

## **Strategic Dimension 1: Vision and Philosophy**

There are 5 strategic foci under the first strategic dimension:

- Institutional Vision for ICT in Education
- Underlying Philosophy for Teaching and Learning with ICT
- Needs of Schools and Society
- Formulation and Ownership of ICT in Education Vision
- Review of ICT in Education Vision

### **A Microsoft Partners-in-Learning (Asia-Pacific) Initiative**

Developed by Prof Cher Ping LIM (Edith Cowan University, Australia), Asst Prof Ching Sing CHAI (National Institute of Education, Singapore), Asst Prof Daniel CHURCHILL (University of Hong Kong), Prof Yong ZHAO (Michigan State University, United States); in consultation with education deans and policymakers from Asia-Pacific countries.

<b>Vision and Philosophy</b>					
	<b>Institutional Vision for ICT in Education</b>	<b>Underlying Philosophy for Teaching and Learning with ICT</b>	<b>Needs of Schools and Society</b>	<b>Formulation and Ownership of ICT in Education Vision</b>	<b>Review of ICT in education Vision</b>
<b>Undeveloped</b>	Absence of articulated institutional vision for ICT in education.	Absence of underlying philosophy for teaching and learning with ICT	Absence of needs and situation analysis of schools and society.	Absence of staff involvement in the formulation of ICT in education vision.	Absence of review of ICT in education vision.
<b>Fundamental</b>	Focuses ONLY on the use of ICT to support existing culture, policies and practices.	Traditional notions of teaching and learning with ICT that are grounded in behaviourist/ cognitivist paradigm.	Needs of schools ONLY based on their existing culture, policies and practices constrain the formulation of the institutional vision for ICT in education	Staffs are involved in the formulation of the ICT in education vision but do not have ownership of the vision.	Review of ICT in education vision is based on pre-determined work schedules.
<b>Proficient</b>	Institutional vision focuses on driving changes in culture, policies and practices mediated by ICT.	Underlying philosophy is based on progressive notions of teaching and learning with ICT that are grounded in constructivist/ social constructivist paradigm.	Changing needs of schools and society are considered in the formulation of the institutional vision for ICT in education; that is, the vision supports changes in schools that partially meet societal needs.	Staff are involved in the formulation of the ICT in education vision and have developed a sense of ownership of the vision.	Review of ICT in education vision is reactive in essence. That is, it reacts to changing needs of schools and society.
<b>Innovative</b>	Institutional vision is being studied and emulated by other institutions.	Underlying philosophy is based on emerging notions of teaching and learning with ICT that are grounded in knowledge creation paradigm.	Changing needs of schools and society are full integrated in the institutional vision for ICT in education; that is, the vision leads changes in schools that meet societal needs.	Staffs are empowered in the formulation of the ICT in education vision. That is, staffs are contributing members of an evolving and dynamic vision.	Review of ICT in education vision is proactive and visionary (anticipating/ pre-emptive) in essence. That is, it triggers reviews in other institutions.

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## **Strategic Dimension 2: Program: Curriculum, Assessment, and Practicum**

There are 11 strategic foci under the 3 components of the second strategic dimension:

### Curriculum

- Instructional analysis (tasks, learners, context)
- Linkages of courses/units
- Pedagogical approaches (implies the paradigm)
- Modelling (practising what you preach)
- Meaningful use of ICT

### Assessment

- Linkages to curriculum
- Mode of assessment - Balance between process and product (validity, reliability, comprehensiveness, administration)
- Authenticity of assessment tasks

### Practicum

- Linkages to curriculum and assessment
- Support in schools (mentor teachers, coordinating teachers, access to ICT & resources, student readiness, supervisors, principals)
- Expectation of ICT use in teaching and learning in schools

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Program: Curriculum, Assessment and Practicum											
Curriculum						Assessment			Practicum		
	Instructional Analysis	Linkages between Units	Pedagogical Approaches	Modelling	Meaningful Use of ICT	Linkages to Curriculum	Mode of Assessment	Authenticity of Assessment Tasks	Linkages to Curriculum and Assessment	Support in Schools	Expectation of ICT Use in Teaching & Learning in Schools
<b>Undeveloped</b>	Absence of analysis of tasks, learners and context.	Absence of linkages between units. ICT units are developed in isolation.	Integration of ICT in the curriculum does not change the pedagogical approaches adopted.	Absence of modelling by teacher educators on how ICT is used in the curriculum.	Absence of meaningful use of ICT in the curriculum; ICT use is not contextualised for pre-service teachers.	Absence of linkage between assessment and curriculum.	Mode of assessment is summative or formative but there is no use of ICT in the assessment.	Assessment tasks are not authentic; the tasks are not developed in the context of school or classroom practices.	Absence of linkage between practicum and curriculum/assessment.	Absence of support by teacher education institution for pre-service teachers in schools.	No expectation of pre-service teachers to use ICT for teaching and learning in schools.
<b>Fundamental</b>	Analysis of tasks, learners and context based on personal experiences of teacher educators.	Limited linkages between units. ICT units are developed with knowledge of other units.	Integration of ICT in the curriculum changes the pedagogical approaches but the changes are not informed by a learning paradigm.	Modelling by teacher educators on how ICT is used in the curriculum is carried out only within the ICT units.	Use of ICT in the curriculum is contextualised for pre-service teachers within the ICT units only.	There is ICT use in and linkages between the assessment and curriculum of the ICT units only.	Mode of assessment is summative and ICT is used to facilitate the assessment.	Assessment tasks are somewhat authentic; the tasks are developed in the context of school or classroom practices but may not be relevant to pre-service teachers.	Linkage between practicum and curriculum but no linkage between practicum and assessment; concepts and strategies/examples in the curriculum are drawn upon for and from the practicum.	Some support by teacher education institution for pre-service teachers in schools; support is in the form of e-mail exchanges with and school visits by teacher educators.	There are expectations of pre-service teachers to use for teaching and learning in schools but no expectation of how it is used.

