Annex A1: Terms of Reference[1]

Vanuatu Secondary Schools Extension Project Phase 2
Independent Completion Report

Introduction

The Australian Agency for International Development (AusAID) will undertake an Independent Completion Report of Phase 2 of the Vanuatu Secondary Schools Extension Project (VSSEP II), its program, activities, achievements and impacts.

Background

The Vanuatu Government sees that education is the key to the development of Vanuatu people and to the economic development of the country as a whole. As a result, the Vanuatu Government spends over 23% of the national budget on the education sector. Even if Vanuatu signed the Millennium Development Goals and Education For All agreements, the Government still aims to expand access to junior and senior secondary levels of education through out the country. This expansion requires a corresponding extension of the infrastructure. The Government has sought assistance from various donors to provide some of this infrastructure.

In 1998, the Government of Australia funded a project to upgrade the Montmartre and Onesua secondary schools on the island of Efate. Project outputs enabled Montmartre to introduce a senior secondary stream (year11 to year13), and for Onesua to introduce a third stream of junior secondary as well as a single stream senior secondary class. The Project was described as the Vanuatu Secondary Schools Extension Project (VSSEP).

In 2001, Government of Vanuatu requested that VSSEP be extended to cover the upgrading of secondary schools on outer islands in order to increase access to senior secondary education. Phase 2 commenced in May 2004 and was completed at end of June 2008, it concerned 5 secondary schools: Epi High School (Epi Island), Ranwadi Secondary School (Pentecost Island), Rensarie Secondary School (Malakula Island), Tafea College (Tanna Island) and Aore Adventist Secondary (Aore Island).

The primary goal of the project was to expand senior secondary education to accommodate increasing national demand for secondary and tertiary graduates (up to 350 seats). A secondary goal was to provide increased contracting opportunity for small scale building contractors in order to develop the national construction industry.

In Phase 2, the project was intended to focus in five areas:

1. Construction of additional or upgraded infrastructure as necessary to accommodate a senior secondary program at the five selected outer island secondary schools;

1 The duration of activity was reduced to 20 days, 14 in-country and 6 in Australia.

2. Increase contracting opportunities and support for small scale building contractors through strategic packaging of building contracts and on-the-job skill transfer;
3. Manage procurement activities necessary to build and provision new facilities and facilitate the Community Partnership contracting model;
4. Strengthen the capacity of the Department of Education to manage the planning, construction management and quality control of educational infrastructure development; and
5. Effectively manage and report on Australian contributions to the project and co-ordinate activities with GoV stakeholders.

The VSSEP II project allocation was approximately $9 million of which over $6 million was to be provided for Procurement Construction and Education Materials.

Project Management and Structure

The Department of Education is the responsible government line agency for the project.

Reeves Construction Services was the managing Contractor with its Project Director based in Melbourne. The In-Country project office was based at the Department of Education's Project Implementation Unit with an International Team Leader, locally employed Finance & Administration Managers and a Procurement Manager seconded by Department of Education. The Principal Architect at Department of Education was the designated counterpart for the Team Leader.

There were three Australian Volunteer International Site Supervisors based at the school construction sites on the outer islands. The project also employed site clerks, store managers and other support personnel at the construction sites.

The Contractor managed the implementation, day-to-day management and administration of VSSEP II. The Contractor was supported by the Department of Education through its Project Implementation Unit and reported to the Project Coordination Committee (PCC) chaired by the Director General of education, the peak project decision-making body.

ICR Objectives

The objectives of the independent completion report of VSSEP II are to:

a) assess the extent to which the project resulted in the expected increase in senior secondary school enrolments in Vanuatu;
b) assess the quality of the construction and the status of maintenance of infrastructure and equipment;
c) evaluate the impact of the community contracting approach on the businesses and incomes of the participants;
d) assess the relevance, efficiency, effectiveness, impact and sustainability of VSSEP 2; and
e) identify any important lessons that can usefully inform future assistance to school or other infrastructure in the Pacific, especially Melanesia.

Scope of Services

The ICR team will:

a) Undertake preparations including reading and research of relevant documents;
b) Consult the key personnel from the contracted implementation team either by phone or in person;
c) Participate in an in-country briefing by AusAID;
d) Develop a methodology for the conduct of the ICR, for presentation to – and approval by – AusAID and the Ministry of Education;
e) Undertake in-country consultations, research and analysis in accordance with the agreed methodology;
f) Provide an aid memoire and presentation to AusAID before departure from Port Vila;
g) Prepare a draft ICR;
h) Revise and finalise the ICR on receipt of feedback from AusAID on the draft.

Main areas of investigation:

- Creation of additional places in senior secondary streams
- Quality and cost of construction approach
- Maintenance and allocation of resources
- Economic impacts on the communities

The ICR team will consult:

- Initiative implementation team, Reeves Construction
- Government of Vanuatu - key officials, education personnel (Project Implementation Team, Director General, Planning Unit, Directors, Teachers & Principals based in the schools, …)
- Students and teachers
- Community participants
- Community parents
- AusAID personnel at post
- Other donors in the sector

Approach Methodology, Duration and Phasing

[Note: Actual times allocated to the team were less than indicated here. 14 days were allowed in-country, and 6 days post-visit, for a total of 20.]

The methodology will be developed in detail by the team on mobilisation, and agreed in consultation with AusAID and the Ministry of Education.

The indicative duration for the ICR is as follows:

a) The team will be given two days pre-mission preparation during which time the Team Leader will convene a virtual team meeting in order to have a preliminary discussion of the methodology and approach to the mission.

During that time, the team will be provided with background documentation for reading and research

b) On arrival in Vanuatu the team will participate in a briefing from AusAID. Up to 20 days will be allowed for the team in country, depending on the final agreed methodology. After a few days, the team will present a proposed methodology for the community impact evaluation and will commence field work at the end of the first week

c) The team will have up to two days for in Australia consultations with AusAID Headquarters and the implementing contractor: Reeves' Construction.

d) The team will have up to five days additional input (to be used according to the areas requiring amendment) after submission of the draft ICR in order to make any necessary changes in response to AusAID feedback.

The total elapsed time for the ICR is therefore 29 days, plus the time required for AusAID to comment on the draft ICR and for the team to finalise the report.

The complete estimated phasing is as follows, noting that the methodology developed by the team during the first days of the mission may lead to adjustments:

Pre-mission preparation	**2**
In Vanuatu mission	
Port Vila	5
School sites (5 sites for 3 days each)	15
AMC consultation & AusAID consultation in Australia	2
Reporting writing	5
Total inputs (days)	**29**

Team Specification/ composition

A team of at least two, and up to four, international specialists is required. The team must, between them, include the following skills and experience:

- Expertise in secondary school education in the Pacific;
- Skills in supervising, managing and assessing school infrastructure projects in a developing country context;
- Experience with community contracting approaches to infrastructure development and/or maintenance;
- Expertise in conducting community impact assessments, preferably in the Pacific;
- Evaluation skills;
- Preferably Bislama language skills

The team will also include a local community development consultant who will focus primarily on the community impact study, but who will also assist the team throughout the mission.

One member of the team will be designated as the Team Leader.

The Team Leader will manage all aspects of the team's work, ensure objectives are met and all activities are completed in the agreed timeframes. In addition, the Team Leader will:

a) Coordinate communication with AusAID and other stakeholders during the mission;
b) Direct the coverage and coherence of the final report;
c) Provide leadership in the discussions, and strategic and conceptual guidances;
d) Draft sections of the report and take overall responsibility for the content of the report (in consultation with the rest of the team), and take responsibility for re-drafting as required; and
e) Lead the presentation of key findings to AusAID and the Ministry of Education.

Team Members will:

a) Participate fully in the mission according to their areas of expertise and responsibility;
b) Draft sections of the report in accordance with agreed timeframes;
c) Contribute to any necessary redrafting of the report.

Reporting requirements

The team will provide the following reports:

a) An aide memoire and presentation to the AusAID initiative manager and First Secretary summarising the key findings of the mission, before departing from Vanuatu;
b) A draft Independent Completion Report, in keeping with the attached interim guidelines for AusAID ICRs, no more than one week after completion of the in-country mission; and
c) A final ICR no more than one week after receiving AusAID feedback on the draft report.

Reports must be provided in electronic format compatible with MS Office.

ATTACHMENT:

The Independent Completion Report (ICR) – Interim Guidelines

Purpose

The ICR is the initiative-level bedrock of AusAID's evaluation system for accountability and learning lessons. ICRs are heavily relied upon in preparation of analyses such as Annual Program Performance Updates and Country Strategy Reviews.

An ICR should be a stand-alone document that can be read by an outsider without ready access to the CR.

