

出國報告(出國類別：其他—會議)

參加「運用資訊科技協助 偏遠地區取得學習資源研討會」

服務機關：教育部電子計算機中心

姓名職稱：杜愛葆 高級管理師

派赴國家：馬來西亞

出國期間：民國 97 年 3 月 26 日至 30 日

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摘要

本次主要任務是參加「運用資訊科技協助偏遠地區取得學習資源研討會」，本會議係由馬來西亞空中大學(Open University Malaysia, OUM)規劃提出，為 APEC 同意支持進行之「運用資訊科技於貧窮及偏鄉社區計畫」啓動會議（1st Kick-Off Workshop on “Capitalising Information Technology for Greater Access Among Poor and Rural Communities”）。本計畫重點工作為運用資訊科技建立數位學習之訓練教材，提供各會員體貧窮及偏鄉社區民眾使用，以縮短弱勢族群及城鄉間之數位落差。本次啓動會議邀請參與國家簡報各國縮減數位落差推動情形，並初步研商如何借重各國經驗共同發展資訊科技數位教材。預計至本(97)年底前由各國完成教材初稿交由計畫主辦單位審核，98年2月於泰國召開計畫結束及成果發表會議。本次會議中透過各國報告及交流機會，瞭解許多亞太國家如中國、印尼、日本、菲律賓、泰國、巴布亞紐幾內亞、馬來西亞等地資訊網路教育發展現況，值得作為未來借鏡與參考。建議未來仍應積極參與後續相關事宜，以增進我國與他國於資訊教育議題之互動瞭解及國際合作經驗。

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一、目的

馬來西亞空中大學 (Open University Malaysia, OUM)來函邀請本部電子計算機中心楊正宏主任參加「運用資訊科技於貧窮及偏鄉社區計畫」啓動會議 (1st Kick-Off Workshop on “Capitalising Information Technology for Greater Access Among Poor and Rural Communities”)，該會議係於 97 年 3 月 27 日至 3 月 29 日於吉隆坡舉行，爲一 APEC 組織支持之正式計畫並由 OUM 規劃辦理，邀請中國、印尼、日本、菲律賓、泰國、巴布亞紐幾內亞及我國等代表發表各國推動情形報告及經驗交流。

由於我國近年來推動縮減數位落差工作已展現具體成效，如建置數位機會中心、偏遠教師遠距培訓、國民電腦補助等，藉此機會可提供許多相關經驗與他國分享交流，亦可對各國推動概況及趨勢作一瞭解，爲難得之國際交流機會，爰接受邀請並經楊主任指派本人代表出席，經簽奉核可後前往參加此會議。

二、過程

(一) 行程說明

日期	行程說明
97/3/26 (三)	台北至吉隆坡
97/3/27(四)	出席「運用資訊科技於貧窮及偏鄉社區計畫」啓動會議第一天議程（開幕式、各國現況簡報）
97/3/28(五)	出席「運用資訊科技於貧窮及偏鄉社區計畫」啓動會議第二天議程（各國現況簡報、參訪活動）
97/3/29(六)	出席「運用資訊科技於貧窮及偏鄉社區計畫」啓動會議第三天議程（討論及座談、結論報告、閉幕式）
97/3/30(五)	吉隆坡至台北

(二) 詳細議程

Date / Place	Time	Activities
Day 1 - KL Thursday, 27 March 2008	8.30 am	Registration
	9.00 am	Opening Ceremony Ybhg Prof Dr. Abtar Kaur (Project Overseer) Ybhg Prof Tan Sri Anuwar Ali (President/Vice Chancellor, OUM) Ybhg Dato' Thomas George (secretary General, Ministry of Human Resources)
	10.00 - 10.30 am	Tea Break
	10.30 - 11.30 am	Session 1 1. Overview and session targets 2. Discussion and issues on flow of overall workshop
	11.30 am - 1.00 pm	Presentation by Experts <ul style="list-style-type: none"> • Presentation 1: Malaysia (E-communities) • <u>Presentation 2: Chinese Taipei</u>
	1.00 - 2.00 pm	Lunch
	2.00 - 3.30 pm	Session 2: Continuation - of presentation by Experts <ul style="list-style-type: none"> • Presentation 3: China • Presentation 4: PNG
	3.30 - 4.00 pm	Tea Break

Date / Place	Time	Activities
	4.00 – 5.30 pm	<ul style="list-style-type: none"> • Presentation 5: Philippines • Presentation 6: Japan
Day 2 - KL Friday, 28 March 2008	8.30 – 10.00	<i>Session 3:</i> <ul style="list-style-type: none"> • Presentation 7: Thailand • Presentation 8: Indonesia • Presentation 9: Malaysia
	10.00 – 10.30 am	Tea Break
	10.30 – 12.00	Visit to OUM
	12.00 – 2.00 pm	Lunch
	3.00 – 5.30 pm	Visit to Vocational Training Centre (VTOC)
Day 3 – KL Saturday, 29 March 2008	8.30 – 10.30 am	<i>Session 4:</i> <ol style="list-style-type: none"> 1. Discussion of Post Visit 2. Presentation of 1st draft of sample curriculum materials 3. Discuss the curriculum and methodologies to be used to execute the training materials 4. Create a sample of the intended curriculum materials
	10.30 – 11.00 am	Tea Break
	11.00 am – 1.00 pm	<i>Session 5:</i> Improvement of materials
	1.00 – 2.00 pm	Lunch
	2.00 – 4.30 pm	<i>Session 6:</i> <ol style="list-style-type: none"> 1. Discuss work schedule & protocol for presentation of materials by experts 2. Discuss plans, deliverables, venue and schedule for 2nd meeting
	4.30 – 5.30 pm	Closing ceremony

(三) 會議記要

第 1 天 (3/27/08)

Session 1

1. 會議背景及目標說明
本計畫為 APEC 補助之正式計畫，擬於 1 年後計畫結束時，提出 ICT 數位學習教材範本，提供弱勢地區及族群使用。
2. 訓練教材研發說明



- (1) 對象：貧窮及偏鄉地區，尤其希以女性為主要
- (2) 提供訓練單位使用
- (3) 需設計完整訓練內容(含架構,題目)
- (4) 可提供補助經費
- (5) 本次會議結束前討論完成初步架構

3. 各國現況簡報 [簡報檔詳附錄]

(1) 馬來西亞 (E-communities)

- 於偏遠地區設置 Telecenter (TC)作為社區服務據點
- 縮減數位落差有一國家推動策略(National Strategic Framework)
- 目標對象含兒童、青少年、女性、老人、身心障礙者、土著(原住民)、城市邊緣人等
- 研究問題：對社區經濟等方面之影響、服務據點是否成功、永續經營考量等
- 推動重點：基礎建設、資訊科技專業人力、內容發展、結合企業等
- TC 成功因素：基礎建設、經營管理者、推廣行銷、地方領袖投入等
- 民眾經常使用資源內容：戲劇、音樂、影片、圖片、資訊蒐尋、聊天室等
- 民眾資訊需求：社區每日動態、需要等
- 訓練需求：採由上而下或由下而上方式，以社區需要、本土內容為主、希富正確性之資訊

(2) 台灣

- 資訊教育推動現況
- 相關計畫
- 偏遠地區教師遠距課程培訓情形
- 推薦參與本計畫之社區介紹－山峰 DOC

與會代表回應意見：

- 對我國 DOC 中強調之人性主義、人本 (Humanism、People-centered) 等理念表示肯定
- 對 DOC 資源結合退休教師感到興趣
- 線上培訓課程是否授予學位？
- 我國對偏遠(remote)及鄉下(rural)定義有何差異？



Session 2

各國現況簡報(續)

(3) 中國:(劉美鳳教授, 北京師大)

- 全國齊心協力改善城鄉不均衡發展現象
- 資訊教育自 80 年代初期開始推動以適應資訊化社會到來
- 訂定國家級發展計畫：校校通(2000-2010)、資訊課程納入中小學必修、建置 CERNET，使用數位衛星系統、電視等
- 1997 年建立 1000 所實驗學校
- 2005 年建立資源網(China Basic Education Resources Base)，發展數位教學資源
- 目前約 80%學校連上 internet
- 2005 年開始縮短數位落差計畫
- 1995 年起推動教師資訊培訓，2005 年訂定教師資訊科技能力標準規範，教師需通過檢測，成立國家教育科技中心
- 2003 年建立教師研習網路，8 所師大、CRTVU 等加入，3000 門學位課程
- 數位落差現況：全國 65%為偏鄉地區學生，資訊教學環境歧異甚大，先進學校可達班班電腦、多媒體教學環境；有的班級每一學生有筆記型電腦；許多中學以上學校有一間以上電腦教室。而有些偏鄉學校連教室都沒有、一班有 100 人以上、3 個人合用一張書桌、多年級合班上課、甚至無電力供應
- 2003-2007 年投入 16 億改善偏遠地區資訊教育推動（3 種模式）
 - 教室光碟機(CD-ROMs displaying station)
 - 衛星接收設備(Educational satellite receiving and playing stations: TV, DVD, CD ROM)
 - 電腦教室(Computer classroom-for junior highs)共用 PC 設備
- 目前全國教學電腦人機比為 19.38:1，都會地區約 10:1
- 2006 年高中/中/小學課程 ICT 課程比例達 100%/90%/20%
- 結論
 - 需訓練教材提供國家教育科技中心使用
 - 不同之經濟發展環境需不同之需求評估
 - 建議課程教材可依不同模式及程度發展

(4) 巴布亞紐幾內亞 (Mr. Aria of Univ. of PNG Open College)

- 背景：多語系、多文化、87% 人口居於偏鄉, 45% 人口收入低於平均所得
- 國家網路頻寬僅 64K 且電力不穩
- 2002 年起每年約 60,000 名 10-12 年級學生離開學校
- 低於 15% 學生升學至大專校院
- 85%中輟生為偏鄉學生

- UPNG Open college 扮演角色
 - 於全國各地設置學習中心(study centers)並持續推廣至偏鄉地區
 - 提供遠距教學課程
 - 紙本及 CD 模式仍為主要授課媒體
 - 提供諮詢輔導等支援活動
- 漸應用多媒體教學方式
- 目前訓練對象：新近離校者或中輟生、失業青年、弱勢婦女、NGOs 及社區工作者、偏鄉教師、公私部門員工、犯人等
- 推薦 2 個社區接受本計畫培訓：Minj (western island)及 Kainantu (eastern island)

(5) 菲律賓 (Dr. Torremonia, IT human resources , national computer center-field operation office)

- 政府部門之努力：2004 年成立 CICT (Commission of ICT)
 - ICT 政策制定、規劃、協調、執行
 - ICT 願景：便利取得、品質、效率、永續性
 - 社區 e 化中心(Community e-centers)共建置 233 個
 - ICT 計畫：Universal access to ICT –PhilCeC initiative (2008-2010)，以 2010 年前完成每一自治市均建置 1 個社區 e 化中心，由 PhilCeC Academy 負責執行
- 民間組織 Isis International Manila 介紹
 - 提出 ICT 發展為市場導向之迷思
 - 數位落差根源於社會落差之存在(性別、階級、宗教等)
 - 工作對象以本土女性為主，加強其 ICT 基本知能以促進經濟自主、政治參與、自我成長等能力
 - 希望課程特性：易取得、正確、可產生轉化變革

(6) 日本 (Dr. Makino-Senior Advisor in ICT and Education, JICA-Japan International Cooperation Agency)

- 日本空中大學：以電視及廣播方式提供學位課程，50 個學習中心、面對面助教輔導
- 83,126 個學生、6296 人修習碩士、男性 35,861 人(43%)
- JICA 計畫介紹：USP (U. of south pacific)等 12 國參與, 1998 日本加入協助衛星網路建設，最近升級為 IP-based 衛星網路
- 需求
 - 應瞭解地方人士對 ICT 的真正需求在哪裡
 - 應以地方人力資源來經營 ICT 之推動

- 以泰國及塞內加爾為例，如何應用圖片、符號等幫助農民學習
- ICT 基礎建設：寬頻、廣播系統(FM, AM), internet with WiMax, HF radio 等
- 社區中心
- 問題：訓練者之訓練、對象(貧困農民?)、課程內容、課程研發者、資訊傳遞方式等

第 2 天 (3/28/08)

Session 3

- (7) 泰國 (Puwapat, Head of International Official, Prince of Naradhiwas Univ. Thailand)
- 本計畫試辦學校建議由 KhonKaen School 擔任
 - 該校有 1000 位學生、60 位教師
 - 願景
 - 以”人”為中心
 - 以”人的發展”為目標
 - 知識分享
 - 與人協力合作
 - 介紹自由軟體 Ubuntu 使用情形(強調其 African 原意為'Humanity to others')
- (8) 印尼 (Dr. Paulina Pannen)
- 介紹印尼社經現況：學校數、文盲率、學童就讀率等
 - 高等教育就讀率為 17%
 - ICT 現況：18,000,000 網路使用者、72,000 村莊中 50%未連線 internet
 - 2006 由 MONE (Ministry of National Education)訂定資訊教育推動政策
 - 國家資訊教育推動委員會 (National ICT council) 由總統擔任主席
 - 網路：Jardiknas, INHERENT (高等教育)
 - 設置社區通訊中心 Community Telecenter (CTC)，定位：

- ”教師診所” ，提供教師使用 internet
- Pr-PP：對貧窮者提供數位伙伴關係
- 問題：教師尚未感到 ICT 帶來的附加價值、電腦為捐贈而得但已不堪使用

▪ 提出 2 個建議試辦單位

(9) 馬來西亞(Ministry of Rural and Regional Development 代表)

- 建立多功能社區 ICT 中心(ICT Center)
 - 提供偏鄉民眾”一次到位”(one-stop)之 ICT 中心服務
 - ICT 訓練中心
 - 2001 年起開始 6 項先導計畫
 - 預計 2007 年前完成 55 項工作計畫
 - 已建置完成 322 個 ICT 中心
 - 選擇設置之條件含有好的領導人才、1000 人以上社區、電力充足穩定等
 - 挑戰：維運成本高、基礎設施範圍限制、需有效管理、需社區支持、ICT 技術快速進步等
 - 希望有好的商業計畫以增加收益

參訪活動

◇ 馬來西亞空中大學－教學設計技術中心 (Center for

Instructional Design and Technology, CiDT)。該中心負責研發及編製各項數位學習教材提供師生使用，結合



內容、教學設計專家及多媒體、IT 技術團隊等共同開發高品質之教材，

<http://cidt.oum.edu.my/>



◇ 職訓機會中心 (Vocational Training Opportunity Center) —位於市中心之職業



訓練中心，對象以弱勢婦女為主，教育其資訊、藝能、家政等謀生技巧，以培養獨立工作生活之能力。該機構以自立自養方式經營，亦有獲得企業部分補助，有許多實際成功案例值得肯定。

第 3 天 (3/29/08)

Session 4

◎討論課程內容教材設計方式及綱要

- 教師手冊
 - 內容範圍
 - 撰寫方式：先以英文撰寫、由 OUM 審核，再翻譯為本地語言
 - 2008 年底前繳交
- 學生手冊
 - 目標對象：APEC 計畫要求為女性(APEC project(CBN(Capacity Building Network)-HRDWG)
 - OUM 可提供內容範例
 - 需加強英文瞭解程度

◎關鍵成功因素

- 可增進受訓者之學習效果及效率
- 改善 ICT 技巧、思考力及創造力
- 可用 ADDIE 模式(Analyze、Design、Develop、Implement、Evaluate)
- 提升認知能力
- 增進生活福祉
- 當地資訊基礎設施環境之配合
- 對受訓者產生影響力、從”心”改變
- 與當地現有執行計畫結合

Session 5

- 介紹本計畫獲 APEC 同意執行之背景
- 目標族群之定義
 - 邊緣人：身心障礙、單親、藥物成癮、老人、原住民、外籍新娘等
 - 窮人：鄉村部分－農漁民、佃農等
 - 窮人：城市部分－失業者、無住所者、非法居民、依親生活者等
- 訓練計畫說明
 - 目的：使其獲得知識獲取之能力
 - 在本國文件中自行敘明對”鄉鎮”(rural)之定義
 - 訓練人數不限，可視當地訓練場所可提供幾台 PC 而定
- 教材內容

- 目標：自我認知、蒐尋資訊、加值服務
- 初學者學習內容建議：BCC、鍵盤輸入技巧、網際網路入門、基本應用（文書處理等）、溝通方式（email, surfing, chat..)
- 配合事項
 - 於 6 個月內完成初稿(約 2~3 小時教學內容、英文撰寫、案例以符合當地特色為主)
 - 預定 2009 年 2 月於泰國召開期末會議，各國有 2 名額可派員出席，建議一為 ICT 專家，一為偏鄉(或弱勢)研究專家，共同討論修正各國教材內容，最後提出一整合版本交 APEC 結案。

