of an education system. SIS stakeholders are faced with a further consideration in that the literature on curriculum reform and renewal in SIS is not at all clear. Ambiguities remain in regards to curriculum content, objectives, outcomes-based systems of assessment and student-centred curricula grounded in a constructivist theory of learning. The advice to education officers in SIS or aid recipient countries when negotiating a curriculum aid package is to ask this question: What is the evidence that this activity will result in improved student learning in my country?

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