The ICR's target audience is the community of professionals implementing Australian aid, all of whom need credible, independent advice on the results of past efforts. This community includes such stakeholders as AusAID staff and management, counterpart governments, contractors, multilateral organisations, other donors, NGOs and universities. Accordingly, ICRs are published electronically.

Who prepares and method

The ICR team must be independent of the initiative. Ideally the team - generally of two - should not include any members who have had any past involvement with the initiative, including as TAG members.

Key skills for the team collectively might be:

- impact assessment from relevant technical, social, economic and financial perspectives
- consultative skills and participatory research methods
- critical thinking, broad analytical and research skills, and report writing

Where possible, appropriately skilled independent AusAID staff should be part of the ICR team. However, if it is not practicable to include a suitable AusAID employee (for example, due to time constraints), the ICR should proceed with a team of consultants rather than be postponed.

Generally the ICR process will involve a field visit. An ICR field visit should not have to duplicate the function of basic gathering of performance information, which is the responsibility of the delivery organisation. Rather, the visit should be question-based and research-oriented. It should focus on checking the key assumptions and methodological risks apparent in the evidence and analytical base of the CR; and in gathering and analysing new, additional data (qualitative or quantitative) when there is a real value in this being done by the independent team.

Serious consideration should normally be given to an in-country workshop of all key stakeholders, around the time of initiative completion. Participants should include the initiative team, beneficiary representatives, key counterpart officials, relevant AusAID staff (ie Initiative Manager), members of any Technical Advisory Group (TAG) or other quality assurance or advisory mechanism, and possibly other donors working in the same sector or country.

Main steps for an ICR

- The Initiative Manager prepares Terms for Reference and selects team members. Advice should be sought from managers, colleagues, sector advisers, the TAG or equivalent if there is one, and ODE.
- The draft ICR should be submitted to the Initiative Manager and distributed for comments from relevant peers and experts including ODE (and also advisers, TAG, delivery organisation, others as useful) within six weeks of the final CR.
- The final ICR should be submitted within two weeks of receiving the consolidated comments to the draft
- The Initiative Manager arranges translation if necessary, distributes the final ICR and records the quality ratings from the report in AidWorks as the final "quality at exit" assessment of the initiative

Distribution

The Initiative Manager is responsible for distribution of the final ICR, which in addition to hard copy filing and attachment to the AidWorks initiative should include:

- Relevant AusAID staff, particularly the Canberra Assistant Director General, senior A-based officer at Post and the Office of Development Effectiveness
- IRSU (AusAID Library)
- Relevant counterparts (eg implementing agency and aid coordination agency)
- Other Australian government agencies with an interest in the sector and/or country
- Other interested stakeholders as relevant (eg other donors, NGOs)
- Publication on the AusAID website (arranged by referral to PAG)

Contents

The ICR should be 25 pages or less plus attachments. The Executive Summary should be a short document that can be read in isolation if necessary. The CR should not be attached. The focus of the ICR will depend to a significant degree on the judgement and skills of the ICR team.

Overall, the approach and content of the ICR should resemble that of an ex-post evaluation. Attention should be paid to good practice principles for conducting such evaluations, particularly the DAC Criteria for Evaluating Development Assistance.[2] However, the relatively rapid methodology of the ICR should be remembered and expectations kept at an appropriate level.

The ICR should have the following format (refer to the discussion of the CR for explanation of some of the section titles):

a) Title page

b) Table of contents

c) General information

d) Basic activity data

e) Executive Summary

- This should be aimed in part at reviewers reading a large number of ICRs relating to one particular sector or country. The Executive Summary should include a summary table along the following lines:

Initiative title: XXXXXXXXXXXXXXXX and AidWorks ID	
Country/region and province/district if applicable	Primary sector of initiative
Date initiative commenced	Main Country Strategy Objective contributed to
Date initiative complete	Form of aid
Initiative cost to Australia	Final initiative quality rating
Total initiative cost	Economic rate of return or similar, if available

2 http://www. oecd. org/document/22/0,2340,en_21571361_34047972_2086550_1_1_1_1,00. html

Initiative title: XXXXXXXXXXXXXXXX and AidWorks ID	
Delivery organisation	ICR authors and their organisations
Counterpart organisation	Contact AusAID employee

f) Method

- Assumptions and possible biases of the ICR team and limitations of the method
- Discussion of the key questions and "reality checks" to be pursued in the ICR, arising from the consideration of the CR and other key initiative documents
- Sources of evidence and types of analysis used to answer those questions

g) Relevance

h) Effectiveness

i) Efficiency

j) Impact and sustainability

k) Overall quality

- The author(s) needs to provide ratings, on the standard AusAID six-point scale, of the quality of the initiative. These will be compared with ratings made earlier by AusAID at different stages of its cycle. The final ratings incorporate some of the issues discussed above (effectiveness, efficiency, etc) but are intended to primarily measure the quality only of initiative delivery. The quality ratings are not designed to be a summary of the evaluation role of the completion report. The ratings to be given are:
    1. To what degree did the initiative achieve its objectives, and how well did they contribute to higher level objectives in the program strategy?
    2. How robust was the system to measure ongoing achievement of objectives and results?
    3. How effectively was the initiative managed? To what degree did it provide good value for money?
    4. How appropriate is the sustainability of the initiatives outcomes?
    5. Was the initiative of the highest technical quality, based on sound analysis and learning?

Definitions of Rating Scale

Satisfactory (4, 5 and 6, above the line)

6 Very high quality

5 Good quality initiative; could have improved in some areas with minor work

4 Adequate quality initiative; could have improved with some work

Less than satisfactory (1, 2 and 3, below the line)

3 Less than adequate quality initiative; needed improvements in core areas

2 Poor quality initiative; needed major improvements in core areas

1 Very poor quality initiative; needed a major overhaul

l) Lessons learned

m) Overall conclusions

n) Attachments

- Initiative logframe or equivalent planning/monitoring document, unless already included in the body of the text under “Effectiveness”
- Final cost summaries (component, actual against budget, against cost categories such as fees, training, equipment, construction, etc, for each year)
- Initiative reports - list of all significant reports prepared during the initiative
- Completion Report working papers if applicable (eg cost/benefit analysis, survey documentation)
- Capacity building - summary of individuals and organisations that have had capacity built by the initiative and the means used
- Any other attachments necessary to support the discussion in the main body of the report eg details of analysis or evidence collection
- References

Annex A2: Methodology

Vanuatu Secondary Schools Extension Project Phase 2
Independent Completion Report

AusAID requires that an Independent Completion Report (ICR) be prepared for all projects with expenditure in excess of $3 million. It is not intended that the ICR duplicate preparation of the contractor Completion Reports (CR) – rather the ICR should independently seek to check and verify the assessment provided in the CR and identify and address any information gaps.

A team of two international consultants and one local specialist will undertake the ICR. The team, that included, comprised from David Week, team leader, infrastructure and strategy specialist, Mihaela Balan, M&E specialist and Abel Nako local education and community development specialist, provide a mix of skills and experience and expertise in (1) secondary school education in the Vanuatu; (2) supervising, managing and assessing school infrastructure projects in a developing country context; (3) experience with community contracting approaches to infrastructure development and/or maintenance; (4) expertise in conducting community impact assessments; and (5) strong evaluation skills. Two of the team speak Bislama.

A Managing contractor Completion Report has been prepared for VSSEP II. The ICR will provide an overview of the relevance, efficiency, effectiveness and impact of the VSSEP II and identify lessons that can be applied to the design and implementation of similar programs in the future.

While the ICR will draw much of its analysis from secondary sources, particularly contractor reports, it will be important to reinforce and validate this information in consultation with the key VSSEP II stakeholders. The Australian Managing Contractor (MC) has undertaken considerable consultation with local stakeholders in the preparation of its Activity Completion Reports (ACR). Nevertheless, there have been some gaps and inadequacies in the analyses, and little in the way of an overall evaluation of the project economic and social benefits. Therefore, the team sought to validate and extend the ACR through interview of as many stakeholders as practicable.

There are a large number of stakeholders in the VSSEP. These include:

- MoE management and officers, school principals, students, parents, working groups/committees, national agencies;
- Activity participants involved in the construction, training, etc;
- AusAID management and desk officers;
- The managing contractor, Reeves Construction, responsible for the management of project;
- Sub contractors, both Australian and Vanuatu, government and private, or community groups responsible for the implementation of project.

The preparation of the contractor Activity Completion Report has involved extensive stakeholder consultation with all stakeholder groups. It is not cost, resource or time effective for the ICR team to duplicate this process or conduct face-to-face

consultations with all stakeholders. The ICR proposes the following stakeholder consultation process based on TORs:

- Two-week field mission to Vanuatu to meet with VSSEP II representatives, MoE, principals, students, subcontractors, ni-Vanuatu, Working Group participants, the AusAID Post in Port Vila, other donors, supporting VSSEP II partners based in Vanuatu, and other Government agencies involved in VSSEP II activities
- Meetings and/or telephone interviews with the Managing Contractor.