三、心得與建議事項

- (一) 由本計畫之主題及目標可感受到，目前國際關注之數位落差對象已除了地理位置之相對偏遠地區外，亦包含貧窮者、城市邊緣人、弱勢婦女甚至罪犯等，對這些不同的關懷對象應有不同的關懷策略及考量，以適當縮短數位落差之存在。
- (二) 於過程中兩處參訪地點覺得有許多可效法借鏡處，如：CiDT 之人力編制及經費均相當充裕，提供其足以發展高品質數位課程與教材之基礎，且其保管蒐集(archiving)之規劃亦相當完善，以 digital library 方式提供流通使用，真正做到跨越時地限制之資訊提供，非常值得參考借鏡。另 VTOC 幫助青少年們重建生活能力與自信，由她們現身說法中可感受到新知識帶給她們的新希望、新生活，相當令人感動。雖然該中心的設備環境仍相當簡陋，畢竟在都市叢林中這樣一塊有理想、充滿人文關懷的淨土，在志工們時刻不懈努力以赴下，為青少年們打造截然不同新人生的精神真的十分令人感佩。
- (三) 由各國談及之數位落差經驗中可發現，其實有的嚴重情形遠大於台灣目前景況，如印尼許多地區文盲率高達 20%，提供教育之方式尚有許多困難需突破；馬來西亞有些偏遠地區甚至無馬路，必須經由直昇機輸送物資，遑論教育資源的導入問題；中國大陸有些落後地區學校設施極度匱乏，最嚴重者無教室可用，或需混年級合班上課，或需 3 位學生共用一張課桌等，顯見「縮短數位落差」議題真的需要不同策略來因應不同的實施需要，值得政策訂定者深思。而我國其實已累積相當多有關經驗及特色，如能有系統的作一整理應該可以在國際舞台上有所貢獻的空間。
- (四) 由此次參與會議過程中深刻感受到英文教育之重要，同樣身為亞洲國家之一員，然而目前馬來西亞、新加坡、菲律賓、印度等均以英語為官方語言，人民從小在幾近母語之教育環境下，均能以英語流暢表達及溝通（姑且不論其國力如何、腔調特殊等等），在國際事物及議題上的確有其優勢，就如計畫主持人爭取 APEC 計畫之過程及活躍程度為例，相信語言無礙之優勢定產生加分作用。就連在吉隆坡各處所遇對象(行政助理、店員、路人、服務生…)也都能以英語溝通服務，令人感覺到國際化都市應有之格局，的確覺得台灣這方面的急起直追相當重要。
- (五) 本次簡報中我國提到之人性關懷 (people-centered, humanism) 等觀點有引起與會代表之重視及興趣，咸認為係縮短數位落差議題中相當重要之一環，希望此重點在我國未來提出之教材草案中充分加以考慮及運用，成為對國際社會有幫助的一項貢獻。

四、附錄：各國簡報資料

- (一) 馬來西亞
- (二) 台灣
- (三) 中國
- (四) 巴布亞紐幾內亞
- (五) 菲律賓
- (六) 日本
- (七) 泰國
- (八) 印尼

(一) 馬來西亞

投影片 1

Developing knowledge society
and enhancing internet
connectivity among the
marginalized communities in
Malaysia

Assoc Prof Datin Dr. Norizan Abdul Razak
Head
Center of Excellence Bridging Digital Divide Malaysia
Universiti Kebangsaan Malaysia
UKM Bangi 43650
Selangor

投影片 2

Background of Telecenter (TC)
development in Malaysia

- Total of 1945 TC implemented by various ministries and central agencies, private and NGOs, state initiatives and individuals
- Different objectives and deliverables
- Towards producing an ICT literate citizens and narrowing the digital divide among those at the rural and marginalized communities

投影片 3

**UNDER-PRESENTED GROUPS FOR ICT
CONNECTIVITY**

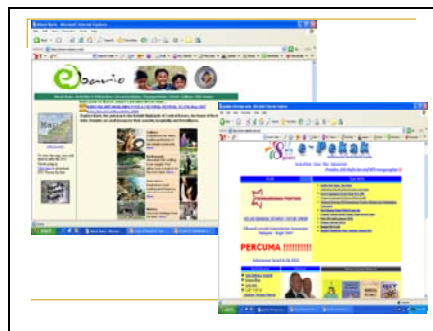
- Illiterate and neo-literate populations
- Ethnic, marginalized and minority groups
- People with learning difficulties
- People who are physically challenged
- Girl children and women
- People at the remote locations/ rural areas
- Indigeneous groups

投影片 4

ICT INITIATIVES IN MALAYSIA

- Knowledge Networking -ICT high potential to digitally link Malaysian in all communities
- Empower society to participate in economic and social progress and access information and knowledge via e-learning and assist Malaysian towards Knowledge and value added society.
- Enable Malaysian to make informed decisions on issues affecting them

投影片 5



投影片 6

Research Questions

- What social, economic and cultural benefits will access to ICT bring to the community?
- What characteristics of communities are indicators that TC will succeed?
- Is community participation necessary and in what ways?
- How can the financial and social sustainability of the TC be achieved?
- What needs to be done in terms of applications and information content to maximize the benefits of access to ICT for communities?

投影片 7

FRAMEWORK TO EMPOWER COMMUNITY VIA ICT

- To leapfrog from developing agricultural or production based economy to a knowledge based economy requires
- Basic infrastructure
- Pool of ICT skilled manpower
- Content development industry
- Well established regulatory and policy framework
- Mindset and commitments of society to support and embrace ICT

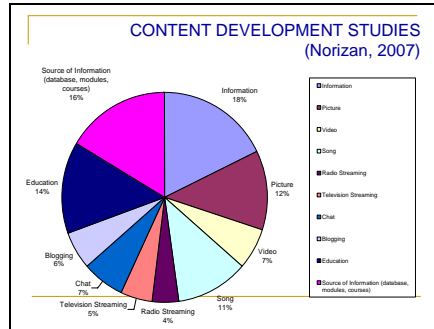
投影片 8

Critical Success Factors

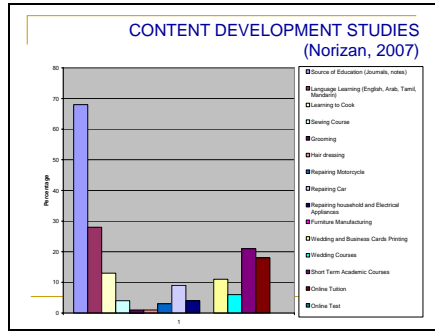
(Norizan, 2008)

- Top Level (Pink):** Commitment & support of stakeholders and local champions
- Middle Level (Orange):** Promotion of ICT, Content development for TC users, Effective training and certification of TC managers and users, Increased value in business, entrepreneurship, lifelong learning
- Bottom Level (Blue):** Adequate infrastructure and facilities at TC, Dedicated and experienced TC managers, Commitment & active participation of the central agencies and all involved

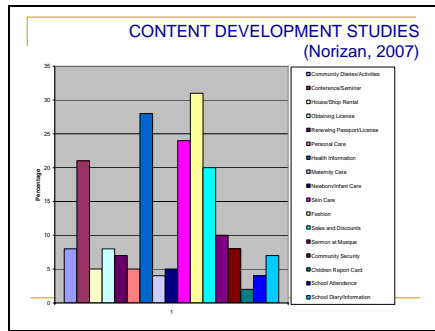
投影片 9



投影片 10



投影片 11



投影片 12

- ### Training Needs
- Top down and bottom up approach
 - Should be based on community needs and also government agenda in educating the public especially on government policy and developing a knowledge society by 2020.
 - Provision of lifelong learning materials
 - Provision of training programmes leading to certification

投影片 13

Training Needs

- Provision of training to assist the community to achieve higher value in terms of
- Productivity and economically
- Socially and better lifestyle
- Literacy rate
- Continuing education

投影片 14

Training Needs

- Identification of literacy framework
- Standards and online course design meeting the needs and literacy level of the marginalized communities
- Local content for the marginalized groups
- Accuracy of training materials and adequacy of training in terms of time, syllabus and assessment

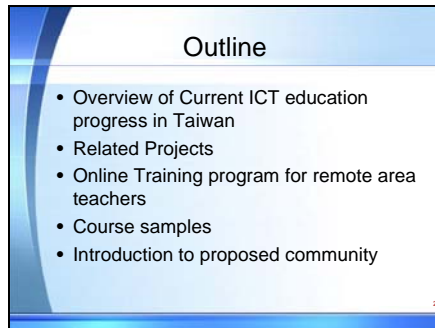
投影片 15

- Thank you
- ekomuniti@gmail.com
- Phone: 03 89214352-
- Fax:03 8921 4353

(二) 台灣
投影片 1



投影片 2



投影片 3

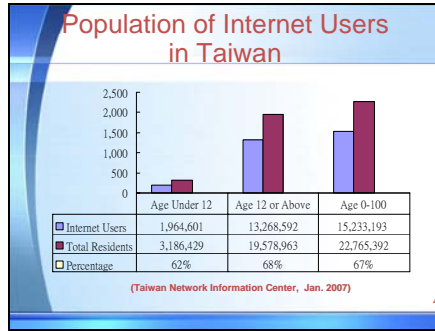


Taiwan, officially named Republic of China (R.O.C), is also known as Ilha Formosa, "the beautiful island". Located in Eastern Asia at 23°30'N, 121°00'E, the main island of Taiwan, totaling to nearly 35,980 sq. km, is the largest land between Japan and the Philippines in the west side of the Pacific Ocean, with the Taiwan Strait separating it from mainland China, about 220 km at its widest point. The climate is subtropical while 24 percent of the land area is arable, with the eastern two-thirds of the land being mostly rugged forest mountains, sharply sloped to gently rolling rich alluvial plains in the west where communities, farming activities, and industries are concentrated. As for demographics, the population totaled 22.7 million as of December 2004; median age: 33.7 years; life expectancy: 77 years; literacy rate: 96.1 percent; and major languages: Mandarin (official), Taiwanese, and Hakka.

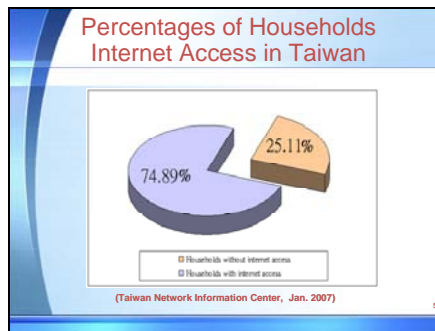
Turning to government structure, the R.O.C government is a multiparty democratic regime headed by a popularly-elected president and unicameral legislature (the Legislative Yuan). The Executive Yuan (a.k.a. the Cabinet) is the executive branch headed by the Premier, appointed by the President based on recommendations. The capital is Taipei City.

Taiwan is a modern industrialized megalopolis clinging to the fringes of an ancient culture. It is one of East Asia's four tiger economies due to its industrial strength and economic prosperity, characterized by a dynamic capitalist economy, coupled with gradually decreasing government guidance for investment and foreign trade. Taiwan is famous for dominating world market shares of computer products and electrical equipment. In 2004, the economy grew at a rate of 4.1 percent in addition to a per capita GDP of USD14,032 in the same year.

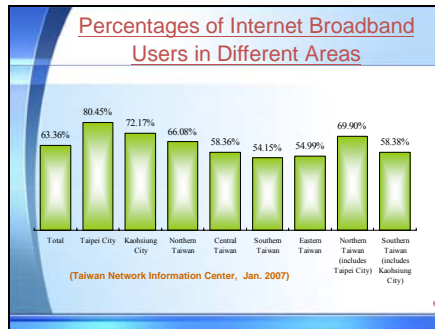
投影片 4



投影片 5



投影片 6



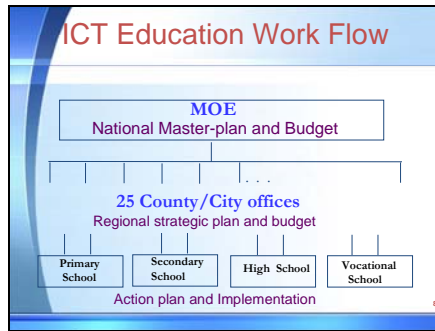
投影片 7

Educational overview

- **more than 5,000,000 students and 270,000 teachers in total**
- **compulsory education**
 - 6 years elementary
 - 3 years secondary
 - connected and integrated into a 1st-9th grade Curriculum
- **Statistics as of S. Y. 2007-2008**
 - Schools(k-12): 3,867
 - Universities and colleges: 164

7

投影片 8



投影片 9

Functions of MOECC

- ICT in education
- Taiwan Academic Network (TANet)
- e-learning policies and support measures
- e-Administration for educational systems and information management
- Bridging the digital divide in education

9

投影片 10

	1998/7/1	1999/6/30
University	100%	100%
High School	100%	100%
Middle School	72%	100%
Elementary School	24%	100%

投影片 11

-
- ICT Education Infrastructure Plan (1997~2007)
 - Master Plan for ICT Education (2001~2005)
 - Challenging 2008 : National Development Project — Building an e- Learning System for All (2002~2007)
 - Whitepaper on ICT in Education (2008~2011)

投影片 12

-
- Create Digital Opportunity for Rural Areas Plan (2005-2008)
 - Deployment of Digital Opportunity center (DOC) in 168 remote townships
 - Provide computer and internet access for all people
 - Provide digital learning programs and e-service for remote areas
 - Serves as an after-school learning facility for student
 - 113 DOCs by 2007

投影片 13

The Objective of DOC

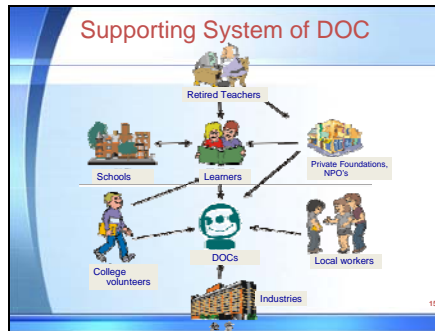
- Provide citizens with both ICT capability and spirit of humanism
- Construct a "People-Centered" internet learning environment
- Enhance the digital learning ability of local residents
- Develop local special features with digital applications
 - Digital education
 - Digital marketing
 - Cultural archiving
 - Caring for society

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投影片 14



投影片 15



投影片 16

ICT services by the ICT Volunteer Group

- Service to the elementary and secondary schools and DOCs in remote areas
- Online tutoring for after-school students to improve academic and ICT abilities
- Results of 2001-2007
 - 557 youth teams joined
 - Over 6,120 youth served as ICT Volunteers
 - 887 remote schools, 113 DOCs are served
 - 21,492 people got helped in total

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投影片 17

One Laptop Per Child (OLPC) Program

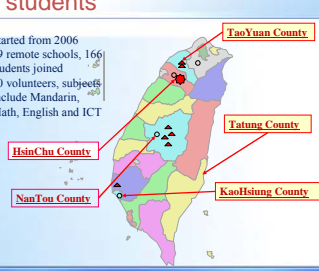
- Purchase low-priced PCs and donate to low-income families with school-aged children
- Provide equal ICT opportunities for students in low-income families
- To improve the ICT literacy and living quality of students and their families
- 8,000 PCs distributed in 2007

17

投影片 18

Online tutoring for after-school students

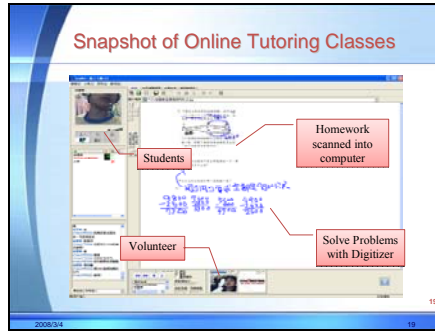
- Started from 2006
- 19 remote schools, 166 students joined
- 70 volunteers, subjects include Mandarin, Math, English and ICT



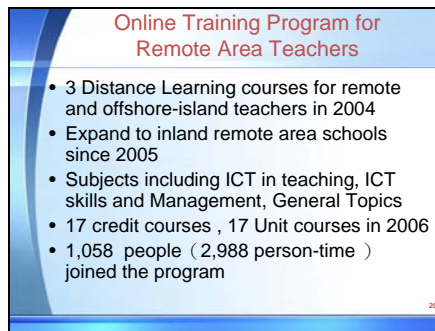
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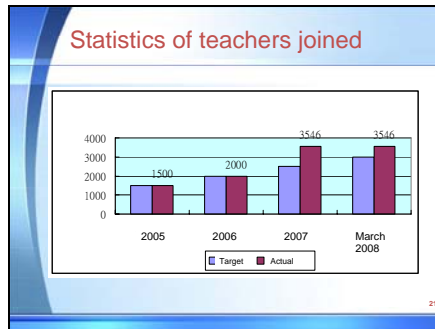
投影片 19