The table below lists the key VSSEP II stakeholders, and the timing of these consultations.

STAKEHOLDER COVERAGE **Stakeholders**	**AN**	**Who?** **DW**	**MB**	**Where**
Government of Vanuatu				
PCC (John Gideon)	o	o	o	Port Vila
Department of Economic and Strategic Management		o		Port Vila
Facilities and Assets Unit		o		Port Vila
MOE (DG)	o	o	o	Port Vila
Provincial Education Officer	o			Port Vila
Directors of Education, Corporate Services	o	+		Port Vila
Provincial Maintenance Officer		o		Trip
School: Principal and Teachers				Trip
VEMIS			o	Port Vila
Local Communities				
Village heads	+		o	Trip
School councils	+		o	Trip
Parents	+		o	Trip
Students	+		o	Trip
Small contractors		o		Trip
Workers		o		Trip
Suppliers (concrete block, transport)		o		Trip
Maintenance?		o		Trip
Private Sector				
Contractors, including small scale (*)[3]	+	o	+	Port Vila
Suppliers: WILCO (*)	+	o	+	Port Vila
Shipping companies (*)	+	o	+	Port Vila
Local engineers and architects? (*)	+	o	+	Port Vila
Managing Contractor				
Reeves		o		Melbourne

3 (*) This meeting did not take place, because the interactions between the MC and these entities were fairly standard, and meetings would have been of low value compared with time spent on other stakeholders. In the case of AVI, all key staff involved had left the organisation.

AVI (*)		o		Melbourne
Funders				
AusAID	o	o	o	Port Vila
Other donors	o	o	o	Port Vila

Checklists of questions will be developed to guide discussions and informal interviews with each stakeholder group. A simple questionnaire will be drafted and discussed with MoE, school principals and students to collect information from VSSEP participants.

In addition the team will:

- Develop a list of sub-contractors and community members from which to commence consultations in the islands
- Review a selection of AMC quarterly reports relevant to consultations in Vanuatu and Australia
- Develop checklists of questions to guide consultations with each stakeholder group
- Develop initial drafts of the questionnaire to survey VSSEP II participants
- Develop a simple questionnaire for collecting perspectives from AusAID Post

In addition to consultations and simple survey approaches outlined above, the ICR will seek to assess the quality of selected VSSEP outputs. Key documents produced and facilities built will be reviewed. Other stakeholders will also be consulted for their opinions on the quality and appropriateness of key VSSEP outputs, schools and facilities built.

Annex A3: Persons Interviewed

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Date 2009	Department/ Persons Interviewed	Position	Location
Office of the Director General			
25 May	Daniel Lamoureaux	Director General	DG Education Office
Department of Educational Services			
04 June	Roy Obed	Director Educational Services	MOE
		PEO Secondary	
05 June	John Niroa		MOE
Department of Policy & Planning			
25 May	John Gideon	PEO Projects	MOE
26 May	Bob Nikaih	Head of Unit & Chief Architect	MOE
		Facilities and Implementation Unit (FIU)	
	Richard Rahuban	Senior Foreman, FIU	MOE
	Tony Benjamin	Purchasing Officer, FIU	MOE
	Tim Ethridge	Advisor, FIU	MOE
05 June	Alexis Hoyaux	Advisor, VESAP	MOE
	Gervais Salabert	Advisor, Language Policy	MOE
Provincial Education Offices			
30 May	Veriki Taferua	PEO Tafea Province	Isangel Tanna
05 June	Richie Robert	PEO Shefa Province	MOE
02 June	Renjo Samuel	PEO Malampa	Rensari Malekula
05 June	Helen Vusilae	PEO Penama	MOE
05 June	Tao Bles	Acting PEO Sanma	MOE
AusAID			
25 May	Nick Cumpston	Counsellor AusAID	AusAID
	Gordon Burns	First Secretary AusAid	AusAID
	Christelle Thieffry	Senior Program Manager	AusAID
	Pamela Carlo	Program Officer	AusAID
05 June	Leith Viremaito	Program Manager GFG	MOE
	Freya Beaumont	Transport Sector Coordinator	MOE
Other Gov't Depts			
26 May	Thomas Banga	Sector Analyst	DESP
NZAID			
26 May	Angela Hassan-Sharp	First Secretary	NZAID Port Vila
European Commission			
26 May	Elena Gimenez-Beltran	Expert in Cooperation & Development	NZAID
	Rogier van 't Rood	Edutrain Evaluator	Sebel Hotel
School Communities: Aore Adventist Academy			
02 June	David Rogers	Principal, Aore Adventist Academy	Aore
	Alastair MacCilliveray	Manager Aore Vocational School	Luganville
03 June	Ian Manu	Supervisor, Community Work Groups	Luganville
	Morris	Local Contractor	Luganville
26 May	Tom Tara	Sub-Contractor	MOE

School Communities: Ranwadi High School			
28 May	Silas Bule	School Principal	Ranwadi
	Silas Tabi	Deputy Principal	High School
	Alosio Bule	Local Businessman	PENTECOST
	Steven Toa	Teacher	
	Ray Tabi	Handiman	
	Lingban Arsene	Teacher	
	Matietta Pakoro	Teacher	
	Fiona Nelson	Teacher	
	Graham Bule	Teacher	
	Darren Bule	School Librarian	
	Albert Bule	Teacher	
	Lois Mabon	Teacher	
	Charles Bani	Teacher	
	Stewart Wari	Pastor/Chaplin	
	Rolland Mabon	School Nurse	
	Venneth Bule	School Bursar	
	Nicholson Bule	School Boarding Master	
	Ray Tabi	Gardener	
	Joachim Tabi	Community Chief	
	Shadrack Sali	Pastor/Church Village Elder	
	Zaccheus Tabi	Builder	
	Ron Tabi	Community Chief	
	Isaiah Tabi	School Council Member	
	Kenneth Tabi	Chief & Land Owner	
	Resis Tabi	Land Owner/	
	David Bule	Gardener	
	Ken Tabi	School Cook	
	Vakah Bule	Farmer	
	Jackson Tabi	Farmer	
	Nancy Bule	Housewife/ Painter	
	Joyce Tabi	Housewife /Painter	
	Joslyn Marbon	Housewife /Painter	
	Bessy Sali	Gardener	
	Tania Matan	Student/prefect	
	Janeth Vira	Student/prefect	
	Martha Bebe	Student/prefect	
	Jenita Tavoa	Student/prefect	
	Dorian Marbon	Student/prefect	
	Jefflyn Tarinako	Student/prefect	
	Shem Tangwale	Student/prefect	
	Niko Shaun	Student/prefect	
	Jandy James	Student/prefect	
	Dickson Tari	Student/prefect	
	Douglas Maki	Student/prefect	
	Peter Sewen	Student/prefect	
School Communities: Rensari Secondary College			
01 June	Mishael Garaelulu	Principal	Rensari
	LouisTavunwo	Deputy Principal	Secondary
	Cyriaque Kaln	Teacher	College
	John Knox Tolish	Teacher	MALEKULA
	Jonathan Sesai	Chairman School Council	
	Louis Malapa	Driver	
	Fred Vinock	Handyman/Landowner	
	John Sandy	Chief/Driver	
	Jules Sewere	Local Contractor	
	Kalveh	Farmer	
	Paul Johnny	Landowner/Donated coral and sand	
	Kalpin Sairas	Labourer	

School Communities: Epi High School			
27 May	Avusa Morsen Yonsen Savo Makin Valia Tasso Welawo Willie Graham Katherine Ligo Rinnie Johnson Morrison Valia John Valia Keith Apia Nok Zebbedy Jack Fred Peter Ronga Elder Jimmy Allan	Principal Teacher Teacher Owner Bungalows Chairman Council of Chiefs Painter Supervisor/ Painting Chief/ supplied coral & sand Purchasing Officer Builder soakaway Subcontractor/Builder Vice Chairman of School Council/Builder School Bursar School Council Chairman	Epi High School EPI
School Communities: Tafea Secondary College			
29 May	Georges Noel Tom Kuhai Nako Navvi Namumanian Frank Jerome Nago Charlot Naho Jokasai Jimmy Tom Tasa Juliano Bule David Tangap	Principal Deputy Principal Chief/Gardener Chief/ Gardener Gardener School Mechanic School Baker Subcontractor/ Builder School Handiman Chairman, Task Force	Tafea Secondary College TANNA

Annex A4: Secondary School Enrolments, Vanuatu and the 5 VSSEP Schools

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	Gender	Female									
	Enrol		**Survey Year**								
	SchoolTypeCode	**Level**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Vanuatu	**Secondary School**											
	Junior Secondary	Year 7	976	981	1071	1199	1359	1226	1148	905	523	523
		Year 8	820	855	989	1091	1257	1227	1153	1206	739	739
		Year 9	779	796	914	988	1107	1035	1059	1128	1504	1501
		Year 10	645	650	774	856	965	916	972	1019	1035	1029
	Senior Secondary	Year 11	340	340	441	494	658	651	670	770	862	862
		Year 12	258	258	323	367	549	551	593	590	593	593
		Year 13	78	78	83	108	150	192	234	251	318	318
		Year 14	17	17	17	32	36	25	19	31	63	63
	SS Total		**3913**	**3975**	**4612**	**5135**	**6081**	**5823**	**5848**	**5900**	**5637**	**5628**
	JS		3220	3282	3748	4134	4688	4404	4332	4258	3801	3792
	Snr Sec		693	693	864	1001	1393	1419	1516	1642	1836	1836
5 VSSEP Schools												
	Aore		50	50	50	50	50	41	67	83	44	64
	Epi		0	0	0	0	0	0	0	43	46	30
	Ranwadi			0	49	49	49	49	56	73	87	111
	Rensarie		20	20	61	61	61	35	17	46	54	60
	Tafea		0	0	17	17	17	32	28	35	28	41

	Gender	Male									
	Enrol		**Survey Year**								
	SchoolTypeCode	**Level**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Vanuatu	**Secondary School**											
	Junior Secondary	**Year 7**	**933**	**990**	**1125**	**1235**	**1392**	**1255**	**1085**	**799**	**487**	**487**
		Year 8	**887**	**917**	**1005**	**1127**	**1280**	**1181**	**1138**	**1133**	**683**	**682**
		Year 9	**769**	**792**	**871**	**966**	**1094**	**1091**	**1062**	**1168**	**1548**	**1546**
		Year 10	**702**	**709**	**873**	**922**	**1027**	**973**	**991**	**1004**	**1009**	**1006**
	Senior Secondary	**Year 11**	**394**	**394**	**449**	**498**	**766**	**752**	**792**	**869**	**891**	**888**
		Year 12	**269**	**269**	**298**	**345**	**528**	**555**	**571**	**623**	**758**	**758**
		Year 13	**91**	**91**	**96**	**107**	**155**	**214**	**247**	**245**	**304**	**304**
		Year 14	**13**	**13**	**13**	**33**	**36**	**39**	**23**	**37**	**44**	**44**
	SS Total		**4058**	**4175**	**4730**	**5233**	**6278**	**6060**	**5909**	**5878**	**5724**	**5715**
	JS		3291	3408	3874	4250	4793	4500	4276	4104	3727	3721
	Snr Sec		767	767	856	983	1485	1560	1633	1774	1997	1994
5 VSSEP Schools												
	Aore		50	50	50	50	50	45	36	78	75	67
	Epi		0	0	0	0				33	43	35
	Ranwadi		0	0	52	52	52	52	73	75	58	68
	Rensarie		16	16	46	46	46	45	24	47	58	79
	Tafea		0	0	9	9	9	20	19	45	31	44

	Gender	(All)									
	Enrol		Survey Year									
	SchoolTypeCode	Level	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Vanuatu	**Secondary School**											
	Junior Secondary	Year 7	1909	1971	2196	2434	2751	2481	2233	1704	1010	1010
		Year 8	1707	1772	1994	2218	2537	2408	2291	2339	1422	1421
		Year 9	1548	1588	1785	1954	2201	2126	2121	2296	3052	3047
		Year 10	1347	1359	1647	1778	1992	1889	1963	2023	2044	2035
	Senior Secondary	Year 11	734	734	890	992	1424	1403	1462	1639	1753	1750
		Year 12	527	527	621	712	1077	1106	1164	1213	1351	1351
		Year 13	169	169	179	215	305	406	481	496	622	622
		Year 14	30	30	30	65	72	64	42	68	107	107
	SS Total		**7971**	**8150**	**9342**	**10368**	**12359**	**11883**	**11757**	**11778**	**11361**	**11343**
	JS		6511	6690	7622	8384	9481	8904	8608	8362	7528	7513
	Snr Sec		1460	1460	1720	1984	2878	2979	3149	3416	3833	3830
5 VSSEP Schools	**5 schools TOTAL**											
	Aore		100	100	100	100	100	86	103	161	119	131
	Epi		0	0	0	0	0	0	0	76	89	65
	Ranwadi		0	0	101	101	101	101	129	148	145	179
	Rensarie		36	36	107	107	107	80	41	93	112	139
	Tafea		0	0	26	26	26	52	47	80	59	85

Jr Sec	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
5 VSSEP2 schools										
Aore	87	87	87	87	87	87	60	31	56	NA
Epi	79	79	79	79	79	72	75	75	100	NA
Ranwadi	132	132	101	132	132	132	144	110	117	NA
Rensarie	120	120	120	120	120	90	48	87	133	NA
Tafea	77	77	77	77	77	61	43	43	99	NA
TOTAL	**718**	**718**	**718**	**718**	**718**	**442**	**370**	**346**	**505**	

Annex A5: Distribution of boys and girls in VSSEP schools and in Vanuatu senior secondary schools overall

Vanuatu Secondary Schools Extension Project Phase 2 Independent Completion Report

Enrol		Survey Year					
SchoolTypeCode	Level	2004	2005	2006	2007	2008	2009
Senior Secondary							
% Girls in senior secondary education							
5 schools TOTAL							
Aore		50%	60%	62%	52%	38%	48%
Epi		54%	46%	46%	57%	52%	46%
Ranwadi		49%	49%	43%	49%	60%	62%
Rensarie		57%	44%	41%	49%	48%	43%
Tafea		65%	62%	60%	44%	47%	48%
% Boys in senior secondary education							
Aore		50%	40%	38%	48%	62%	52%
Epi		46%	54%	54%	43%	48%	54%
Ranwadi		51%	51%	57%	51%	40%	38%
Rensarie		43%	56%	59%	51%	52%	57%
Tafea		35%	38%	40%	56%	53%	52%
Vanuatu Average Senior Secondary Education							
% Girls		48%	48%	48%	48%	48%	48%
% Boys		52%	52%	52%	52%	52%	52%

Annex A6: New Designs for the Comprehensive High School

Vanuatu Secondary Schools Extension Project Phase 2
Independent Completion Report

New Designs for the Comprehensive High School: From Concept to Practice

George H. Copa and Bruce A. Jilk

Introduction

This paper is presented in two parts, each developed by one of the above authors. The first part describes the design process used to create the learning specifications for New Designs for the Comprehensive High School and introduces the learning specifications themselves. More depth of description of the learning specifications and their rational can be gained form the reports noted in the bibliography at the end of the paper.

The second part of the paper will deal with translating the learning specifications into the design of a supportive learning environment. The features of the learning environment, including learning technology, begin to suggest in very concrete ways the recommended changes needed for effective 21st century high schools.

The Design Process and Learning Specifications

Prepared by George H. Copa

This research and development began in January, 1991, and was funded by the U.S. Department of Education through the National Center for Research in Vocational Education, headquartered at the University of California, Berkeley; the work was done in the College of Education and Human Development at the University of Minnesota site of the Center. The initial development work was completed in December, 1992, with continued refinements made as New Designs for the Comprehensive High School is the focus of presentations, workshops, and technical assistance to schools which are implementing the design concepts. We have had an opportunity to present to a wide diversity of professional and lay groups. In the last twelve months, invited presentations have been made to the American Association of School Administrators, the Council of Educational Facility Planners, School Business Officials International, the American Institute of Architects, the National School Board Association. We've made presentations to international audiences in Canada and Australia. We also have directed workshops for several schools systems and state education agencies. Schools drawing on the New Designs concepts are now under construction in Newport News, Virginia; Janesville, Wisconsin; Chaska and Apple Valley/Rosemont/Egan, Minnesota; Kennewick and Bellingham, Washington; West Des Moines, Iowa, and also the Washington DC public schools.

The Design Process

When this work was started, a National Design Group was brought together to guide the effort. To give them some freedom in their thinking, we introduce what was called a ‘design assumption’ as an orientation. The assumption was a quote from a book On Becoming a Teacher by Jonathan Kozal:

"Public schools did not exist forever, they did not come out of the forehead of a Greek or Roman God, they were contrived by ordinary men and women and for just this reason they can be rebuilt or reconceived, dismantled, or replaced not by another set of Gods by plain men and women. You and I leave school as it is, can change it slightly or turn it inside out and upside down."

This statement gives permission to think about high schools very differently.

We have moved from the agricultural age, to the industrial age, and now to the information age. Yet, you can walk into a high school today, almost any place in the United States, and won’t be surprised in terms of the way the place is built, the way it is organized and structured, and the way that it operates. In a sense, we are trying to give birth to major reforms in education and are constrained by an outdated operating system and building design.