投影片 20



投影片 21



投影片 22

Website for Distance Learning Courses

- For offshore and remote area in-service teachers
- <http://go2school.sce.pccu.edu.tw/>
- Joint efforts of universities and local governments to provide learning opportunities for promoting literacy of remote area teachers

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投影片 23

Implementation Method

- eLearning courses in 6 categories and 30 course in total
- Studying results sent to local government teachers affiliated
- Studying hours and course credits recorded in teachers training website if meet course requirement

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投影片 24

Course Titles (1/6)

Category	Title	Hours
ICT in Education	Introduction to eLearning Design	9
	Introduction to ICT skills for teaching	15
	Best practice for ICT in education	12
	Internet in teaching	15
	eLearning teaching Design	9

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投影片 25

Course Titles (2/6)

Category	Title	Hours
eLearning fundamentals and applications	Theory and practice on On-line courses	9
	Open Source Software	15
	Trend and application of eLearning	12
	New trend for web 2.0 Concept	12

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投影片 26

Course Titles (3/6)

Category	Title	Hours
IT skills and management	Information Security Overview	9
	Introduction to MS Office	9
	Multimedia applications	15
	Operating System management	15
	PC maintenance	9

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投影片 27

Course Titles (4/6)

Category	Title	Hours
Education topics	Gender Mainstreaming Concept	6
	Class management	12
	Teacher specialties and Multi-culture impact in teaching	6
	Knowledge management in schools	6
	Internet literacy for teachers	6
	Design concept for Multimedia teaching material in folk custom	6
	Special Education concept	6

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投影片 28

Course Titles (5/6)

Category	Title	Hours
Languages	English	12
	English writing skills	12
	English stories	12
	English reading	9

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投影片 29

Course Titles (6/6)

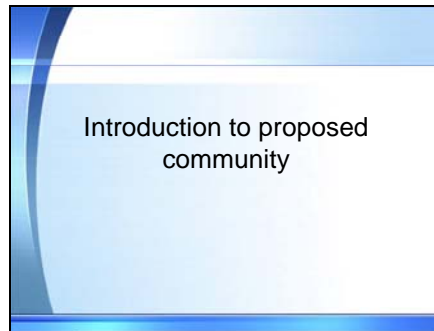
Category	Title	Hours
General topics	Time management and career planning	12
	Internet and life	6
	Communication skills	6
	Traditional Artistic Concept	9
	Anger Management	9

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投影片 30

- ### Sample of Course Outline
- Introduction to Information Security (9 hours)
 - Main Purpose
 - To realize the importance of IS, and use tools to protect the computer using environment
 - Course Outline
 - Introduction to Computer Network
 - Introduction to IS
 - Introduction to internet hackers
 - Security of OS
 - Personal protection software
 - Browser and email Securities
 - Weakness scanning and system maintenance
- 30

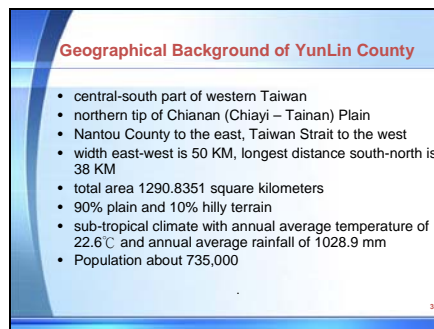
投影片 31



投影片 32



投影片 33



投影片 34

Background of ShanFeng

- Population : 200 residents
- ethnic groups : Taiwanese, Foreign spouse
- School : ShanFeng Elementary school
- Community goals
 - Agricultural products : orange, bamboo shoots
 - Coffee planting
 - Ecological education and tourism
 - Regimen village



投影片 35

Local Map of ShanFeng Community



投影片 36

Features of ShanFeng

- Natural Scenery
- Tung tree flowers
- crested serpent eagle
- bellflower
- Coffee field



投影片 37



投影片 38



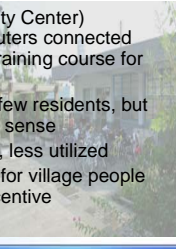
投影片 39



投影片 40

Environment and Infrastructure

- **DOC** (Digital Opportunity Center) provided with 12 computers connected to Internet, to provide training course for the villagers
- Small village with very few residents, but highly equipped with IT sense
- Almost 1 PC per family, less utilized
- Provide group courses for village people to increase learning incentive



投影片 41

Course held in DOC


- Basic Computer Concept (2005)
- word processing software (2005)
- Website design (2006)
- Family English class (2006)
- Agriculture product manufacturing (2007)
- eCommerce website design for agriculture product (2007)
- Local industrial opportunities (2007)



投影片 42

Coaching Group functions

- Course planning
- Teachers training
- Computer hardware/software maintenance
- Promotional activities
- Self-sustainable operation of DOC



投影片 43

Coaching Group for ShanFeng DOC

- HsinSenHwo Community development association
- ShanFeng elementary school
- National Formosa University
(<http://www.nfu.edu.tw/>)

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投影片 44


Contact Info of Coaching Group

- **Person in charge** : Mr. H.K. Chang
Tel : 886-937-749029
Mail : sanfonsct@yahoo.com.tw
- Contact 1: Ms. S.L. Cheng
Tel : 886-5-5829442
Mail : u9023015@yuntech.edu.tw
- Contact 2 : Ms. H. L. Wang
Tel : 886-935-721373
Mail : hlwang@dcc.com.tw
- Contact 3 : Mr. W.H. Chang
Tel : 886-5-5822075
Mail : birdfly@ylc.edu.tw

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投影片 45

Thank You for Your Attention!!



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(三) 中國
投影片 1

Bridging the Digital Divide
---- China's Experience

Dr. Liu Meifeng
Prof. School Of Educational Technology
Beijing Normal University, P.R.China

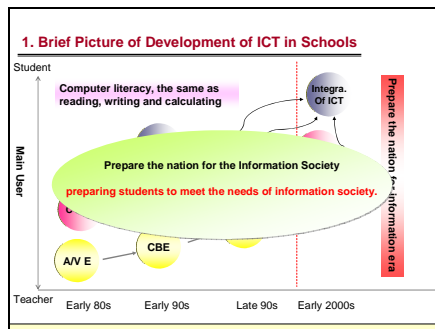
27th March 2008 Malaysia Conference

投影片 2

Overview

1. Brief Picture of Development of ICT in Schools
2. Digital Divide and Bridge Building
---- 'Project of Modern Distance Education in Rural Areas'
3. Future Development Prospects

投影片 3



投影片 4

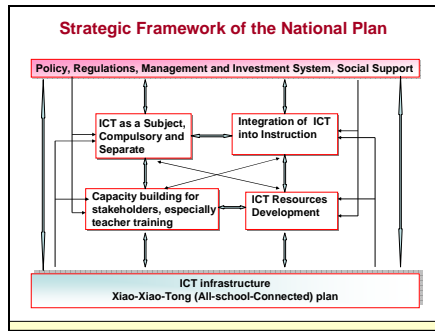
Important Landmark

National plan for Popularization of ICT in School Education
Issued on Nov.14, 2000, by Ministry of Education

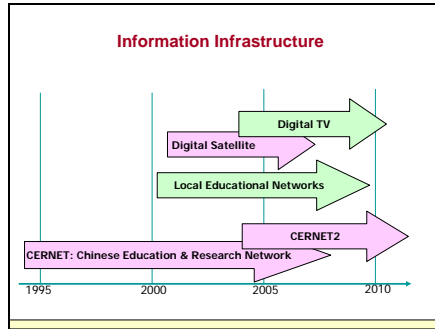
Action Plan for Vitalizing Education for the 21st Century (1999)
MOE, with approval of the State Council

Aim: it plans to take five to ten years since 2001 to popularize ICT education in School Education.
To promote modernization of education through application of ICT, and to strive for stride-leap development of basic education.

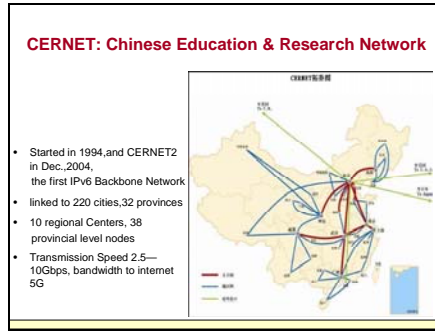
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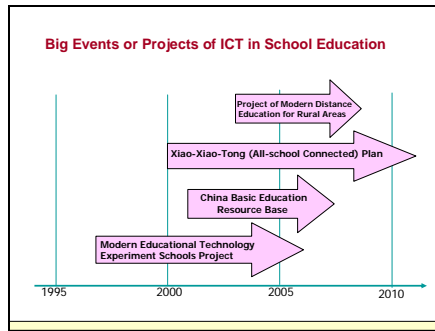
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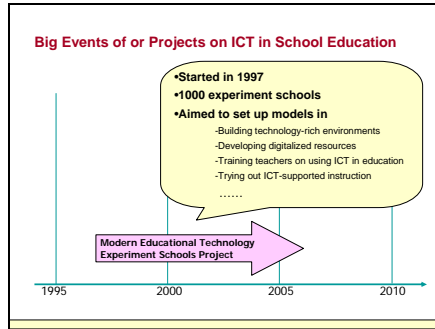
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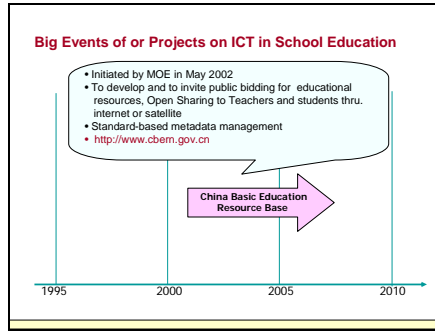
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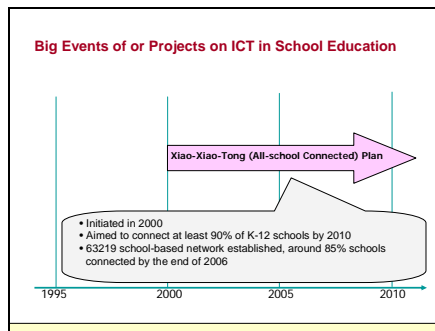
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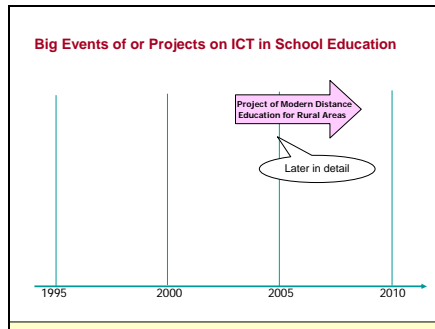
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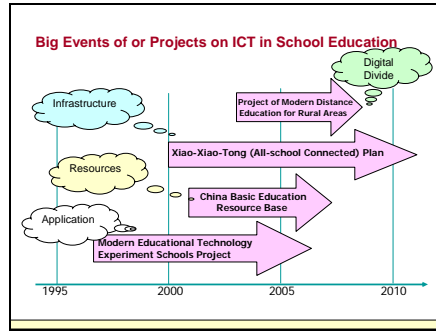
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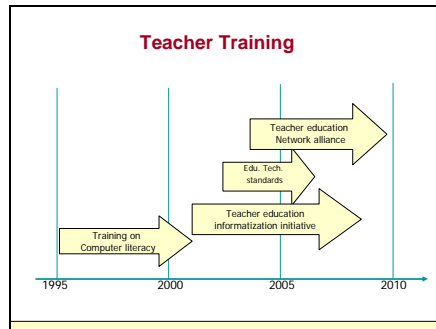
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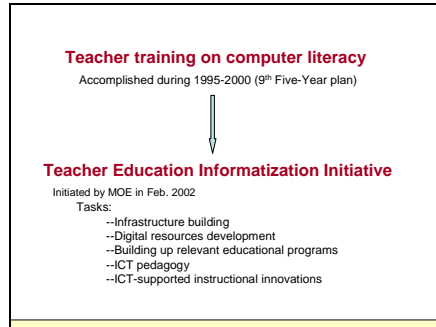
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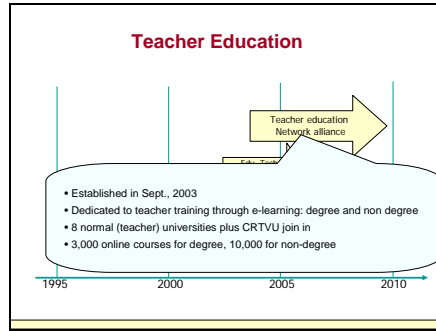
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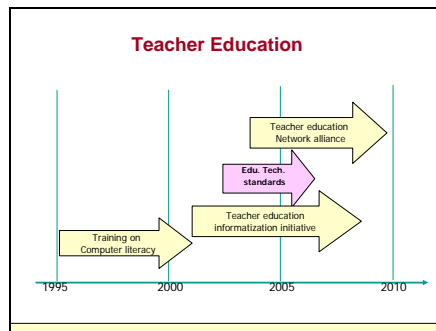
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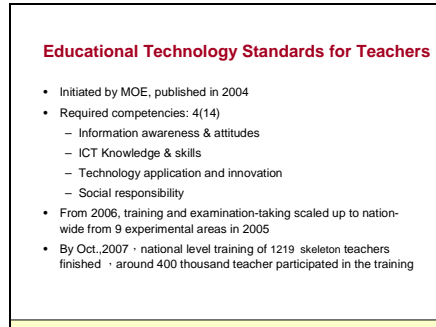
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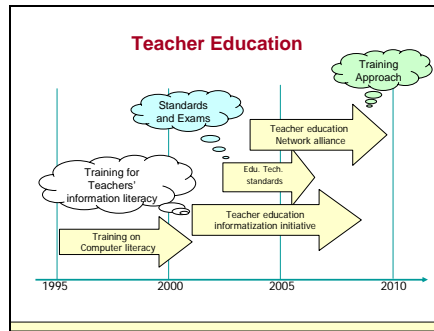
投影片 17



投影片 18



投影片 19



投影片 20

Overview

1. Brief Picture of Development of ICT in Schools
2. Digital Divide and Bridge Building
---- 'Project of Modern Distance Education in Rural Areas'
3. Future Development Prospects

投影片 21

OECD: Definition

- The term "digital divide" refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.


投影片 22



China: Digital Divide

- Urban areas VS Rural Areas
- Eastern areas VS Western Areas

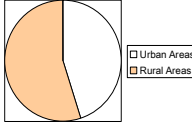
投影片 23



Population Between Urban and Rural Areas

-----By the end of 2007

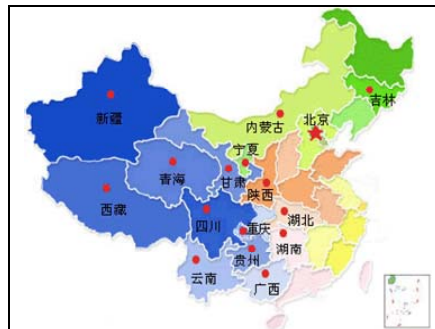
- By the end of 2007, the total population is 1,321,290,000
- 593,790,000 in town, 727,500,000 in rural areas, 56.1% in rural areas
- 55% out of total primary and Junior high school teachers in rural areas
- 65% out of total primary and Junior high school students in rural areas



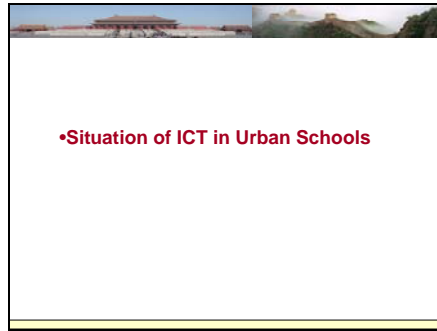
Legend: □ Urban Areas, ■ Rural Areas

Published on 28th, Feb 2008 by National Statistical Bureau

投影片 24



投影片 25



投影片 26



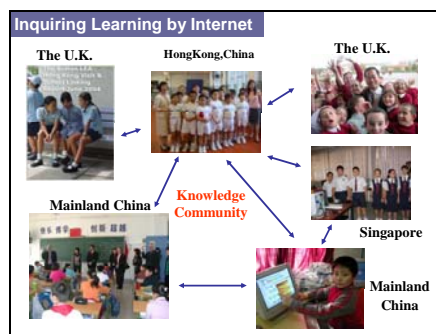
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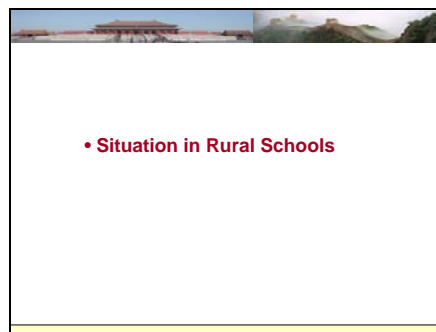
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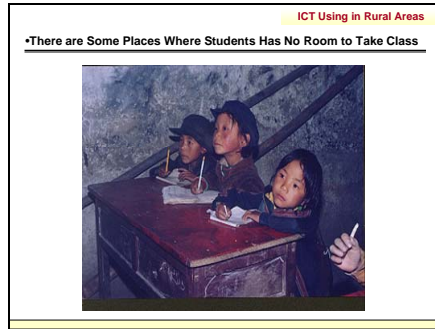
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投影片 30