When we started this work and brought our Design Group together for the first time, the first question they asked us was: "What is the problem you are trying to fix, as you think about new designs for the high school?" We identified three problem areas. The mismatch of school and life, inequity in educational opportunity, and the increasing demand for schools effectiveness.

First, concerning the mismatch of school and life, those who have studied the contrast of life inside of school and life outside note that: - in school we work individually and outside we work in small groups and teams; - inside we work with well defined problems, outside we work with problems where we have to decide what the problem is, and it is usually messy and ill-defined; - inside school we work with paper and pencil, outside of school we work with all kinds of tools and equipment; inside of school we consult the textbook for the answer to problems, outside of school, while we might turn to a book for answers.

Young people have noticed this contrast between life in school and life outside. And, they are beginning to wonder about the meaningfulness of school and whether or not they should put their motivations into this place. In this context, too large a group of young people have dropped out of high schools in the United States. Another group is staying in, but they are "putting in their time" for mainly the social reasons.

The second problem area that we needed to address in New Designs is inequity in educational opportunity. In most high schools in the United States, you can find inequity in educational opportunity among students. By operating schools in ways that allow this inequity to exist, we are losing the talents and full potential of a whole lot of young people to our communities. And, if you look where our investments are now going, education is losing funding increases to prisons and crime prevention, to often for the same students for which the school held low expectations and provided weak educational opportunities. If we are going to redesign high schools for the 21st century, we

have to deal in a very substantive way with the inequity of educational opportunity we find in each school.

The third problem area addressed was the need to improve school effectiveness without increasing costs. The expectations of the public for school performance are going up, and resources are constant at best. What do you do in a situation like that? One solution is to consider doing things in very different ways.

Our thinking is that designing high schools for the 21st century is an educative process. We cannot simply look at the last new high schools that were built in the area and hope to get by with minor modifications. We must go through a serious educative process to figure out new designs. The resources for the design process will include a review of the latest educational research and cutting edge professional practice in schools throughout the world. The design process must be a learning process where the designer, the community, and the school staff work together and learn, if you will, to uncover and discover new ways to design the high school learning experience and environment. In our design process we carefully reviewed the many government sponsored and commissioned reports suggesting needed changes to improve high schools in the United States. The process also involved group interviews with students, teachers, and school administrators, each as separate groups. The interviews that were conducted as part of New Designs were held in cities including Atlanta, Detroit, and Los Angeles. In each place we convened a small group of students, 7 or 8 or 9, and talked to them about learning and about the school environment and about the staffing and the relationships that would best support them in the learning process. We talked through with them what it was like when learning was really occurring, when they could feel it, when they could see it, how was it organized, what resources were there, what was the environment like and so forth. Students often commented on this experience as being the first time anybody had seriously talked with them about school design. If we want students' motivation, their energy in the school, we are going to have to figure out their needs and wants and how to be more responsive. Conversations with students is one of the ways to get new and relevant ideas for school designs.

In each of the cities noted above, we held similar meetings with teachers and with school administrators. We also composed a National Design Group made up of stakeholders in the high school that included a chief state school officer, researchers, school administrators, counsellors, academic and vocational teachers, and business and labour representatives. All of the above were the ingredients in the design process for New Designs for the Comprehensive High School.

In addition, we looked historically in the United States from the time high schools began to review the major changes, the reform initiatives, and what could be learned from these experiences so that we did not reinvent the past. We wanted to make sure that if we did recommend some of concepts and idea from the past, we were building on strengths and avoiding limitations. We also noted that the performance of high schools in the United States are no longer being compared with the schools in the next-door community. They are being compared internationally. With this in mind, we examined high school

change initiatives in six other countries: Australia, France, Germany, Japan, Sweden, and Great Britain. What are the changes they are making? Why these changes? What problems are they encountering in their high schools? What could we learn from each country about designing future- oriented high schools in the United States?

The Design Vision

A very brief presentation is made of the key points in the vision that we had for the learning experience and school design in New Designs for the Comprehensive High School.

The first key point is that we wanted the design to represent the leading edge of a wedge of a new breed of schools in a way that would create some new 'space' in which to think about the operation of high schools. Perhaps high schools in the United States are as good as they can be in the current way that the schools are designed and operated. There is a real need to think about design and operation in some very different ways if we are to improve effectiveness without increasing costs. The Carnegie unit as a framework for learning time, the department structure for organising staff, and the nine month school year all represent confinements on thinking about high school operation and supporting designs.

Second, we wanted to break through some of the traditional educational practices where they were standing in the way of progress to school effectiveness and efficiency. Some of these practices have already been noted above. We have new high schools opening in the United States today that have academic and vocational wings. At the same time, we are spending millions of dollars to integrate the curriculum knowing that the split of academic and vocational forces young people to make choices between these two areas when they need both for a bright future. We're opening schools in the United States today where if you are not a student or a teacher, counsellor, or administrator, there is no place for you to comfortably be in the school. At the same time we are introducing major new initiatives that call for closer collaboration and partnership with the community as being essential to improving school effectiveness. These are some of the current educational practices from which we need to break.

Third, more and more schools and states across the country are promising the idea of a common set of learner outcomes for all graduates. Conversations with school administrators and board members in these schools and states suggest they are getting very nervous about what it is going to take to deliver on the promise of a common set of learner outcomes for all students. Think about it. The guarantee of a common set of outcomes for all students. That's not what we have in high schools across the United States today. My projection is that we can not deliver on this promise the way high schools are currently organized and operated. Schools that are going to deliver on the promise of a common set of outcomes for all students will very likely have to look different than the schools we have today. For example, these schools will need to believe that a student can learn the same thing in a variety of subject matter areas or in a variety of settings. If the student needs to learn problem solving, the school will recognize that it could be learned in an art class or a

business class or a science class. None of these subject matter areas has the ‘corner of the market’ on teaching problem solving.

Fourth, the design vision is that learner outcomes are closely related to the challenges and opportunities in work, family, and community life. So, rather than starting with a curriculum that is modelled on the university or based on the latest textbooks, the challenges is to begin to sort out what are the important challenges and opportunities that young people are going to face, they either are facing now or will in the future in work, family, and community settings, and then began to work backwards and see what curriculum makes sense. That is a new way to approach curriculum design and not the typical way we go about planning the high school learning process. And, it would take some courage; but, if we want to reconnect the school and life for young people, we will have to take this approach seriously.

Fifth, the new high school needs to operate as a learning community. When we talked with folks in high schools across the United States, one of the major concerns is they wanted the school to have a greater sense of caring, of common and high expectations, of attachment and ownership for their high school. Those are characteristics that we can’t command anybody, whether youth or adult, to give us. We can not make anyone do them; they are attributes given when there is a feeling of being trusted and cared for and so forth. And one of the places where this happens is where there is a strong sense of community. So we decided that somehow the sense of community must be strengthened in new school designs.

Sixth, we want a high school where there is a close alignment among the learner outcomes, leaning process, learning organization, and the learning environment. The importance of the idea of alignment or coherence within the school comes from the work on total quality management and continuous quality improvement as applied in the private sector and increasingly in the public sector. The assumption is that if we want quality and effectiveness and efficiency, internal alignment and coherence of operation is needed. Aims and processes have to fit together. Many high schools, particularly large high schools, do not fit this pattern. Too often there are many things going on and they are going in several different directions; they do not form a consistent and coherent pattern. We are recommending a design process that will result in much more alignment and coherence in the operation of high schools, resulting in increased quality and efficiency.

Seventh, the attention in a New Designs school is on learning (in contrast to teaching). Much of the current high school environments seems to be first a teaching environments. It is largely classrooms, set up for an adult with twenty to thirty young people; the teacher stays in the room and young people move around on a bell system. What would happen if you begin to reverse these roles and make the learners the center of attention.

Eight, we want the school to have a special character that gives focus, coherence, and spirit to learning. This concept draws on the school effectiveness literature and from the experience of private schools where it is suggested that one of the things that contributes to quality and high performance is a sense of specialness. And, everybody in the school knows what this specialness is from the janitor to the students, teachers,

administrators, the school board. It is a uniqueness that permeates all that goes on at the school. In the typical comprehensive high schools across the United States, it is very difficult to detect a specialness from one school to the next. About the only thing that distinguishes one school from the other is the name of their athletic team. We are suggesting the need to begin to re-thinking community by community what the specialness of their high school should be.

The last point in envisioning a new design for high schools was that we wanted a school that didn't cost any more to build or operate than an existing school. Given the resource constraints for education, we tried to keep the cost challenge before us all during the design process.