投影片 31



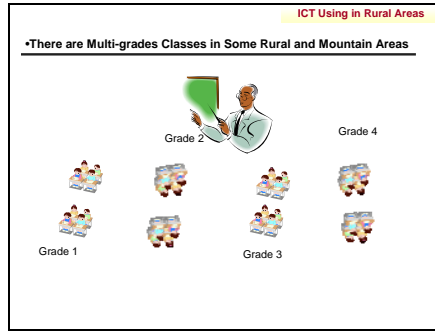
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投影片 33



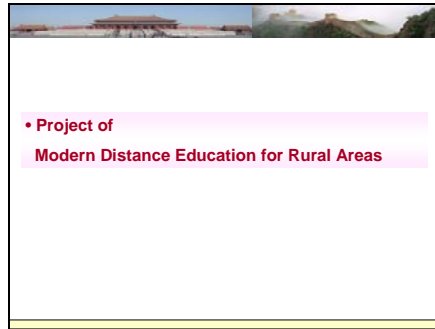
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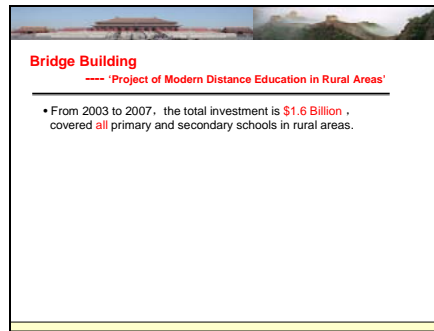
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投影片 36



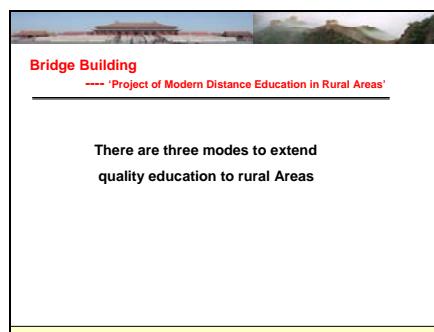
投影片 37



Bridge Building
---- 'Project of Modern Distance Education in Rural Areas'

- From 2003 to 2007, the total investment is \$1.6 Billion, covered all primary and secondary schools in rural areas.

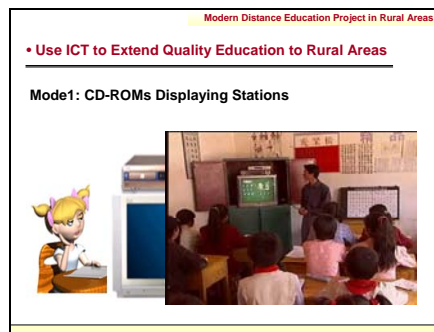
投影片 38



Bridge Building
---- 'Project of Modern Distance Education in Rural Areas'

There are three modes to extend quality education to rural Areas


投影片 39



Modern Distance Education Project in Rural Areas

- Use ICT to Extend Quality Education to Rural Areas

Mode1: CD-ROMs Displaying Stations

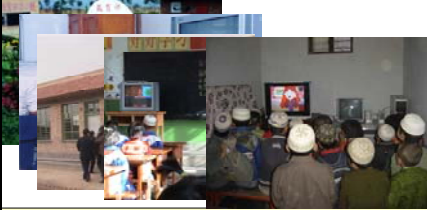


投影片 40

Modern Distance Education Project in Rural Areas

- Use ICT to Extend Quality Education to Rural Areas

Mode2: Educational Satellite Receiving & Playing Stations: TV set, DVD player, a complete set of CD-Rom; satellite receiving and playing facilities



投影片 41

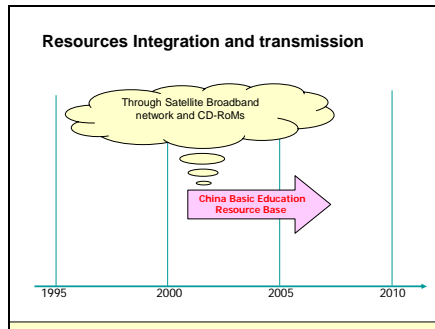
Modern Distance Education Project in Rural Areas

- Use ICT to Extend Quality Education to Rural Areas

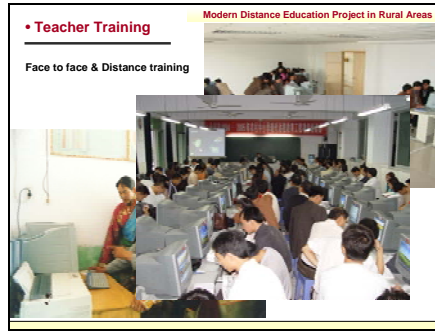
Mode3: Computer Classrooms -- For Junior High Schools



投影片 42



投影片 43



投影片 44



投影片 45



投影片 46


Modern Distance Education Project in Rural Areas

• Support and Service System

National Educational Technology Center Established

- Call center for distance service
- Technical supporting system
- Short message system
- Center of Educational Technology in Each Level

投影片 47



Bridge Building
---- 'Project of Modern Distance Education in Rural Areas'

- From 2003 to 2007, the total investment is \$ 1.6 Billion, covered all primary and secondary schools in rural areas.
- By the end of 2007, 402 thousand sets of DVD display station, 279 thousand sets of digital satellite receiving sites, 45 thousand sets of computer and multimedia device, 90% junior high schools connected, 80% primary schools connected thru. Satellite, 110 thousand teaching points, 250 thousand primary schools and 30 thousand middle schools covered
- DVD materials developed covered all grades and all subjects(8) of primary schools, some demonstrations, experiments and other materials, 9 subjects, for secondary schools. 100 million students in rural areas can share quality educational materials. \$14 million invested for resources development.

投影片 48



Benefits from
---- 'Project of Modern Distance Education in Rural Areas'

- Have alleviated the digital divide between urban and rural areas
- Have improved the quality of teachers and their way of teaching
- Have offered more classes, such as English and Music, etc.
- Have widen the vision of students
- Have provided good service for New Village in China

.....

投影片 49

Other Related Projects

- Li Ka Shing Project
- Beijing Oracle Distance Collaborative Learning Project
- MoE's Modern Distance Education Pilot Project
- Rural Primary and Secondary School Distance Education Pilot Project
- National Distance Education Project for Poverty Reduction
- UNDP403 Project
- China-Europe Basic Education Project

投影片 50

Modern Distance Education Project in Rural Areas

Gap Reducing

• **Basic Date by the End of 2006**

- Average Ratio of Student to Computer: 19.38 : 1
- Average Ratio in Urban Areas: 10.66 : 1
- Average Ratio in Town in Countries: 18.32 : 1
- Average Ratio in Rural Areas: 29 : 1


1999 Average Ratio of Student to Computer: 123 : 1
2001 Average Ratio of Student to Computer: 51 : 1
2003 Average Ratio of Student to Computer: 35 : 1

投影片 51


ICT as a Subject for All Students

- Computer education pilot program since later 1980s
- From **Computer Education into ICT education for all students** started from 2001, planned to be fully implemented by 2010
 - before 2003 for senior high schools
 - before 2005 for junior high schools
 - before 2010 for primary schools

By the end of 2006,
--100% for senior high
-- 90% for junior high
-- 20% for primary



投影片 52



Overview

1. Brief Picture of Development of ICT in Schools
2. Digital Divide and Bridge Building
--- 'Project of Modern Distance Education in Rural Areas'
3. Future Development Prospects

投影片 53

3. Future Development Prospects

- Emphasis of ICT: Equipment Installing or Application?



投影片 54

3. Future Development Prospects

- Emphasis of ICT: Equipment Installing or Application?
- Digital Divide Still Remains: Quality VS Quantity
- Quality of Teachers : **Rethinking the effect of training**
 - Instructional Design
 - How to organize cooperative learning
 - Why, When and how to choose and to use ICT
 -

投影片 55



投影片 56



投影片 57



投影片 58



投影片 59



投影片 60



投影片 61

3. Future Development Prospects


- Emphasis of ICT: Equipment Installing or Application?
- Digital Divide Still Remains: Quality VS Quantity
- Quality of Teachers

投影片 62

3. Future Development Prospects

- Emphasis of ICT: Equipment Installing or Application?
- Digital Divide Still Remains: Quality VS Quantity
- Quality of Teachers
- Sustainable Development of ICT Application
 - Equipment maintenance
 - Lack of enough equipments
 - Heavy work load of teachers
 - Stimulating system for teachers
 - Lack of full-time technology coordinator
 -

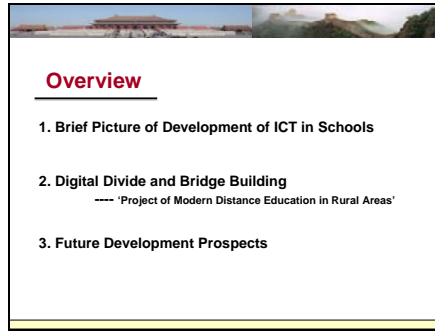
投影片 63



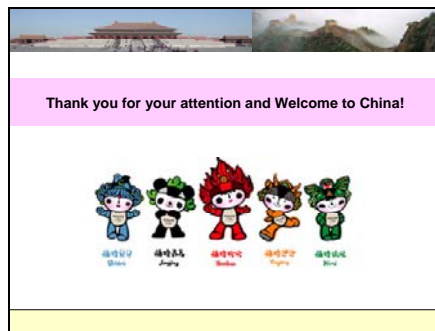
Closing Remarks

- Digital divide still remains and corresponding measures are still necessary; Quality training materials are needed as always
- **China Educational Technology Center** (<http://www.ncet.edu.cn/>) is the agency to execute related projects, and there are established infrastructure in rural areas to receive quality materials in China
- Needs assessment should be done in detail first before developing materials in order to meet each economy's needs

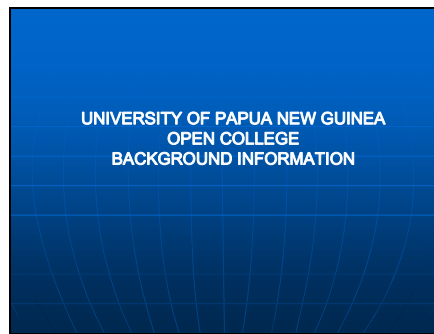
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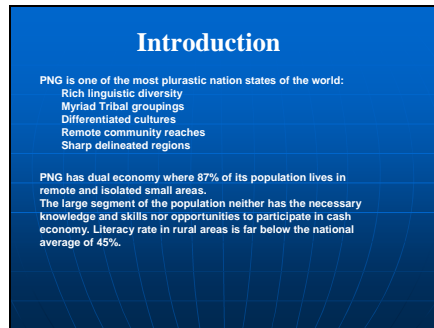
投影片 65



(四) 巴布亞紐幾內亞
投影片 1



投影片 2



投影片 3



投影片 4

Since 2002, estimated average of 60,000 Grade 10 & 12 School Leavers leave High & Secondary Schools each year:

Less than 15% enter Colleges & Universities.
Majority of the 85% that miss out are rural based and have no ways and means of furthering their education etc.

Remote & Isolated Areas in PNG context include:

Local villages – Constitute majority of the population.
Subsistence lifestyles & scattered along mountain ridges, rivers, isolated islands & atolls.
Direct communication & Accessibility difficult. Limited communication through LLG & PGs.
No access to basic electricity and modern communication & information system etc.

投影片 5

Local level Government Districts – Government, NGOs, Churches, Community Groups & Some Private Sector

Semi-rural of which majority have access to basic electricity and
Limited communication services in the form of telephone and postal services.
Direct communication & Accessibility possible for most DLGs.
Villages within vicinity of LLG HQs have access to basic services.

Provincial Government – Government, NGO & Community Groups & Some private Sector

All services provided
Villages & LLGs within vicinity of PG HQs have access to services.

投影片 6

Geographical Area of Economy with Adequate Technological Infrastructure, vis-avis poor & rural to be used as test bed for project.

投影片 7

The UPNG Open College currently plays a leadership role in addressing some of the current issues and concerns:

Through its clusters of Study Centers scattered throughout the country it is bringing education to the population at large.

Currently reaching out to geographically disperse rural areas not previously covered.

Particular emphasis is to accelerate the building of a PNG knowledge society.

投影片 8

The UPNG's strength as leading provider of program and course offerings in DE include:

Enhanced capacity in program development, instructional support, infrastructure and support systems.

More than 100 academics received specialized training in writing DE course materials. More are trained annually.

5 local Instructional Designers trained and appointed.

11 Certificate, Diploma & undergraduate Degree programs developed.

More than 100 courses developed and are now on offer.

投影片 9

UPNG is the only institution in the country that has developed a full capacity for developing learning materials and now supports other educational institutions and providers with instructional support in developing DE course materials.

投影片 10

Course Materials & Learner Support Systems

The UPNG has adopted a learner-centered instructional system. This system requires provision of self-instructional learning resources for study through its network of SCs.

Print mode is the main delivery method.

Learner Support Systems Include

Orientation program which is conducted at the beginning of each academic year for new students by senior UPNG OC headquarters and SC administrative staff on a range of issues including administrative procedures and processes of their academic programs.

投影片 11

Course Materials & Learner Support Systems

Counseling/Mentoring/Tutorial support which is provided on needs basis mostly provided by qualified industry and community based professionals which include - School Teachers, Lecturers from other educational institutions, professionals/experts from private sector industries, NGO groups, Church workers and other Community based groups who are appointed by the University.

Residentials which are conducted by Academics from the Schools who on visits meet with students for several days and give advice on learning methods including writing assignments and sitting for examinations among other academic activities.

Coordination, monitoring and tracking of assignments, exams and other student work materials submitted for assessment which is administered by the UPNGOC in consultation with the Schools.

投影片 12

**Use of Appropriate Technology,
Outreach to Remote, Rural and
Marginalized Communities**

投影片 13

The UPNG OC has adopted a multimedia approach to instruction.

Given the country's unreliable power supply system and low bandwidth (4K) for communication landline, there is a heavy reliance on print mode supplemented by CD and audio-visual learning materials.

The practical components of the programs use materials and agencies that are locally based and relevant to student's localities.

All other related academic activities including research and work attachments use local industries, NGOs, Community based groups and Government agencies.

The UPNG OC through its clusters of OCs, PUCs and FCs covers most of the remote and isolated areas of the country.

投影片 14

Major Stakeholders

投影片 15

The UPNG OC reaches out to its clients while maintaining close dialogue with its major stakeholders which include:

- The three levels of Government in PNG – Local, Provincial & National.
- NGOs & other Community Groups at Community, Local, Provincial & National levels.
- Local Private Sector Organizations.
- Local Business Community.
- International Community – COL & other sister OU's

投影片 16

All these agencies are involved in one way or another in the identification, development and offering of the range of Certificate, Diploma and Degree programs.

UPNG Current Client Base

The UPNG OC's current client base includes:

- Fresh School Leavers and dropouts* – Grade 10 & Grade 12 to enhance educational opportunities and community skills.
- Unemployed youths* – Grade 10 & 12 to enhance educational opportunities and community skills.
- Disadvantaged women* – enhance educational opportunities and community & professional skills.

投影片 17

- NGOs & Community workers and leaders* – Semi-skilled/Skilled to enhance career opportunities and community skills
- School Teachers in isolated and rural communities* - requiring supervisory & management skills to enhance career opportunities.
- Government & Private Sector workers in isolated and rural communities* – educational learning to enhance career opportunities
- Prisoners* - enhancing educational opportunities & community skills.

投影片 18

Background of the intended communities who will receive the final training.

投影片 19

The background of the two communities to receive the final training are:

1. Selected Local Communities in Minj

Minz is one of the Districts of the Western Highlands Province.

Population of South Whagi is about 56,000. Minj is about half of this.

The administrative headquarter of Minj is Minj.

Minz Township is connected to all the modern facilities – electricity, internet connection etc.

Nearest city is Mt Hagen, which is also the Capital city of Western Highlands.

投影片 20

Mt Hagen is within 1 – 2 hours drive out of Minj.

Minj & Mt Hagen are connected to the rest of the Highlands & Northern region by the Highlands highway by road and all other means.

Almost all the local communities that make up about 90% of the population are rural based.

Most of these are connected to Minz town-ship and the capital city by roads.

Majority of the local communities are located within approximately 100 kilometers vicinity of Minj town-ship.

投影片 21

Majority of local communities have direct road connection to Minj and Mt Hagen.

Land is fertile and the economy is rural based. Agricultural practices including Animal Husbandry are on small scale basis utilizing local methods.

The District has huge potential to be one of the major suppliers of fresh food and vegetables for local consumption and for export purposes.

投影片 22

2: Selected Local Communities in Kainantu (Aiuyara)

Kainantu is one of the Districts of the Eastern Highlands Province.

Aiuyara has population of about 10,000.

The District headquarter is Kainantu.

Kainantu Township is connected to all the modern facilities – electricity, internet connection etc.

Nearest city is Goroka, which is also the Capital city of Eastern Highlands.

Kainantu is about an hours drive out of Goroka.

投影片 23

Kainantu & Goroka are connected to the rest of the country and world by all other means.

Almost all the local communities (approximately 30 villages) that make up about 90% of the population are rural based.

Most of the communities are connected to Kainantu town-ship and Goroka by roads.

Majority of the local communities are located within approximately 100 kilometers vicinity of Kainantu.

Majority of local communities have direct road connection to Kainantu.

Land is fertile and the economy is rural based. Agricultural practices including Animal Husbandry are on small scale basis utilizing local methods.

The District has huge potential to be one of the major suppliers of fresh food and vegetables for local consumption and for export purposes.

投影片 24

Background of the Participating Agencies & their skills and knowledge to execute the intended program

投影片 25

The participating agencies will include:

1: The UPNG Open College

It is expected that the UPNG Open College will play overall coordinating role in executing the program. The Director and staff of the Mt Hagen Open Campus will be responsible for all logistics while the administration and other policy related activities shall be monitored and coordinated via the Office of the Executive Director in consultation with the other participating Agencies.

The Mt Hagen Open Campus is located in Mt Hagen City but currently has direct links with Minj and Kainantu.

投影片 26

Staff Strengths

Mt Hagen has staff strength of 1x Director, 1x Computer Laboratory Supervisor, 1 x Administrative Assistant/Officer and 1x secretarial/clerical support staff.

The Staff strength is complemented by:

- Periodical visits of Academics from each of the mainstream Schools of UPNG who provide academic support and advice on the range of subject areas.
- Locally based Part-Time Tutors and Mentors who provide tutorial & mentoring support on specific subject areas.
- Periodical visits of senior staff from OCHQ & UPNG administration who provide general advice & support.
- The Director and all the visiting academics from the Schools have Masters Degree as their basic educational qualification.
- The Part-time Tutors and Mentors are experienced and senior working professionals in relevant subject areas and other administrative & Technical staff have undergraduate degrees.

投影片 27

Facilities Available

The facilities available in Mt Hagen OC include:

- Computer Laboratory equipped with PCs and network & internet services.
- Office spaces & work rooms for limited number of staff and office equipment.
- All other facilities and services are hired from local institutions depending on needs and requirements.

投影片 28

2: Western Highlands Provincial Administration (WHPA)

UPNG OC currently has arrangement with WHPA under signed MOA. The MOA define responsibilities:

For UPNG,

- Those for Western Highlands Provincial Administration and
- Those that are shared.

Franchise Centers (FCs)

UPNG also has number of FCs in Western and Eastern Highlands. FCs are:

投影片 29

- Non Government Community Groups
- Local Churches
- Other Education Providers both Government & Non-Government and
- Private Sector Organizations

FC MOA's define responsibilities for:

- UPNG
- Those for FCs and
- Those shared.

Specific Arrangements

UPNG OC also has other specific arrangements with Institutions and individuals for hire of facilities both in Mt Hagen & Goroka.

投影片 30

3: Other Important Agencies to be Involved

Current UPNG & COL initiative aims to link research organizations and farmers to develop diverse programs to improve the skills base of the target groups – people working in agro based industries, to bring entrepreneurial skills to farmers, to provide information (such as marketing) and to improve access – to reach the unreached. These programs could be executed co-jointly with involvement from the following Agencies:

PNG Microfinance.

National Development Bank (Haus Moni Bilong Yumi)
The bank was insolvent in 2004. It has now been restructured as an organization, independent of Government, with a new board and new systems. It has made a profit for the last three years. The Bank is operating throughout PNG. It has a charter to help agriculture and small holders. The Bank is aware of the problem of training for small holders.

投影片 31

Department of Agriculture and Livestock

The DAL are acutely aware of the need to help farmers get access to appropriate knowledge and skills to help them not only survive but to improve their viability. They would like to be included as a partner in the proposed exercise.

DAL was moving down the technology track and were very excited about the web site which had been approved and should work in parallel with the COL/UPNG project.

National Agricultural Research Institute

NARI was established number of years ago with a mandate to help the small and subsistence farmers. Currently involved in research on a range of Agricultural products where they work with local people including farmers, women and Schools in face to face dealings.

投影片 32

Fresh Produce Development Agency

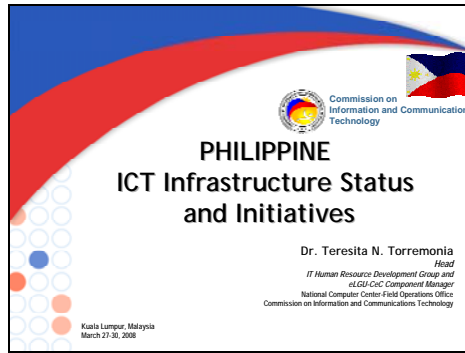
The FPDA is controlled by a board representing the stakeholders, principally DAL and Treasury. There are also representatives from wholesalers, farmers, small holders, PNG Institute of Directors, Women, Dept of National Productivity and Rural Development. The Board meets quarterly.

FPDA currently provides market information including capacity of farmers to capture good markets. They have developed an extensive network of Village Extension Workers who are trained to train people in their communities.

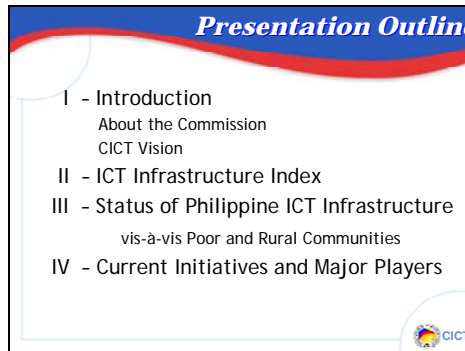
Provincial Department of Agriculture and Livestock

Minj & Mt Hagen – FPDA

(五) 菲律賓
投影片 1



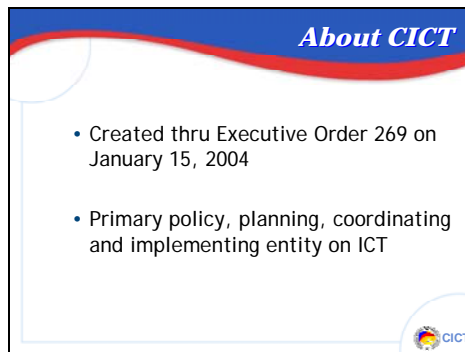
投影片 2



The first part of the presentation will dwell on the status of the Philippines in terms of e-governance, how are we doing for the past years, particularly the year 2005.

The second half of my presentation will be about the measures we are taking in regards to improving our stance in the global e-governance.

投影片 3



投影片 4

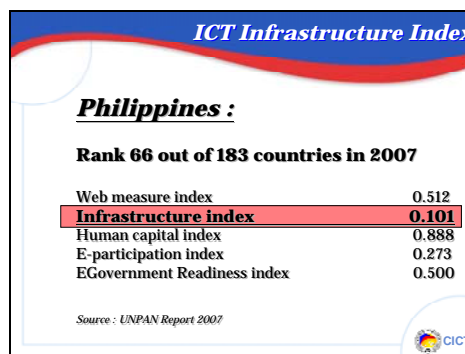


CICT Vision

a society where citizens have **access** to information and communication technologies that provide **quality** education, **efficient** government service, **sustainable** economic development, and a **better** way of life

CICT

投影片 5



ICT Infrastructure Index

Philippines :

Rank 66 out of 183 countries in 2007

Web measure index	0.512
Infrastructure index	0.101
Human capital index	0.888
E-participation index	0.273
EGovernment Readiness index	0.500

Source : UNPAN Report 2007

CICT

The e-Government Readiness Survey 2005 assesses more than 50,000 features of the e-government websites of the 191 UN member states to **ascertain how ready the Governments around the world are in employing the opportunities offered by ICT to improve the access to, and the use of, ICTs in providing basic social services.**

Web measure index. Assesses the websites of the government to determine if they are employing e-government to the fullest.

Infrastructure. Assesses the proliferation of ICT in government processes and dissemination to the public.

E-participation. Assesses “how relevant and useful the e-participation features of government websites around the world are; and how they are deployed by the governments for promoting participatory decision making.


Human Capital Index. Assessment of human skills, based on adult literacy and enrolment ration in schools.

投影片 6

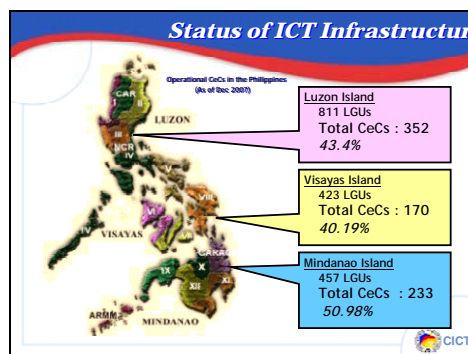
ICT Infrastructure Index

Philippines and other Asian Countries

2007 UN e-Readiness Survey	World Ave	Philippines	India	Malaysia	Thailand	Vietnam
Overall e-Readiness Index	0.433	0.500	0.381	0.606	0.503	0.456
Web Measure Index	0.354	0.512	0.478	0.676	0.505	0.445
Infra Index	0.210	0.101	0.044	0.302	0.151	0.108
Human Capital Index	0.742	0.888	0.620	0.839	0.853	0.815
e-Participation Index	0.191	0.273	0.250	0.296	0.296	0.523
e-Readiness Rank (out of 183)	-	66	113	34	64	91



投影片 7



It's a good thing we are actually doing well in terms of using our ICT resources in delivering our services to the public. Even though the Philippines were not included in the Top 25 countries, it's a good sign that we are rapidly climbing the ranks. It is good news that in just a span of a year, we have improve considerably. From Rank 47, we went 6 notches up the ranking ladder.

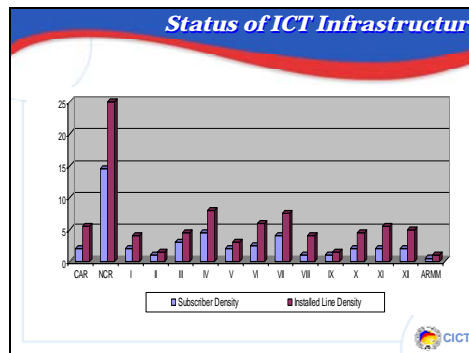
We have invested considerable resources in e-government, which is now reflected in our good performance level. This will encourage us to make continual efforts to improve our services and handle our resources well.

投影片 8

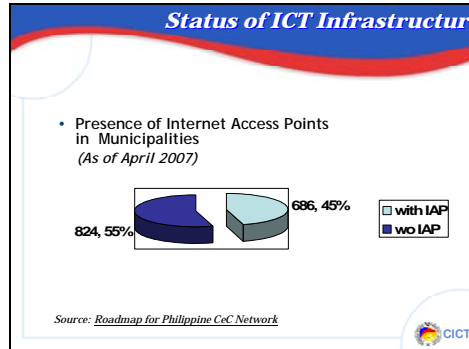
Target	NTDP (1990)	MTDP (2001-2004)	Status
Teledensity (installed fixed lines)	3.2% by 1998 6.2% by 2004 10% by 2010	12.7% by 2004	9.1% in 1998 8.7% in 2002 7.8% in 2005
PCO service/ Telecenters	PCOs in all municipalities by 2010 and 51% of barangays in 2010	Telecenters in all municipalities by 2004; public telephone service in all barangays	45% of municipalities have internet access points; 737 telecenters (as of Jan 2007); 96% of cities and municipalities have PCOs as of 2002
Cellular service	All cities and municipalities by 2010	100% of provincial capitals, cities and major highways	Network coverage of Smart and Globe now reached 99.9% and 96% of population, respectively
High Speed Broadband Service		In all cities by 2004	Est. no. of internet subscribers (1.4M) and about 7.8 M internet users

Source : ideacorp "Towards Universal Internet Access in the Phils" Jan 2008

投影片 9



投影片 10




投影片 11

Top 3 Areas with Adequate Infra

Three Philippine urban contact centers ranked as among the Top 10 Asian Cities (overall) :

- 1) Quezon City (7th) (Luzon Island)
- 2) Cebu City (8th) (Visayas Island)
- 3) Davao City (10th) (Mindanao Island)

Source : IDI Magazine Issue (Dec 2007- Jan 2008)



投影片 12

Poor and Rural Communitie

The largest increases in poverty in the Philippines :

- Southern Island Group including the :
 - » Autonomous Region of Muslim Mindanao
 - » Region XII in Mindanao Island
 - » Region IX in Western Mindanao



投影片 13

Initiatives

Philippine Strategic ICT Directions
(for Infrastructure)

- Provision of Universal Access to ICT
 - PhilCeC Program (2008-2010)

Source: Roadmap for PhilCeC



Ensuring universal access to

ICT. All citizens must have access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies.

The Philippine government is committed to ensuring universal access to ICT, and will prioritize programs to benefit marginalized sectors and underserved areas. Under this, we have the **Community e-center program, Low Cost Computing, National Broadband Plan, and the Last Mile Initiative.**

Developing human capital for sustainable human development. Programs to

develop Human Capital include 1)the **ICT Competency and Standards Development**, the creation of guidelines and standards to be used and applied in education and training; and 2)the **ICT4E**, the incorporation of ICT usage in education schema and the determining and accessing infrastructure necessary in all educational levels.

Strategic business development to enhance competitiveness in the Global ICT market. In here, we define the roles that the private sector and the government. The **private sector should remain as the prime mover of the ICT industry** while the **government play the role of the advocate.** **Legal and policy agenda for the Philippine sector.** The **provision of legal and regulatory reforms** are necessary to promote the country as a global knowledge player and ICT services provider.


投影片 14

Initiatives

Vision

“A community e-center in every municipality”

The Community e-Center is a self sustaining shared facility providing affordable access to ICT-based services and relevant content. It serves as conduit for efficient delivery of government and other services and a potent tool for empowerment and participation of unserved and underserved communities in development.



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投影片 15

Initiatives

GOALS

1. To provide connectivity to ALL municipalities of the Philippines
2. To identify, develop and provide access to content responsive to knowledge needs of the target customers
3. To ensure availability of competent CeC knowledge workers
4. To provide systems support to sustain management and operation of CeCs

CICT

Ensuring universal access to ICT. All citizens must have access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies. The Philippine government is committed to ensuring universal access to ICT, and will prioritize programs to benefit marginalized sectors and underserved areas. Under this, we have the **Community e-center program, Low Cost Computing, National Broadband Plan, and the Last**

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投影片 16

Initiatives

PhilCeC Network

"A learning and collaborative community of CeC stakeholders that will contribute to the achievement of the Philippine CeC Program vision and delivery of the mission thereby ensuring responsive, efficient, valuable, and sustainable CeCs."



Ensuring universal access to ICT.

All citizens must have access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies. The Philippine government is committed to ensuring universal access to ICT, and will prioritize programs to benefit marginalized sectors and underserved areas. Under this, we have the **Community e-center program, Low Cost**

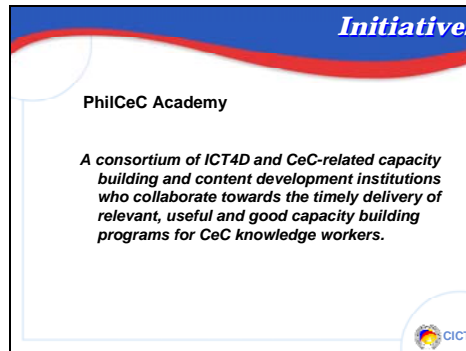
Computing, National Broadband Plan, and the Last Mile Initiative.