In summary, the design process was developed in a way to assist us to move beyond the current barriers that stand in the way of school reforms and initiatives, and that represented a renaissance with respect to thinking about teaching and learning. We took an architectural perspective calling for being careful to make sure that we got at the learning specifications for the school before we thought about its physical environment. We used a 'design down' process to give the alignment and coherence we wanted and that would force us to ask the most important design questions first. The design incorporated a synthesis of research and best practice. It had a 'stem to stern' orientation which moved beyond studies of single aspects of the high school such as curriculum, organization, decision making, or technology, and put these all together in one system so that one aspect could be aligned with another. And, last we wanted to model the process of involvement of students, teachers, administrators and community in the design process. This dimension of the design process is crucial because the resulting high schools would likely operate and look very different from the high schools of today. Without solid involvement it would be difficult to get the political support needed to implement new design models.

The Learning Specifications

The design down process used in New Designs for the Comprehensive High School is made up of a series of phases. It starts with the learning signature or figuring out what is to be special about a particular school. The next phase focuses on learner outcomes, or other words can be substituted for outcomes such as results, standards, aims, goals, or essential learning. But, somehow we need to come to grips with what is going to be the promise learning for the resources that the school is going to consume. Next, we turn to designing the learning process which involves the assessment, the curriculum, the instruction, that's going to go on in the school to reach the learner outcomes. Then we get to the decisions about learning organization: how are we going to organize time, the curriculum, students, settings, technology, and decision making in the school to deliver on the learning process. The next focus in the design process is the learning partnerships with other schools, post secondary institutions, parents and family, business and industry, and the community. Then we get to the learning staff, and the staffing might look considerably different than the staffing we currently have in schools. And then the learning environment: what kind of environment physically and technologically will support the learning process and organization decided in previous phases.

Last, we come to dealing with the learning cost. That is the process we used over a two-year period to develop New Designs for the Comprehensive High School and it is the same process we now we use with schools implementing the New Designs concepts and specifications.

In terms of signature, only a few aspects are covered here. We expect the leaning signature to give focus and coherence for the school and communicate in a very powerful way what the school is about. We developed a signature for New Designs, but the signature is something schools need to do each on their own. Our signature encompasses three major themes: learning community, curricular integration, and transformation.

The idea of learner outcomes is as keystone holding the process and environment together in a very visible way. We noted that the learner outcomes ought to focus on the customer's of the school and they all need to be involved in developing the statement of learner outcomes. The outcomes should involve reaching for the kinds of goals and objectives in terms of education that are perhaps beyond what we can measure and represent the interests of all students. The outcome statements we adopted were from Minnesota and included: thinks purposely, directs their own learning, communicates effectively, works productively with others, and acts responsibly as a citizen. These outcomes represent a major change in paradigm with respect to thinking about the promises of education. One doesn't see seat time in English, social studies and so forth. Rather the outcomes address the competencies that young people are going to need if they're going to tackle the problems and issues of 21st century life in a successful way. And it represents a real opportunity to begin to think through in a serious way what school should be about, how it's organized, and what one would learn there.

With regard to the learning process, we suggested a need to emphasise the integration of curriculum because the problems of life do not come to one as mathematics problems or social studies problems or English problems, but they combine multiple subject matter areas. The emphasis in assessment is on it use to improve learning. And, we want the learning process to be relevant to real life, active, and experiential.

We were pressed very hard to describe in detail the curriculum in a New Designs school. However, we suggest that before getting to curriculum details, one would first begin by asking about what learning products could students produce in school that would give evidence that students had reached or were making progress on reaching the learner outcomes. These could be physical products or service products. Then begin to ask a second question concerning the learning activities or projects the students would need to engage in order to produce the products. And, only then get to the question of integration of high level academic and modern vocational education in forming the curriculum. This is a different way to begin to think about curriculum and depends on the students having roles in school as workers and producers in contrast to mere recipients of information which is too often the case in schools today.

We also wanted a learning process that represented multiple ways for students to learn the same thing. We wanted an organization in terms of time

and setting that would create a very small school experience because that would create a stronger sense of learning community. The learning organization also was to include strategies where the settings are expanded to other schools and into the community.

Learning technology was to be used by students to demonstrate learning and take on adult roles. We thought the cutting edge on technology was around notions such as student as producer and having technology enable young people to be producers as opposed to receivers of learning. Technology would provide the opportunity for students to be managers of their own learning as opposed to teacher doing all of the managing. Other contributions of learning technology included equaliser of learning opportunity, linker to a wider community, and students as teacher.

There are many other learning specifications that make up New Designs for the Comprehensive High School. They are described in the publications listed at the end of this paper. In addition to more details about the dimensions of the high school noted above, the additional specifications address the areas of decision making, partnerships, staffing and staff development, and learning costs as relates to New Designs. One can see these specifications played out in another way as we turn to describing the learning experiences and supporting environment of the New Designs High School in the next section of this paper.

Designing the Learning Experience and Supporting Environment

Prepared by Bruce A. Jilk

This part of the presentation will focus on the learning environment. The presentation concludes with a video that illustrates these ideas actually occurring. It's a virtual reality video of a school that's under construction, it has no classrooms, it's not being built by the school district but rather it's being built by a city, and the teachers will include the Zoo scientists located at the site where the school is being built. It's in a district that has over 20,000 students and typically builds 2000 student high schools, however this school is for four hundred students. That's much smaller. And it breaks a lot of other paradigms as well. I will refer to this project as the Zoo school.

This presentation is organized into three parts:

1 a short history of school buildings in the USA;

2 the concept of this learning environment;

3 the idea of designing a learning experience.

A Short History of Schools in the USA

The first schools were one room schools. In the one room school house there were two parts:

1 there was the room and

2 what went on inside the room.

Over time we kept the room and we replicated it but we threw out what went on inside. I will come back to this 'split' towards the end of my presentation. For now I will suggest that this was a fundamental error.

The Concept of the Learning Environment

The charge that I got from George Copa and the Design Group was not to design a school to accommodate 1,600 kids and then figure out how many classroom need and how many gyms etc., but rather the charge was this. Create an environment that supports outcome focused learning, (results based, or essential student learnings, as they call it in Washington), the idea that all students can learn, and curricular integration, which has a big impact on the design. Also the environment should support the idea of partnerships, learning to learn, teamwork, assessment to improve learning, learning technology everywhere, decentralised authority, and the sense of a learning community. You're going to see these phrases come up on some graphics that show what life would be like in this type of environment. This completes the circle of the design down process.

First I will give you a concept of how this design was organized. A traditional school has the basic building block of classrooms. Think of that as a teaching environment. In this design we will, however, create a learning environment. Our basic building block is the individual. They are organized into groups of five. Next, twenty of these learning groups comprise the Family of 100 students. This is followed by the Neighbourhood which is made up of four families or 400 students. These group sizes of five students, a hundred students, and four hundred students are based on research. We did illustrate this design as a sixteen hundred students school. There is no research that supports that size, but it is very typical of schools in our communities.

To repeat, we started with a group of five which became the building block of a family of a hundred which in turn became the building block of a neighbourhood of four families for a total of four hundred students. Now that is a stand alone school and that is what the Zoo school in the video is: a high school of four hundred students. Beyond that we did show how this would work in a larger setting, sixteen hundred students and then also most importantly make the connection between the school and the greater community.

Each of these basic spaces in the learning environment has a center, support space and a level of technology. The hierarchy of technology follows that of the students. Every student would have their own personal telecommunication computers. That is a portable computer with a video device on it so students can interact both audibly and visibly. In the Zoo school they are indeed planning to implement this idea. As we get to the family level we have more sophisticated technology: Graphics, CAD, and multimedia, which you'll see that in one of the graphic vignettes. Next, at the neighbourhood, we will introduce a new type of space in schools that we call studios and the technology found there. At the student community level is a place for new technology. Ten to fifteen years ago when computers first became known to educators we created a special place for them and called it a computer room. Now the idea is for every student to have a computer. But there still is cutting edge technology. And you need a place for that and today we believe that the virtual reality technology. Ten years from now there will be something else and we will still need a place for it. Last of all the experiences that the students have in the real world will include, of course, real world technology.

Just to illustrate this learning environment concept graphically, we start with our students at their individual work stations and next we see a member of a group of five and then the family of a hundred and the four neighborhoods of four hundred.

Next this is developed into architectural dimensions. First is the student with four other students, the table as the center, and each student has a personal workstation. It includes a computer, a file drawer and a place for photos and other personal items. We've gone through a couple of design phases on the workstation. We actually did prototype of this in preparation for the Zoo school. The idea is for the workstations to be modular and the students have the freedom to rearrange them but yet there would be some uniformity.

In the Family the students and their individual work stations are in groups, wrapped around the production/resource center. This is the center of the family and will be described later. There is also a place that we call the lab which is multi-purpose. Next is a divisible lecture room. Lecture is still a viable part of teaching, it's just not the only way (which is what a school made up of classrooms implies). There is a seminar space and a place for teachers at the family level.

The neighbourhood is a standalone school. We assumed a two-story setting so we start with a mirror image of the family space on the ground level and then repeat this on the second floor.

If you are going to build the school for sixteen hundred students, how would this all work? We took a 'kit of parts' approach in designing two new high school for Newport News, Virginia. The two schools have equity because they are both made up of the same parts. But at the same time you can have individual identity because the parts are rearranged differently and they can also adjust to the site configurations. So we take a neighbourhood of four hundred students and add a second, third and fourth neighbourhood. To that to that we need to add an activity block. An activity block is where large group performance and athletic activities occur. Then this is all wrapped around what we call a forum, the center of the community.

Last of all we took a look at how all this would fit into the larger community. This connection will be explained shortly.

Designing the Learning Experience

I have just described the learning environment concept. Now I will share with you a process for how to go about making these design decisions. We use a process which has been tested with numerous school planning committees around the USA. This has lead to school designs that really are rather different from what is traditionally done. If you've ever been involved in a building project, this is really quite a different process. It is a process I hope you will take with you to help you make decisions on your own projects. We call it Designing the Learning Experience. Instead of designing the building or an object in space, design the learning experience. The traditional design process allows you to get caught up into too many things that really don't contribute to learning. Design the learning experiences you want your students to have and the bricks and mortar will fall in place.

I'm going to take you through the design of a learning experience. First I will contrast that to a traditional school which we call cells and bells model. The example school is one that we've converted to a New Designs type of school. It can happen in existing buildings as well! But the typical image that you have in a school like that is not unlike this image of students seating in rows and aisles. I have gone through many high schools, walking up and down the school corridors and this is what I see, by far, most of the time. There are a few variations but this is pretty typical. What I will share with you now is some more graphic vignettes that I want you to think of as additional opportunities for students other than this setting of rows and aisles.

To do this we've created a hypothetical project. The list you see here is the learning events, as we call it, that are appropriate to this project. Different projects would have different events. The list goes from the idea or ideation to sharing, research, design, prototype, feedback, collecting parts, assembling, marketing and distributing. This is based around a physical product, but it could also be an intellectual or a social product. We've worked with several people who have produced these types of projects. Next these learning events are going to take place in a learning setting and in this example this is what I just described to you. The next step is to make that connection between the two: the learning events and the learning setting.

I think that point is really important so I'm going to illustrate it a second way. Using the word pathways reinforces the 'connectivity' of this learning process. Think of a matrix with the learning events in the vertical column and the learning settings going across horizontally. Notice that a learning setting is not necessarily space. Included are technologies and people. In this particular hypothetical project the dots show those learning events taking place in the various learning settings. But what really moves this whole concept a step forward is the fact that these events/settings are connected and this is one of the strong points of designing the learning experience. It is something that gives coherence and meaning to the student's experiences in their school. This is in contrast to the aimlessness that is often associated with the departmentalised high school.

Now we're going to take you through that sequence of this hypothetical project. The following graphic images should be thought of as additional experiences offered the student above and beyond the photo of students sitting in rows and aisles. First the ideation. The idea starts at the individual work station which is shown in three-dimensions. Our first graphic vignette shows our student coming up with an idea in which he has ownership. This image is addressing the charge that all students can learn because we're starting with the individual student.

The project's next step is the next learning event of teamwork and the production resource center setting focuses in on that. There are places here for two- dimensional, three-dimensional displays or video display. These students don't do everything every day, all day, all year with the same group of students, but rather are a part of different groups for different projects, in different families or different neighborhoods. They will be in varied groups and settings. That is why there are the round tables for those other teams and activities. There is a place for producing items like posters and just plain work

space such as the larger tables. A place for resource materials such as software would also be needed. Finally the rectangular tables are for the multi-media technology.

Our second vignette shows our students getting some other students interested in this project. This is where we get into the teamwork aspect of learning. These students all are going to have ownership of the project. This is not something that somebody else is going to spoon feed to them.

Next a word about staff. Their space (shaded) has a very similar setting to the students. Our vignette shows the staff planning together. That is an important part of making this kind of education work. But it also reflects the idea of decentralised authority. The staff here are empowered to make decisions about the use of space, time, equipment, and curricula.

Next the group tests the idea that they have with staff input. The teacher is coach-mentor and is folding the learner outcomes into this project. The objective is to help the students reach those outcomes. Basically the idea is that how the learner reaches the outcomes is not being pre-determined by some else but rather it is the responsibility of the learners with assistance >from their teachers.

In the project research phase we see just one of the examples of the many places where technology would be. Shown here is the multi-media technology in the production/resource center.

There's also the need to share data and direction and this next vignette illustrates that the student is involved in demonstration and display. Also illustrated is the idea that assessment is used to improve learning in this educational design. Assessment is not something that happens at the end. It happens in the middle and, in fact, as at the Zoo school it happens at the beginning. There the first thing they do is test the kids to see if they have the skills needed for the up coming thematic unit.

We are going to take a quick look at the neighbourhood. There are two spaces here I want to say a few words about. The first is the commons. Remember every level in this school has a heart to it, really a center. And in the neighbourhood it is the commons. This is the social heart as well as where dining will occur. Even where we have four of these together to create a 1600 student, dining is going to occur in each separate neighbourhood. A school for Bellingham Washington does indeed do this. We suggest that this ought to be more of an adult like setting. This is why the design has the suggestion of a cafe type of environment. Much more friendly than the institutional almost, prison like feeling in a lot of cafeterias. There the rectangular tables make you wonder where are the metal plates, metal cups, and striped uniforms! This is also a place where the whole student body can gather here for pep-fests, pep-rallies etc. That "action" is part of creating a sense community at the neighbourhood level.

Probably the most significant type of space that we are implementing in schools projects of all sorts is what we call a studio. There are four of them per neighbourhood, two on each floor, in the corners. There is no vocational wing to this building. The studio is where curricular integration happens more than anywhere else, although it happens everywhere. A key aspect of the

studio concept is its flexibility. Every one of these studios has the same floor area, the same walls, the same doors, the same windows, the same power and network grid, the same utility walls, (that's where water, plumbing, sewer, gas, etc. are), and the same ventilation manifold.

What goes on in a studio is dependent upon the curriculum and the equipment we put in that room, not upon the infrastructure. We created three examples to share with you. The first one is an engineering studio and the vignette shows the students working on their projects. By the way the hypothetical project is a computer and the students are assembling it here in the engineering studio.

We have also taken that same infrastructure, same bricks and motor, and created a communications studio. The image shows a totally different learning experience. Remember, we're designing learning experiences. What you see in this image, even though it's happening in the same sort of physical environment as the previous image, is a totally different learning experience. The third one is the environmental studio. And again everything is the same as far as the infrastructure is concerned. What is different is the curriculum and the equipment that is in that space and therefore the learning experience.

Next our project moves to the whole school level. The roofs are in exploded view here to emphasising the point that the design brings natural daylight into every occupied space in this building.

I want to focus on the center. The forum is the heart of the whole student community. Think of it in two ways. First of all in Roman times they had what they called the forum which was the center of their community and it was surrounded by communal resources. Such as the library that you see on the upper level. Such as governance that they called the Senate. Such as commerce or what we call the student store. That is what this space indeed is and it creates that feeling of a community for the whole school.

Another dimension to this space however is that it is a place for performance. In this type of education performance is extremely important so we want to provide for it in a way that would be readily accessible. In contrast the traditional auditorium is typically down the hall around the corner behind locked doors and dark. I'm not sure why it's this way, but possibly somebody's afraid it's going to be used! We wanted to reverse that mentality. Here's our vignette of our students sharing their project with other students in the forum and there by creating that sense of a learning community.

I mentioned communal resources around the perimeter of this forum. Today one example of that would be virtual reality technology. People say, "oh yeah, that's neat but it's expensive". Well bars and taverns have it so I advise school superintendents and school board members do partnerships with the bars and taverns in their communities. If nothing else, at least they'll get the attention of their parents.

Next we get to the whole global village level and I assume I don't need to talk about Internet to you folks. But in the design of our school we did want to make a very real connection to the community that surrounds the school setting. Because part of the learning process draws on adjunct teachers such as business people, you have people coming to the school to teach and

students going out to the real world to learn. We all know learning does not happen within the walls of the school. We tried to create a graceful and easy way for a physical connection to the greater community. The design also addresses the security issues attached to that type of activity when each neighbourhood has their own access point as well as the school as a whole.

This leads us into the idea that these designed learning experiences happen outside the walls of the school but still they are ‘designed’. This experience is not just one of flipping burgers. For example here is our communications student in a TV studio, the environmental student in a greenhouse and our engineering student in a post secondary laboratory. When you’re in a rural setting those resources aren’t available to you. Such as this one neighbourhood school with a smaller forum and a smaller activity block. You then create enterprises and of course a lot of school districts are doing that. Enterprises include establishing a student store or a student shop.