Developing human capital for sustainable human

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投影片 18



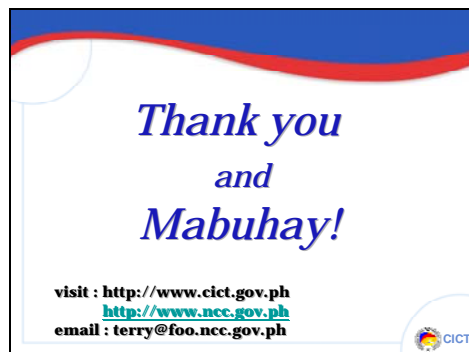
Major Players

The Major Players

1. CICT
2. Executive and Legislature
3. Energy Companies and TelCos
4. Local Chief Executives and Heads of Schools
5. Content Providers and Developers
6. Funding Agencies and Development Institutions
7. Philippine Community eCenter Academy
8. Philippine CeC Network
9. CeC Managers
10. Communities
11. Media

CICT

投影片 19



*Thank you
and
Mabuhay!*

visit : <http://www.cict.gov.ph>
<http://www.ncc.gov.ph>
email : terry@foo.ncc.gov.ph

CICT

投影片 1

**People's Communications for
Development – Sharing of
Philippine Findings**

*1st Workshop on: Capitalising
Information Technology for Greater
Access Among Poor and Rural
Communities*
Isis International Manila
27-29 March 2008

投影片 2

Premises & Assumptions

- Social divides or inequalities pre-exist the “digital divide” (e.g. inequities by class, gender, race, religion).
 - ICT-development is market-driven.
 - The use & development of ICTs take places in unique cultural, political, & economic contexts.
 - The value of ICT is in its utility or non-utility.
-

投影片 3

Framing the Information Society

- We see development not only as modernisation but also the protection of human rights & the promotion of peoples' freedoms.
 - We are moving away from a techno-deterministic interpretation of ICTs to an interactionist model wherein ICTs interact with the cultural, political, & economic landscape.
-

投影片 4

Focusing on Grassroots Women

- Poor women are among the most marginalised. We do not know how poor women communicate. We want to know poor women's interests, concerns, and realities. We want to put the conditions that silence poor women in the development agenda.

投影片 5

Overview of Research

- This 5-country study supported by IDRC examines how NGOs or intermediary groups use new & traditional ICTs to effectively empower grassroots women in 3 Asian countries (India, Philippines, Thailand) & 2 Pacific countries (Fiji & Papua New Guinea).

投影片 6

Overview of Research

- The general objectives of the study are : (1) to know the ICT environment and infrastructure in each country; (2) to determine actual ICT usage by intermediary groups in empowering grassroots women; (3) to know intermediary organisations' notions of empowerment and how these relate to perceived effectiveness of ICTs; & (4) to know grassroots women's notions of empowerment and how these relate to perceived effectiveness of ICTs.

投影片 7

Research Methodology

- Applied Qualitative Research – Key Informant Interviews (81 Intermediary Groups from the five countries)
- Review of Related Literature
- Focus Group Discussion (one organisation was chosen per country)

投影片 8

Focus of Presentation

- USAGE – Top ICTs used by intermediary groups in reaching grassroots women
- ACCESSIBILITY – Most and Least Accessible ICTs for reaching grassroots women
- EFFECTIVENESS – Most and Least Effective ICTs for reaching grassroots women
- Their notion of empowerment
- When is information empowering to them

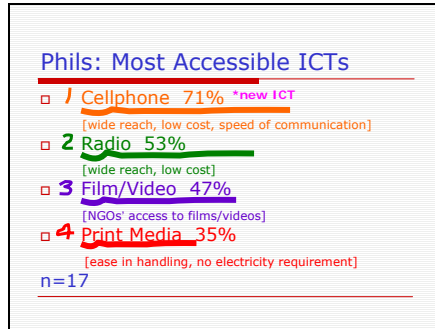
投影片 9

Phils: Top 5 ICTs Used

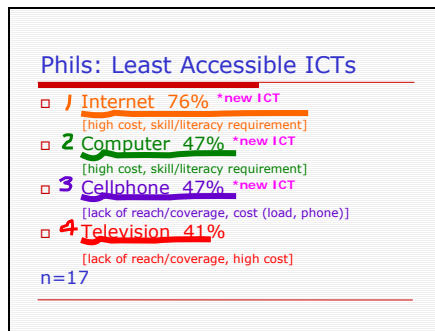
- 1 Film/Video 90%
- 2 Radio 80%
- 3 Computer-powerpoint 70% *new ICT
- 4 Theater 70%
- 5 Cellphone 65% *new ICT

n=20

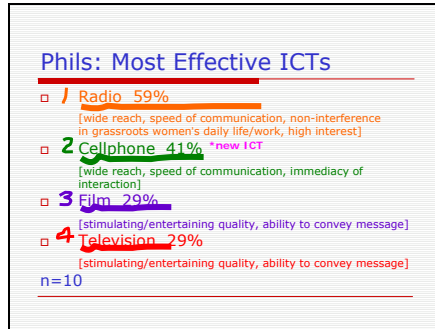
投影片 10



投影片 11



投影片 12



投影片 13

Phils: Least Effective ICTs

- 1 Computer 28% *new ICT
[high cost, skill/literacy requirement]
- 2 Internet 28% *new ICT
[high cost, skill/literacy requirement]
- 3 Letters 21%
[time delay in communication, low interest]
- 4 Books 21%
[lack of stimulating quality, low interest in reading]

n=14

投影片 14

What is Empowerment?

- Economic independence
- Political participation
- Community Organising
- Solidarity Building
- Individual Agency
- Societal Transformation

投影片 15

When is Information Empowering?

- Accessible
- Accurate
- Transformative
- Based on interactive dialogue
- Useful

投影片 16



(六) 日本
投影片 1

1st Kick-off workshop
“Capitalising IT for Greater
Access among Poor and Rural
Communities

Osamu Makino
Senior Advisor in ICT and Education
Japan International Cooperation Agency
March 27-28, 2008

投影片 2

Contents

- Japan’s distance education
- Case study
 - the South Pacific, Thailand, and Senegal
- ICT infrastructure
- Curriculum
- Conclusion

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投影片 3

Distance education in Japan

- The Open University of Japan is a typical distance education system. It provides degree programs and master programs throughout Japan via TV and radio broadcast.
- Various age groups are studying at home and 50 study centers located all over Japan. At the centers, face-to-face tutorial guidance, consultation, library service, self study reviewing of recorded programs, examinations are conducted.

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投影片 4

OIJ

- Recently, 83,126 students, of which 6,296 are taking master degree programs. Among the total number, male is 35,861 (43.1%) and female 47,265 (56.9%), and teen-ager is 5.7%, under thirty 18.1%, under forty 24.9%, under fifty 8,631 11.8%, under sixty 19.3%, and above sixty's 15.3%.
- Master courses include the fields of Environment, Business Management, Education, etc.

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投影片 5

JICA projects

- The University of the South Pacific
- Allama Iqbal Open University, Pakistan
- Multimedia University, Malaysia
- Distance education by TV program, PNG
- etc.

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投影片 6

Distance Education in The South Pacific

- In the South Pacific, the University of the South Pacific, whose main campus is in Fiji, has taken important roles of the distance learning for the Region. USP was established in 1968 as international organization, with 12 member countries in the Region.
- In addition to ordinary face-to-face education, unique distance education has been given to students in the Region. Currently, the University has four faculties, Art and Law, Science and Technology, Business and Economics, and Islands and Oceans.

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投影片 7

USP

- The conventional methods of distance education system were post and HF radio communications, which were slow and low efficient.
- In 1998, Japan provided the University with the satellite network infrastructure (USP-Net) as grant aid, collaborating with Australia and New Zealand.

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投影片 8

USP-Net

- The USP-Net links all campuses in member countries with audio/visual two-way communications. Since then, the USP distance education system had been enormously improved with the USP-Net.
- From July 2002 for 3 years, JICA implemented technical cooperation project providing experts for staff development.
- Recently, the USP upgraded it to IP-based satellite system by their efforts for the maximum utilization of the allocated bandwidth with the latest technology.

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投影片 9

Current issues in the Pacific

- Issues related to ICT in the Region are how to deliver many kinds of information to various groups, such as schoolteachers, medical staff, local government officials, and ordinary people living in remote islands where there is no electricity, no telephone, and access is difficult.
- Few people and poor productivity in the islands are typical features. Therefore, telecom providers are reluctant to expand their network to the islands.

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投影片 10

Thailand

Law and regulations

- Telecommunications business act 2001 was stipulated.
- Frequency management is still difficult issue in the circumstance that new technology is introduced into telecomm and broadcast industry. Specifications of communications infrastructure are also carefully examined.

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投影片 11

Thailand

- ICT stimulates new business chances in communities. OTOP (One Tambon One Product) is good example in Thailand.
- The poor in urban community, the elderly and the disable should be focused in ICT.

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投影片 12

Rural community Project in Thailand

- The purpose of the project is to connect rural villages and access to the people. This is to respond to social needs, local government support, medical services, schoolteacher training, etc., but economical feasibility is not assured due to little economic activity.
- The sites of projects are North of Chiang Rai, near the boarder with Myanmar. The mountainous environments of the sites are critical to the deployment of physical communication network for both radio and fiber connections. Therefore, latest radio communications system, WiMax is attempted to introduce.

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投影片 13

NEEDS

- Local real needs for ICT should be sought.
Why local people need ICT?
- Local human resource to operate ICT is to be considered

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投影片 14

Senegal (1)

Illiterate's training

- This programme is based on Multimedia Cyber Centre development in Senegal. A centre is composed of a local radio and a cyber centre.
- It costs about USD 48,000 for 10 PCs. The programme is mainly financed by UNESCO & Switzerland and planned to establish 50 CMC in 3 years.
- ITU is the technical partner with 3 pilot projects: Senegal, Mali & Angola.

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投影片 15

Senegal (2)

- Until now, 20 CMC have been established in case of Senegal. The difficulty is related to the radio component since it's not easy to get radio frequency (safety & political inquiry is needed). Furthermore, radio component is the most costly.
- As for the cyber component, the difficulty is due to the fact that SONATEL (the only fix phone operator) doesn't have access to all villages. So that among 20 established CMC, some are operating but for others, the equipment is used only locally with operation software (Word, etc...).

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投影片 16

Senegal (3)

- With REVA programme (Back to Agriculture), the goal is to use ICT to teach farmers cultivation techniques (how, when, how long to grow potatoes, type of soils needed, etc...).
- With this programme, no word is used for teaching but rather images (for example rice image will allow accessing to information about how to grow rice and the symbolical traditional farming tool of each ethnic group will allow listening the course in that language).

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投影片 17

ICT infrastructure necessary for distance education and training

- Trunk lines
Fiber optics, Microwave link, Satellite link,
- Broadcast transmitter (FM, AM), Internet with WiMax, Internet with HF radio
- Community Centers
PC (100 dollar, used PC), Electric Power (Solar, Small scale hydro generator),
- Training for trainers, maintenance facilities, management,
- Finance
Universal Service Fund, NGO

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投影片 18

Target group: Poor farmers

- Target group: The poor in remote community
- Agriculture extension officers are dramatically reduced and not functioning well as results of government structural adjustment aiming at small government.
- The number of poor farmers is not reducing.
- One of the reasons may be that they cannot receive appropriate and timely information for their productive daily works, which the extension officers provided before.

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投影片 19

Information needed to disseminate to farmers (1)

- Knowledge and skills in Agriculture
- Sustainable agriculture, new agriculture products, organic farming, tools, pesticides, fertilizer, etc.
- Natural environment
Soil, Erosion, Forest conservation, River, Lake
- Life improvement
Disease, Health (especially mother and child), Hygiene, Sanitation, Nutrition, Cooking methods,

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投影片 20

Information needed to disseminate to farmers (2)

- Weather
Daily and long-term weather information
- Distribution, agribusiness, products processing
In addition to the knowledge and skills related to production, farmers has to know to add values about distribution and processing.
- Documentation
How to access and to formulate proposals to NGO or donors
- Finance
How to apply financing
- Local languages and visual pictures are to be used in the training materials.

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投影片 21

Conclusion

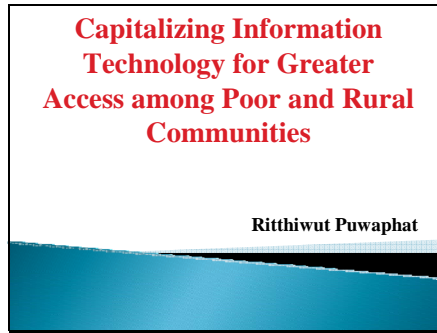
Following items to be made clear,

- Target group or beneficiaries
- Information in the curricula
- Curriculum developer (contents designers and field experts)
- How to deliver the information (ICT expert)
- ...

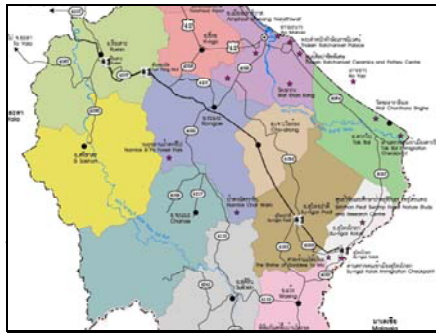
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(七) 泰國

投影片 1



投影片 2



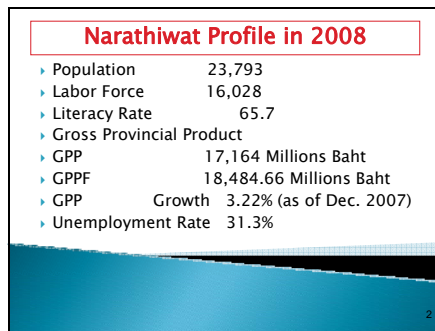
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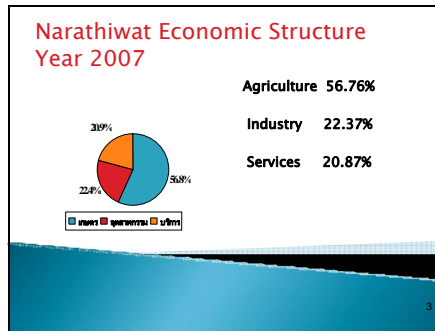
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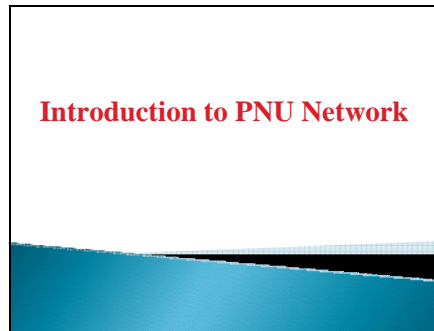
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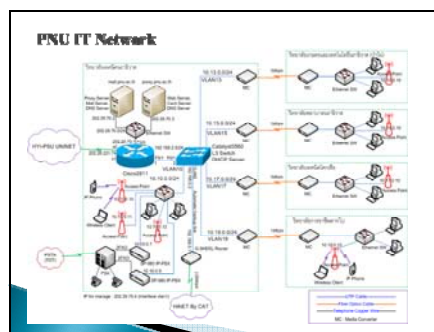
投影片 6



投影片 7



投影片 8



投影片 9

What is Ubuntu? (1/3)

- ▶ Ubuntu is a **community** developed operating system that is perfect for laptops, **desktops** and **servers**. Whether you use it at home, at school or at work Ubuntu contains all the applications you'll ever need, from word processing and email applications, to web server software and programming tools.
- ▶ Ubuntu is and always will be **free of charge**. You do not pay any licensing fees. You can download, use and share Ubuntu with your friends, family, school or business for absolutely

投影片 10

What is Ubuntu? (2/3)

- ▶ Ubuntu issue a **new desktop and server release every six months**. That means you'll always have the the latest and greatest applications that the open source world has to offer.
- ▶ Ubuntu is designed with security in mind. You get **free security updates for at least 18 months** on the desktop and server. With the Long Term Support (LTS) version you get three years support on the desktop, and five years on the server. There is no extra fee for the LTS version, we make our very best work available to

投影片 11

What is Ubuntu? (3/3)

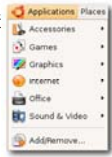
- ▶ **Everything you need on one CD**, which provides a complete working environment. Additional software is available online.
- ▶ The graphical installer enables you to **get up and running quickly and easily**. A standard installation should take less than 25 minutes.
- ▶ Once installed your system is immediately **ready-to-use**. On the [desktop](#) you have a full set of productivity, internet, drawing and graphics applications, and games.

On the [server](#) you get just what you need to get

投影片 12

What does Ubuntu mean?

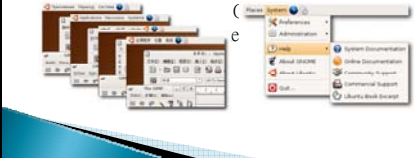
- ▶ Ubuntu is an African word meaning 'Humanity to others', or 'I am what I am because of who we all are'. The Ubuntu distribution brings the spirit of Ubuntu to the software world.

A screenshot of the Ubuntu desktop application menu. The menu is open, showing a list of application categories: Applications, Places, Accessories, Games, Graphics, Internet, Office, and Sound & Video. At the bottom of the menu is an 'Add/Remove...' option. The background of the slide shows a blue and black abstract graphic.

投影片 13

Ubuntu Desktop Edition (1/2)

- ▶ With Ubuntu Desktop Edition you can surf the web, read email, create documents and spreadsheets, edit images and much more. Ubuntu has a fast and easy graphical installer



投影片 14

Ubuntu Desktop Edition (2/2)

- ▶ **A complete office**
 - **Word processor** - for anything from writing a quick letter to producing an entire book.
 - **productivity suite**
 - **Spreadsheet** - a tool to calculate, analyse, and present your data in numerical reports or charts.
 - **Presentation** - an easy, and powerful tool for creating effective multimedia presentations.
- ▶ **System Requirements**
 - Ubuntu is available for PC, 64-Bit and Mac architectures. CDs require at least 256 MB of RAM. Installation requires at least 4 GB of disk space.

投影片 15

Ubuntu Server Edition (1/2)

- ▶ The Server Edition - built on the solid foundation of Debian which is known for its robust server installations — has a strong heritage for reliable performance and predictable evolution.
- ▶ **Integrated and secure platform**
 - As your business grows, so does your network. More applications need to be deployed and more servers are required. Ubuntu Server Edition offers support for several common configurations, and simplifies common Linux server deployment processes. It provides a well-integrated platform enabling you to quickly and easily deploy a new server with any of the standard internet services: mail, web, DNS, file serving or database management.
 - A key lesson from its Debian heritage is that of security by default. Ubuntu Server has no open ports after the installation and contains only the essential software needed

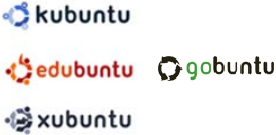
投影片 16

Ubuntu Server Edition (2/2)

- ▶ **Lower Total cost of ownership with automatic LAMP installation**
 - In around 15 minutes, the time it takes to install Ubuntu Server Edition, you can have a LAMP (Linux, Apache, MySQL and PHP) server up and ready to go. This feature, exclusive to Ubuntu Server Edition, is available at the time of installation.
 - The LAMP option means you don't have to install and integrate each of the four separate LAMP components, a process which can take hours and requires someone who is skilled in the installation and configuration of the individual applications. Instead, you get increased security, reduced time to install, and reduced risk of

投影片 17

Ubuntu related project



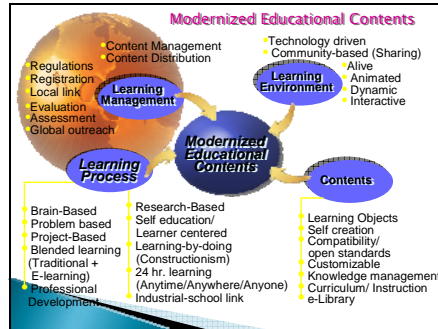
The slide displays four logos for Ubuntu-related projects: kubuntu (blue), edubuntu (red), gobuntu (green), and xubuntu (black). Each logo consists of a circular icon with a gear-like pattern followed by the project name in lowercase letters.

投影片 18

Presentation Outline

1. Learning and using ICT to **survive in the digital Knowledge-Based Economy World**
2. Setting up the **National e-strategic plan** and e-Government to meet world ICT Literacy Indicator
3. **E. Education ICT strategic Roadmap**
 - ICT Literacy Standards for K-12 and University students
 - ICT Infrastructures, Schools accessibility to Internet
 - ICT Application for School management and teaching-learning process
 - E-learning : a key to success for **EDUCATION FOR ALL** access ability

投影片 19



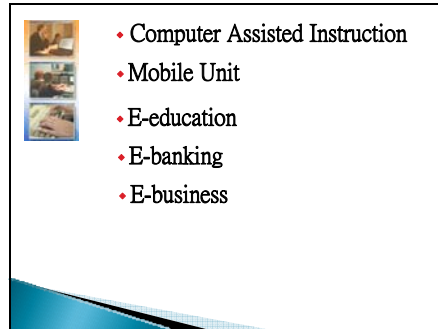
The THINK - Modernized Educational Strategy is set up. It comprise of 4 segments: **Learning Management, Learning Environment, Learning Process and learning Contents.**

投影片 20



My last slide introduce you to the **BEST WEBSITE EXAMPLE OF SCHOOL ICT IN Action** from www.sofweb.vic.edu.au. I do hope that you have some time to search for other success and best practices for your own work.

投影片 21



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投影片 22



(八)印尼
投影片 1

Capitalizing Information Technology for Greater Access among Poor and Rural Communities: *Indonesia*

By: Paulina Pannen & Losina Purnastuti
Universitas Terbuka and Universitas Negeri Yogyakarta
Indonesia
2008

投影片 2

Indonesia: demographic data

- Wide: 1 904 556 square meter
- Population: 238 452 352
- GDP per capita \$1 663
- Human Poverty Index (UNDP) 22.7 (2005)
- Human Development Index (2005) 69.6

投影片 3

Socioeconomic Situation

Distribution of Poor People Population and Literacy

Source: Baku Kemiskinan Indonesia, 2007

投影片 7

Socioeconomic Situation

WORK FORCE GROUPS BASED ON AGE AND SEX CATEGORIES (2007)

Among 162 million, around 66.67% are in the work force or 43.76% of the total population

Age Groups	Male	Female	Amount
15 - 24	13,972,294	8,784,508	22,756,802
25 - 34	17,814,783	10,758,841	28,573,624
35 - 44	15,732,980	9,372,281	25,105,261
45 - 54	11,418,310	6,537,432	17,955,742
55+	9,006,328	4,733,301	13,739,629
TOTAL	67,944,695	40,186,363	108,131,058

投影片 8

Socioeconomic Situation

POPULATION OF ABOVE 15 YEARS OLD WORK FORCE

Level of education	2005	
	Amount	%
Did not/ not gone to school	5,518,811	5.81
Did not/ not yet graduated from Elementary school	12,453,571	13.12
Elementary School	35,418,816	37.30
Junior High School	17,193,368	18.11
Vocational Junior High School	1,365,270	1.44
Senior High School	11,566,173	12.18
Vocational Senior High School	6,282,325	6.62
Diploma III	974,701	1.03
Academy/Diploma III	1,198,522	1.26
Universities	2,976,561	3.13
Total	94,948,118	100.00

投影片 9

Socioeconomic Situation

Illiteracy rate

NO	PROVINSI	TOTAL	
		Jumlah	%
PROVINSI-PROVINSI > 10 %			
1	Papua	317,899	23.33
2	Nusa Tenggara Barat	484,882	15.50
3	Sulawesi Selatan	682,886	12.65
4	Bali	338,956	12.62
5	Jawa Timur	3,315,885	11.75
6	Irian Jaya Barat	47,957	10.05
PROVINSI-PROVINSI < 10 %			
1	Nusa Tenggara Timur	251,359	9.71
2	DIY Yogyakarta	251,866	9.17
3	Jawa Tengah	2,145,703	8.94
4	Kalimantan Barat	267,545	8.44
5	Sulawesi Tenggara	114,308	7.85
6	Lampung	318,647	5.93
7	NTA Darussalam	152,257	5.38
8	Bengkulu	84,212	5.34
9	Maluku Utara	31,856	5.13
10	Sulawesi Barat	34,744	5.05

投影片 10

Socioeconomic Situation

Illiteracy rate

NO	PROVINSI	TOTAL	
		Jumlah	%
	PROVINSI-PROVINSI	45	
1	Bangka Belitung	35,472	4,84
2	Kalimantan Selatan	115,505	4,74
3	Jambi	81,053	4,15
4	Jawa Barat	1,189,365	4,01
5	Sulawesi Tengah	21,280	4,01
6	Kepulauan Riau	42,033	4,00
7	Kalimantan Timur	76,326	3,98
8	Gorontalo	22,369	3,84
9	Maluku	27,816	3,14
10	Sumatera Utara	273,356	3,11
11	Sumatera Selatan	150,923	3,05
12	Banten	198,441	2,87
13	Kalimantan Tengah	42,635	2,64
14	Sumatera Barat	76,025	2,43
15	Riau	78,254	2,16
16	Sulawesi Utara	15,519	0,93
17	Jakarta	59,430	0,84
	INDONESIA	11,401,284	6,91

投影片 11

Socioeconomic Situation

Number of schools	Pre-primary			Primary			Secondary		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
Indonesia	330	49,753	50,083	137,396	10,397	147,793	20,936	15,902	36,838

Enrollment rate	Pre-primary	Primary	Secondary
Indonesia	2,178,875	25,997,445	13,119,769

Number of Teachers			
Indonesia	178,727	1,335,086	978,057

投影片 12

Socioeconomic Situation

Highest Gross Enrollment Rate (2007)			Lowest Gross Enrollment Rate (2007)		
NO.	Province	GER	NO.	Province	GER
1	DKI	112.45	1	NTT	69.78
2	DIY	111.70	2	PAPUA	72.21
3	BALI	99.78	3	PAPUA BARAT	74.65
4	JATIM	99.74	4	SULTENG	76.33
5	NAD	99.45	5	KALBAR	76.88

High GER : > 95% Low GER : < 95%

投影片 13

Socioeconomic Situation

GER vs NER (2007)				
NO	Levels	GER	Number	NER
1	TK	45.00%	4.215.070	22.87%
2	SD	114.15%	30.080.099	99.01%
3	SMP	98.00%	12.670.563	68.74%
4	SMA	29.46%	3.839.500	24.60%
5	SMK	33.30%	4.340.024	29.74%

投影片 14

Socioeconomic Situation

APK Terendah dan Tertinggi di 10 Kab./Kota Tahun 2007 untuk SMP dan Sederajat

APK Terendah < 80%			APK Tertinggi > 95%		
No	Kab./Kota	APK	No	Kab./Kota	APK
1	Kab. Sukoharjo	45.22	1	Kota Yogyakarta	121.21
2	Kab. Wonorejo	48.52	2	Kota Surakarta	124.10
3	Kab. Sunda Baru	48.85	3	Kota Salatiga	124.82
4	Kab. Donggala	55.47	4	Kota Mangrove	125.81
5	Kab. Sukoharjo	56.02	5	Kota Cirebon	126.45
6	Kab. Widyadarmas	55.54	6	Kota Prabon	126.41
7	Kab. Karang	55.58	7	Kota Jakarta Selatan	126.14
8	Kab. Magu	57.47	8	Kota Pangkajene-Parigi	127.82
9	Kab. Pangasinan-Atenas	58.41	9	Kota Bandung	127.24
10	Kab. Riau-Andar	59.91	10	Kota Padang-Selompon	127.24

投影片 15

Socioeconomic Situation

Higher Education Profile

Component	Year		
	2005	2006	2007
People of age 19-24	25.347.200	25.349.300	25.350.900
Number of students	3.868.359	4.285.645	4.375.505
Public HEI	805.479	824.693	978.739
Private HEI	2.243.761	2.567.879	2.392.417
Polytechnics	48.493	51.318	47.253
Islamic Colleges	508.545	518.901	506.247
Universitas Terbuka	262.081	322.854	450.849
GER (%)	15.26	16.91	17.26%

投影片 16

Socioeconomic Situation

Higher Education Profile (by gender)

Komponen	2005		2006		2007	
	M	F	M	F	M	F
People of age 19-24	12.708.400	12.638.800	12.745.500	12.603.800	12.782.600	12.568.300
Number of students	1.939.156	1.929.203	2.147.186	2.138.459	2.243.968	2.131.537
- Public HEI	415.885	389.594	425.806	398.887	505.323	473.416
- Private HEI	1.109.693	1.134.068	1.269.992	1.297.887	1.269.992	1.103.231
- Polytechnics	26.271	21.822	28.225	23.093	25.989	21.264
- Islamic Colleges	252.747	255.798	257.894	261.007	251.605	254.642
Universitas Terbuka	134.160	127.921	165.269	157.585	171.865	278.984
GER (%)	15.25	15.26	16.85	16.97	17.55	16.96

投影片 17

Socioeconomic Situation

Higher Education Profile (non-participant per area)

NO	KOPERTIS	PENDUDUK 19-24	APK REGIONAL	PENDUDUK 19-24 TIDAK KULIAH	PROVINSI
1	KOPERTIS I	2.089.100	14.67%	1.757.030	NAD, SUMUT
2	KOPERTIS II	2.221.500	6.71%	2.072.437	SULSEL, BENGKULLU, LAMPUNG, BABEL
3	KOPERTIS III	1.015.800	63.00%	375.846	DKI JAKARTA
4	KOPERTIS IV	5.487.600	6.77%	5.274.863	JABAR, BANTEN
5	KOPERTIS V	391.900	63.36%	143.637	DIY
6	KOPERTIS VI	3.467.800	7.23%	3.207.894	JATENG
7	KOPERTIS VII	3.718.500	10.94%	3.345.163	JATIM
8	KOPERTIS VIII	1.353.200	7.82%	1.247.380	BALI, NTT, NTB
9	KOPERTIS IX	1.833.800	12.27%	1.608.793	SLUT, SULTEG, SULSEL, SULTEG, GORONTALO
10	KOPERTIS X	1.603.700	10.73%	1.431.623	SUMBAR, RIAU, JAMBI
11	KOPERTIS XI	1.504.300	6.41%	1.407.874	KALIMANTAN
12	KOPERTIS XII	633.300	9.81%	484.383	INKLUDIR PAPUA
TOTAL		28.356.900		22.355.114	

Note: GER per area (not including students of UT, Polytechnics, and Islamic Colleges)

投影片 18

Socioeconomic Situation

Higher Education Profile (teacher upgrading)

Jenjang	Jml Guru	Jumlah Tertinggi						
		SLTA	D1	D2	D3	S1	S2	S3
TK/RA Presk	17449	63.49	5.41	18.56	1.78	10.69	0.07	0.00
SLB Special Ed	10.154	16.41	2.34	28.39	7.91	44.46	0.49	-
SD Elemt	1.250.032	33.39	0.92	47.12	1.91	16.57	0.09	0.00
MI Is. Elemt	204.774	46.27	11.52	22.43	4.44	15.29	0.05	-
SMP Junior H	488.206	8.02	7.42	7.67	14.92	61.31	0.67	0.00
MTs Is. Junior H	179.809	20.60	5.96	7.54	12.55	53.02	0.33	0.00
SMA Senior H	227.433	2.77	0.53	1.79	10.10	83.43	1.37	0.01
MA Is. Senior H	92.723	10.88	2.33	3.47	11.10	70.79	1.42	0.01
SMK Voct. S.H	155.761	3.32	0.86	1.82	15.37	77.53	1.09	-

投影片 19

Socioeconomic Situation

- ✎ Teacher upgrading
 - 2.7m, need upgrade 64%=1.728m
- ✎ Workforce upgrading
 - 94.9m (diploma 1 up, 5.4%, elementary or below, 51.2% = 48.6m)
- ✎ Eradication of illiteracy (reading, technology, information)
 - reading illiterate 15-44 yr 7.8m (7.03)

投影片 20

ICT: current condition

- ✎ Access to Internet: internet cafes, offices, homes, schools and universities
- ✎ Infrastructure: 50% of 72,000 villages no telecommunication connection yet
- ✎ 2,500 educational institutions are Internet users, 80% are secondary schools and 20% are higher education institutions.
- ✎ 2006: INHERENT - 87 HEIs (from 2864 HEIs) are connected
- ✎ 2007: Jardiknas - ICT Center 277, MONE District Offices 474
- ✎ National network infrastructure provided by the TELKOM (state owned plc)
 - Combining terrestrial and satellite connections
 - Terrestrial: optical fiber, copper, digital micro wave: (wireless and on-wire)

Year	Internet user (Indonesia)
1998	512.000
1999	1.000.000
2000	1.900.000
2001	4.200.000
2002	4.500.000
2003	8.080.534
2004	11.226.143
2005	16.000.000
2006	18.000.000

投影片 21

ICT in Education

- ✎ Policy
 - 2006 Strategic Plan of MONE
 - ICT is perceived to be strategic tools
 - to bridge disparity of quality education across geographical areas in Indonesia,
 - to open access and ensure equity, and
 - to support the growth of knowledge-based Indonesian society with competitiveness towards globalization
 - computer literacy (access, computer and internet skills) rate
 - among lecturers and students in higher education in the year 2009 is expected to be 80% and 50%, respectively.
 - At the school level, 65% teachers use computers, 20% write module, 10% web-based content
 - the use of ICT for improving and developing instructional competency of teachers: one of the program in improving educational quality and relevance of teacher education in Indonesia.