On the other end of the spectrum is the idea that there can be greater connections made to community resources. And that is what the Zoo school is about. It is actually a way of reducing the cost of education by sharing resources with the community. So we took the idea and said we can do that with our design. We take each of the four ‘neighborhoods’ and spread them around the community. One is attached to a physical education facility, one is attached to a medical facility, one is attached to a performing arts facility, and the fourth to an engineering facility. You do this by developing partnerships. There is synergy in doing that. And again the Zoo school that I will show you on the tape is exactly that: it is the first one of five settings within this district called an Optional School. Instead of building in another 2000 student high school their going to build five 400 student optional schools. Each will be thematically identified, the first one as environmental studies, and the others will be humanities, business, medical arts, and technology.

I’m going to bring this part of the presentation to a close by going back to the forum where we are indicating the idea that learning needs to be fun, so this image shows the idea of a learning celebration.

In workshops we go through this process of designing the learning experience. First we ask the people involved to identify a product which would confirm the student had achieved one of the learner outcomes. Then we have them create a T-chart. They identify on the left side what learning events the students would have doing this project and on the right side the appropriate learning settings. In our experience about 95% of those learning settings are outside the classroom.

To conclude let’s go back to our one room schoolhouse. Fred Schroeder, an educator who started his own education in a one room school house, said: "The farther I travel from the quaint fragrant beginning, the closer as my affinity to the goals of the resourceful and idealistic rural teacher to whom no subject, course, nor age was separated from its neighbours, and with whom the school day became the invitation to circles of experience, widening outward from the common room so that child, nature, books and imagination were unified in adventure of growing and learning".

I think that is what we threw out of that one room school house. The spirit in this design is to recapture some of that feeling.

(Presentation is completed with examples and video).

References

Copa, G.H., & Pease, V.H., New designs for the comprehensive high school, volume 1, Berkeley, CA: National Center for Research in Vocational Education, University of California, Berkeley, December 1992 (100 pages).

Copa, G.H., & Pease, V.H., New designs for the comprehensive high school, volume 2, Berkeley, CA: National Center for Research in Vocational Education, University of California, Berkeley, December 1992 (400 pages).

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Copa, G.H. (Ed.), New designs for the comprehensive high school, design update 1, St. Paul, MN: National Center for Vocational Education, University of Minnesota site, Summer 1994.

Copa, G.H. (Ed.), New designs for the comprehensive high school, design update 2, St. Paul, MN: National Center for Research in Vocational Education, University of Minnesota site, Winter 1994-95.

Note: The first two publications listed above are available from the National Center for Research in Vocational Education Materials Distribution Service, Western Illinois University, Horrabin Hall 46, Macomb, IL 61455. The phone number is (800) 637-7652.

The last three publications listed above are available from the New Designs for the Comprehensive School, 425D Vocational and Technical Education Building, University of Minnesota, 1954 Buford Avenue, St. Paul, MN 55108. The phone number is (612) 624-1705. The fax number is (612) 624-4720.

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Annex A7: M&E Plan VSSEP2

See PDF sent as a separate electronic document.

Annex A8: VSSEP2 Site Related Imprest Costs

Item	Description	Original Budget	Final Budget	Variance
	Road upgrade-siteworks sand/coral	$-	$18,293	$18,293
3102000	Plumbing	$-	$862	$862
3103000	Electrical	$-	$44,762	$44,762
3104000	Admin Bldg & School shop	$-	$51,116	$51,116
3105000, 3107000	Boys & Girls Dormitories	$163,108	$128,099	$(35,009)
3106000, 3108000	Boys & Girls Amenities	$108,290	$83,133	$(25,157)
3109000	Alteration to existing Building	$-	$2,162	$2,162
3110000	Water Tower	$25,000	$34,290	$9,290
3115000	Staff Houses 2 bed 2 off	$80,275	$74,246	$(6,029)
3120000	Staff Houses 3 bed 2 off	$110,273	$51,520	$(58,753)
3125000	Library and Staff Room	$246,246	$181,055	$(65,191)
3130000	Convert Library to Classroom	$27,000	$18,777	$(8,223)
3135000	Administration	$95,040	$30,317	$(64,723)
3140000	Industrial Arts Laboratory	$154,440	$60,236	$(94,204)
3145000	General Classroom plus ##	$45,540	$20,535	$(25,005)
3150000	Food & Textile Tech Lab ##	$118,750	$67,530	$(51,220)
3155000	Solar Cells	$25,000	$2,186	$(22,814)
3160000	Furniture	$120,000	$72,880	$(47,120)
3170000	Repair Material	$67,120	$40,810	$(26,310)
3180000	Costs across all project	$126,625	$137,998	$11,373
3185000	Training	$-	$103	$103
3190000	Wages	$-	$46,505	$46,505
	Ranwadi High School	1,055,212	1,167,415	(345,292)
3201000	Repair road to school & Bldg pads	$-	$589	$589
3202000	Fix pump & water supply	$-	$2,315	$2,315
3203000	Wages	$-	$54,975	$54,975
3204000	Tank	$-	$-	$-
3205000	Dormitory, girls	$137,616	$194,077	$56,461
3210000	Library	$246,246	$259,975	$13,729
3215000	Convert Library to Classroom	$8,390	$369	$(8,021)
3220000	Staff Houses 2 bed 1 off	$84,032	$102,839	$18,807
3225000	Double Classrooms	$100,298	$75,040	$(25,258)
3230000	Science Lab	$75,482	$87,968	$12,486
3235000	Solar Cells	$25,000	$-	$(25,000)
3240000	Furniture	$50,340	$7,120	$(43,220)
3250000	Repair Materials & Water Pump	$25,000	$101,583	$76,583
3260000	Costs across all project	$-	$200,404	$200,404
3270000	Classroom	$-	$-	$-
3280000	Plumbing	$-	$408	$408
3290000	Electrical	$-	$18,428	$18,428
	Tafea College	752,404	1,106,090	353,686
3305	New Septic tank	$40,000	$6,144	$(33,856)
3310	Dormitory Girls	$128,700	$101,178	$(27,522)

3315	Library, staff,sick, WCs	$325,000	$265,368	$(59,632)
3320	Library to Classroom	$11,700	$-	$(11,700)
3325	Staff room to small classroom	$4,195	$429	$(3,766)
3330	Dispensary to computer classroom	$4,195	$357	$(3,838)
3335	Food & Textile & science Lab	$107,250	$184,600	$77,350
3340	Science Lab to Dormitory	$52,800	$29,351	$(23,449)
3345	Demolish Manual arts	$2,000	$15,607	$13,607
3350	Industrial Arts Laboratory	$126,750	$70,288	$(56,462)
3355	Demolish Dining Room	$15,000	$191	$(14,809)
3360	Dining Room/meeting hall 250sq metre	$59,000	$55,791	$(3,209)
3365	Epi - Solar Cells	$25,170	$2,914	$(22,256)
3370	Repair Materials	$125,000	$109,062	$(15,938)
3380	Costs across all project	$-	$203,969	$203,969
3385000	Furniture	$-	$39,732	$39,732
3390000	Wages	$-	$58,518	$58,518
3395000	Administration Block	$-	$33,889	$33,889
	Epi High School	1,026,760	1,177,391	150,631
3405	Library	$209,750	$92,657	$(117,093)
3406000	Double Classroom	$-	$83,413	$83,413
3410	Furniture	$25,170	$30,433	$5,263
3415	Water Tank	$20,975	$4,274	$(16,701)
3420	Library Materials	$25,170	$11,397	$(13,773)
3450000	Wages	$-	$8,360	$8,360
3460000	Costs across all project	$-	$15,139	$15,139
	Rensarie Secondary School	281,065	245,673	(35,392)
3505	Science Lab x 2	$105,714	$126,454	$20,740
3510	Dormitory Girls	$173,673	$26,149	$(147,524)
3515	Furniture	$50,340	$15,444	$(34,896)
3520	Library Materials	$25,170	$37,486	$12,316
3525	Repair Materials	$50,340	$61,762	$11,422
3550000	Wages	$-	$20,237	$20,237
3560000	Cost across all project	$-	$60,059	$60,059
	Aore Adventist College	405,237	347,592	(57,645)
3605	Educational Materials	$100,000	$521,039	$421,039
3610	Education Materials	$100,000	$-	$(100,000)
3615	Education Materials	$100,000	$-	$(100,000)
3620	Education Materials	$100,000	$-	$(100,000)
360500	Procurement fee	$-	$33,210	$33,210
	Education Materials	400,000	554,249	154,249
	Totals	**$5,400,000**	**$5,888,086**	**$479,213**