投影片 22

ICT in Education

Policy

- National ICT Council - chaired by the President (executive chairperson is the Minister of COMINFO)
 - Basic Strategies:
 - ICT for education quality and access
 - ICT for public services efficiency & transparency
 - ICT for business sectors performance

投影片 23

ICT in Education

No.	Pillars	ICT Strategic role
1.	Access	As media of learning across time and space (open and distance learning): <ul style="list-style-type: none"> • Development of Jardiknas - National Education Network • Development of INHERENT - Indonesian Higher Education and Research Network • Development of TV-edukasi broadcasting system and distribution
3.	Governance, Accountability and Public Image	Management of Integrated Information System <ul style="list-style-type: none"> • MONE Management of Information System • National Identification for schools, teachers, and students • National Education Database • Decision Support System

投影片 24

ICT in Education

No.	Pillars	ICT Strategic role
2.	Quality, relevance, and competitiveness	Implemented in the instructional (teaching and learning) process: <ul style="list-style-type: none"> • TV-Edukasi • Edukasi.Net • E-book • E-learning materials for schools and non-formal education • E-learning in Higher Education <ul style="list-style-type: none"> ○ E-learning content (GDLN, etc.) ○ E-evaluation (EPSBED) ○ Transborder Research and Education (SOI, AUN) ○ Digital Library ○ E-administration ○ Virtual Laboratory ○ Video conferencing ○ Open and Distance Learning

投影片 25

ICT in Education

Master ICT Plan (Schools & NF) +First introduced end 1990 +Establishment of School 2000 Project (2001-2005) +Private Sector	Collaborative Effort +Ministry of National Education (MNE) +Indonesian Teleinformatics Coordinating Team (ITKT) +Private Sector	Focused Areas + Still in Senior High School + Vocational Schools + More of application + Eventually teachers can manage it, its reach? more masses	Curriculum Integration + Gradual assimilation beginning with High Schools + More of ICT as a subject + However efforts to integrate are being made	Targets +2008: 25% of teachers use computers, 10% build module +2010: 65% teachers use computers, 20% build module, 10% web-based content
Infrastructure +High cost of Internet Access +Unreliable dial-up connection + Only 3 in 100 people have telephone lines +lack of sufficient band-width	Budget +Allocation inadequate +Not all schools have implemented ICT	Uneven ICT Distribution + Rural schools have much less in all aspects: ICT for administration, for teaching/learning, low band-width, etc	Implementation Constraints +Lack of awareness of decision on benefits of ICT +Reluctance on adoption +Lack of ICT policy implementers	Others + English Language + Lack of Training +New programs: when internet goes to school +Vendors program: microsoft, intel, cisco, acer, etc. etc.

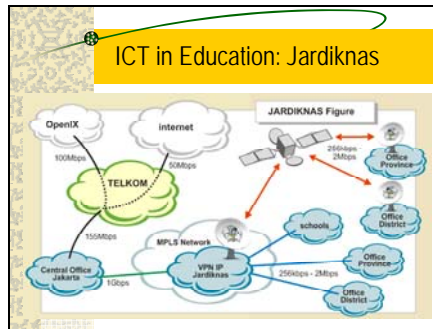
投影片 26

ICT in Education

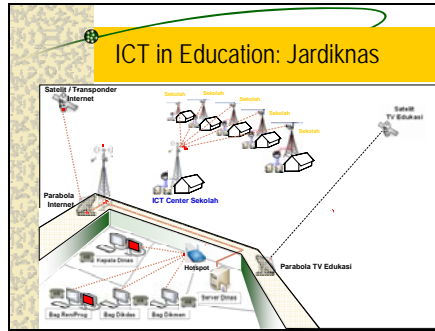
Higher Education

- 2001, DGHE-MONE: Higher Education Strategies for ICT Development - guidelines for higher education institutions to initiate and develop ICT for the purpose of improving quality of education in their individual institutions.
- 2003 Higher Education Long Term Strategies 2003-2010 (article 59): 'The advancement of information and communication technology have brought a variety of new schemes in carrying out education process. In this regard, the DGHE as well as individual institution should prioritize the provision of ICT infrastructure to develop such capacity'.

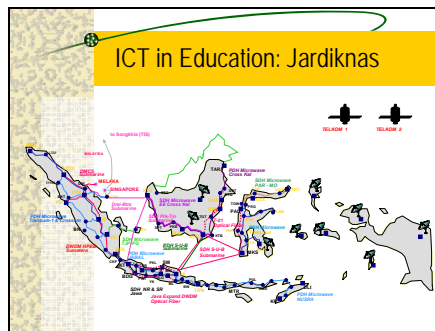
投影片 27



投影片 28



投影片 29



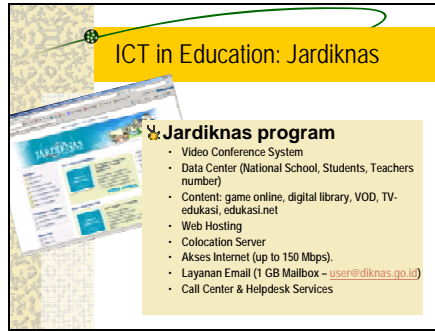
投影片 30

ICT in Education: Jardiknas

Jardiknas nodes (2007)

Intranet Diknas Propinsi (Provinces)	34	Node
Intranet Diknas Kota/Kab (Districts)	462	Node
Intranet Unit Depdiknas (MONE)	119	Node
Intranet SKB (Learning Activity Center)	66	Node
Intranet Library dan National Museum	30	Node
Intranet ICT Center	440	Node
Intranet Campus Zone	300	Node
Total	1.451	Node

投影片 31

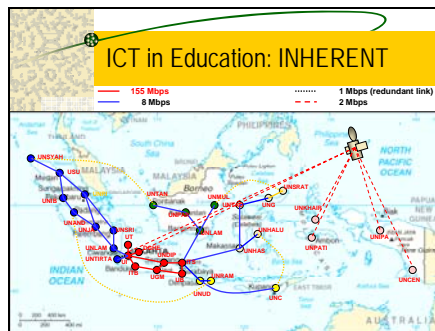


ICT in Education: Jardiknas

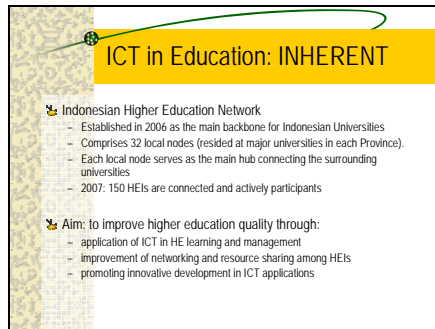
Jardiknas program

- Video Conference System
- Data Center (National School, Students, Teachers number)
- Content: game online, digital library, VOD, TV-
edukasi, edukasi.net
- Web Hosting
- Colocation Server
- Akses Internet (up to 150 Mbps).
- Layanan Email (1 GB Mailbox – user@diknas.go.id)
- Call Center & Helpdesk Services

投影片 32



投影片 33



ICT in Education: INHERENT

Indonesian Higher Education Network

- Established in 2006 as the main backbone for Indonesian Universities
- Comprises 32 local nodes (resided at major universities in each Province).
- Each local node serves as the main hub connecting the surrounding universities
- 2007: 150 HEIs are connected and actively participants

Aim: to improve higher education quality through:

- application of ICT in HE learning and management
- improvement of networking and resource sharing among HEIs
- promoting innovative development in ICT applications

投影片 34

ICT in Education: INHERENT

INHERENT program:

- Video-conferencing
 - Coordination meeting, information dissemination, seminar, workshop, training
- Distance learning
 - Blended learning to full-fledge e-learning
 - Remote laboratory work
- Locally made application systems for academic and administration (open sources) in various HEIs
 - Learning management system
 - Knowledge management system
 - E-library service system
 - MIS for university academic and resources management system
 - Grid computing initiatives for research
 - Utilizing the computing powers already connected to Inherent

投影片 35

Sample Program:

Pe-PP: Partnership for e-Prosperity for the Poor

UNDP Project (in collaboration with National Planning Agency, Indonesia)

Program: Community Telecenter (CTC)

- socioeconomic**
 - Agriculture
 - Fisheries
 - Farming
 - Production
 - Marketing
- education**
 - teaching Clinics (online)
- health**
 - tele-medicine

www.Klinikpembelajaran.com

投影片 36

Pe-PP: Partnership for e-Prosperity for the Poor

Teaching Clinics

- For teachers in remote areas (professional development): teachers forum and Q&A, other pedagogical matters: CAR, Supervision, etc.
- For public: how to use internet

投影片 37

Lessons Learned

- ✦ Policy and modelling
- ✦ Collaboration (networking) and logistical & administrative consequences
- ✦ Infrastructure, hardware, content/program, humanware, and utilization (added values)
- ✦ Sustainability of the project

投影片 38

Proposed action

- ✦ Use of ICT for information access for the poor/rural areas (2 test beds)
 - Survey on information needs, survey on the access and connectivity situation, analysis of the projective development of the area (socioeconomic, education, and health), and design intervention models
 - Develop multimedia materials based on information needs
 - Training trainers and users on the use of multimedia materials
 - Monitoring and evaluation

投影片 39

Proposed action

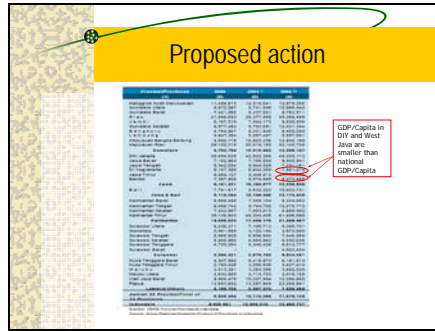
Rationale

Test Bed 1

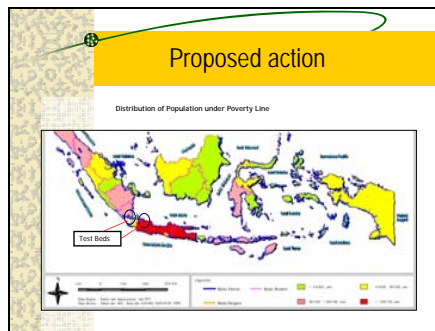
Test Bed 2

Population Density by Line

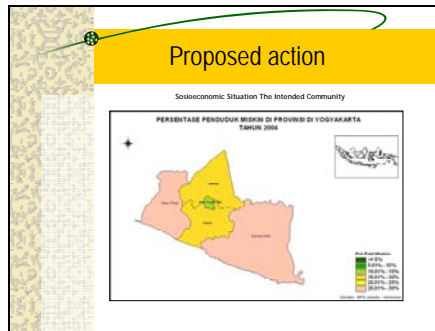
投影片 40



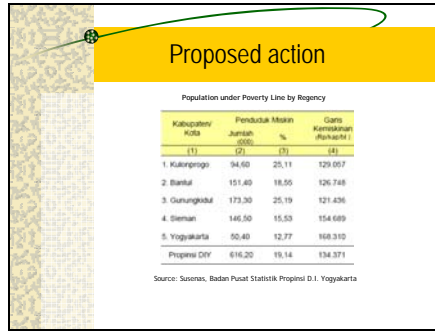
投影片 41



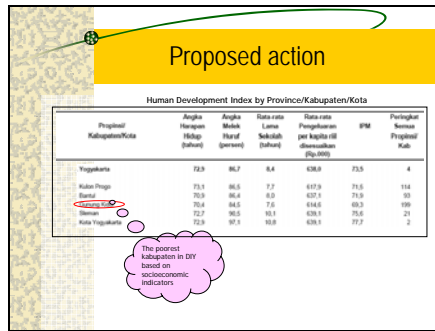
投影片 42



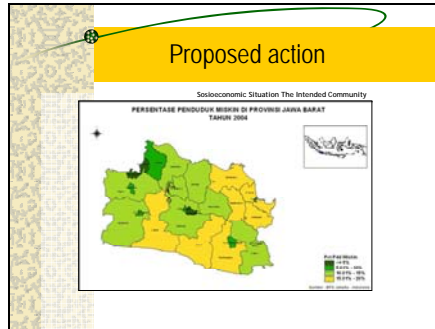
投影片 43



投影片 44



投影片 45



投影片 46

Proposed action

Household under Poverty Line by Regency

KABUPATEN/ KOTA	Household under poverty line	KABUPATEN/ KOTA	Household under poverty line
01 Kab Bogor	257.280	14 Kab Purwakarta	59.271
02 Kab Sukabumi	229.031	15 Kab Karawang	190.294
03 Kab Cianjur	196.486	16 Kab Bekasi	111.276
04 Kab Bandung	281.221	17 Kota Serang	41.659
05 Kab Garut	222.112	18 Kota Sukoharjo	13.176
06 Kab Tasikmalaya	143.234	19 Kota Bandung	84.882
07 Kab Ciamis	119.350	20 Kota Cirebon	15.084
09 Kab Karangas	84.037	21 Kota Bekasi	38.177
08 Kab Cirebon	202.247	22 Kota Depok	32.319
10 Kab Majalengka	115.837	23 Kota Cimahi	21.936
11 Kab Bandung	83.462	24 Kota York	39.491
12 Kab Indragiri	169.327	25 Kota Banjar	10.961
13 Kab Sukabng	147.743	Jawa Barat	2.913.077

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Proposed action

Human Development Index by Province/Kabupaten/Kota

Provinsi/ Kabupaten/Kota	Angka Harapan Hidup (tahun)	Angka Melek Dasar (persen)	Indeks Pembangunan Manusia	Angka Harapan Hidup per kapita di kabupaten/kota (tahun)	Angka Melek Dasar per kapita di kabupaten/kota (persen)	IPM	Peringkat Nasional
Jawa Barat	67,2	94,6	7,4	67,7	93,9	14	
Bogor	68,9	93,6	6,8	62,7	89,2	205	
Sukabumi	66,7	96,6	6,2	61,6	88,7	228	
Cianjur	64,5	97,1	6,1	60,0	96,8	311	
Bandung	66,5	96,4	6,2	62,6	72,4	311	
Garut	63,5	96,0	6,8	62,1	66,7	204	
Kab. Majalengka	67,0	96,3	6,7	62,6	76,4	196	
Ciamis	66,0	96,3	6,6	61,7	69,3	196	
Karangas	66,9	96,0	6,6	61,6	66,0	226	
Cirebon	64,0	96,2	6,1	61,1	66,0	311	
Majalengka	66,1	96,9	6,1	61,5	66,9	302	
Cirebon	66,9	96,7	7,1	62,6	79,2	62	
Indragiri	66,1	76,0	6,0	62,0	63,0	406	
Bandung	66,8	97,0	6,0	62,1	66,2	406	
Purwakarta	66,7	96,2	7,0	61,2	66,6	204	
Karangas	66,3	96,7	6,6	61,6	66,4	302	
Bekasi	68,0	90,7	6,1	61,0	76,4	198	
Kota Depok	66,3	96,6	6,6	62,6	74,9	40	
Kota Bekasi	66,1	97,7	6,0	62,4	74,6	36	
Kota Depok	72,0	97,2	6,2	63,6	77,1	6	
Kota Cimahi	66,7	96,6	6,6	63,9	73,1	73	
Kota Tasikmalaya	66,3	96,6	6,4	61,6	72,1	81	
Kota Banjar	66,0	96,2	6,6	61,6	69,4	101	

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Proposed action

Angka Partisipasi Sekolah (APS) Dasar

Lokasi	Angka Partisipasi Sekolah (APS) Dasar			
	7-12	13-15	16-18	
KABUPATEN				
01 BENGKULU	94,51	69,86	35,45	5,63
02 BAKUKU MIE	94,69	70,62	39,29	5,63
03 BANGSUD	96,27	66,30	23,28	2,47
04 BANGSUNG	97,69	80,34	44,24	7,96
05 BAWU	96,92	72,38	36,31	3,56
06 BUKIT MARGA	96,28	76,29	39,98	6,29
07 CIAMIS	96,66	84,11	44,69	10,54
08 KINENINGAN	97,30	79,72	53,70	7,89
09 CIBINONG	97,23	73,57	47,37	3,95
10 MAJALINGKA	96,22	81,10	36,38	2,95
11 SUMEDANG	98,99	91,84	57,99	11,74
12 INDRAMAYU	98,35	74,07	31,46	4,92
13 TEBING	96,65	67,06	41,11	1,77
14 PURWAKARTA	93,33	76,21	50,39	1,16
15 KARAWANG	97,06	79,63	45,66	9,29
16 BUNDAU	96,32	69,36	31,01	6,93

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Proposed action cont.

Lokusi	Angka Partisipasi Sekolah (APS) Usia			
	7-12	13-15	16-18	19-24
SUMBA				
71 BENGKOR	98.55	98.73	94.16	10.68
72 BUKARAH	99.26	99.58	99.33	10.91
73 BUNDAHIG	97.66	92.98	79.79	20.74
74 CIBERON	96.32	90.58	85.63	10.29
75 BERKAS	99.16	96.62	71.47	21.29
76 DEPUK	96.26	92.91	64.62	22.86
77 CIMAHI	98.79	98.75	87.62	17.88
78 YASREKMALAYA	97.33	89.16	78.84	14.67
79 BANDAR	95.13	89.13	49.63	8.74
Propinsi	96.68	78.29	48.13	9.85