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Program: Curriculum, Assessment and Practicum											
Curriculum						Assessment			Practicum		
	Instructional Analysis	Linkages between Units	Pedagogical Approaches	Modelling	Meaningful Use of ICT	Linkages to Curriculum	Mode of Assessment	Authenticity of Assessment Tasks	Linkages to Curriculum and Assessment	Support in Schools	Expectation of ICT Use in Teaching & Learning in Schools
<b>Proficient</b>	Basic analysis of tasks, learners and context based on systematic but limited collection of primary and secondary data.	Coordinated linkages between units. ICT units are developed with other unit coordinators.	Integration of ICT in the curriculum changes the pedagogical approaches and the changes are informed by a learning paradigm.	Modelling by teacher educators on how ICT is used in the curriculum is carried out institute wide.	Use of ICT in the curriculum is contextualised for pre-service teachers at the program level.	There is ICT use in and linkages between the assessment and curriculum of most units in the pre-service teacher education program.	There are both formative and summative assessments and ICT is used to facilitate the assessment. However, the formative assessment is not linked to the summative one.	Assessment tasks are authentic; the tasks are developed based on pre-service teachers' experiences in the school and classroom.	Linkages between practicum and curriculum and assessment; concepts and strategies/ examples in the curriculum and assessment are drawn upon for and from the practicum.	Support by teacher education institution for pre-service teachers in schools; online and onsite support are provided that include online resources (lesson plan templates, frequently asked questions), discussion boards, online and on-site mentoring by teacher educators.	There are expectations of how pre-service teachers use ICT for teaching and learning in schools. However, these expectations are not shared among the teacher education institution, school and pre-service teachers.

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Program: Curriculum, Assessment and Practicum											
Curriculum						Assessment			Practicum		
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<b>Innovative</b>	In-depth analysis of tasks, learners and context based on systematic and comprehensive collection of primary and secondary data.	Robust linkages between units. ICT is an integral part of all units and they are co-developed by the unit coordinators involved in the program/course.	Integration of ICT in the curriculum changes the pedagogical approaches and the changes are informed by a learning paradigm based on the affordances of ICT.	Modelling by teacher educators on how ICT is used in the curriculum and how the use may transform the curriculum is carried out institute wide.	Use of ICT in the curriculum is contextualised for pre-service teachers at the program level, and they are given the opportunities to transform the curriculum with the use of ICT.	The design of the assessment and curriculum of most units in the pre-service teacher education program are driven by the affordances of ICT.	There are both formative and summative assessments and ICT is used to facilitate the assessment. The formative assessment builds up to the summative one.	Assessment tasks are innovative and authentic; pre-service teachers are required to carry out the assessment tasks in the context of their school or classroom.	The practicum provides the context for the development of the curriculum and assessment tasks.	Holistic support by teacher education institution for pre-service teachers in schools; a professional learning community (both online and on-site) is developed that consists of major stakeholders in the school and university.	There are clear and shared expectations among the teacher education institution, school and pre-service teachers of how pre-service teachers use ICT for teaching and learning in schools.

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### Strategic Dimension 3: Professional Learning of Deans, Teacher Educators and Support Staff

Teacher educators are often viewed as experienced experts in their respective fields but may lack experience in using ICT for teaching, learning and administration. There are 6 strategic foci under the third strategic dimension:

- Professional Learning Culture
- ICT Professional Learning Program
- ICT Professional Learning Plans of Staff
- Mentoring and Peer Coaching of ICT for Teaching and Learning
- Conducive Conditions for ICT Professional Learning
- Reward and Incentive Structure for ICT Professional Learning

<b>Professional Learning of Deans, Teacher Educators and Support Staff</b>						
	<b>Professional Learning Culture</b>	<b>ICT Professional Learning Program</b>	<b>ICT Professional Learning Plans of Staff</b>	<b>Mentoring and Peer Coaching of ICT for Teaching and Learning</b>	<b>Conducive Conditions for ICT Professional Learning</b>	<b>Reward and Incentive Structure for ICT professional learning</b>
<b>Undeveloped</b>	Absence of a professional learning culture.	Absence of an ICT professional learning program for staff.	The staffs in the teacher education institution do not have an ICT professional learning plan.	Absence of mentoring and peer coaching of ICT for teaching and learning.	Absence of conducive conditions for ICT professional learning.	Absence of a reward and incentive structure for ICT professional learning.
<b>Fundamental</b>	Professional learning culture exists to some extent but not at all levels nor institution-wide; the need for professional learning is being enforced from the management of the institution.	There is an ICT professional learning program; however, its development is not based on a needs and situation analysis of the staff and institution.	Staff in the teacher education institution develops their individual ICT professional learning plan; however, there is a lack of ownership and commitment for this plan as they are mandated by the management of the institution. No support is given to the staff in developing these plans.	Mentoring and peer coaching of ICT for teaching and learning are planned. The teacher education institution has a system of assigning mentors or peer coaches to individual staff or groups of staff. However, there is no support or professional learning for the mentors and peer coaches.	Some conducive conditions for ICT professional learning exist but they are mainly necessary conditions of access to professional learning and access to ICT facilities.	A reward and incentive structure for ICT professional learning is in place but it is not an integral part of the staff appraisal system.

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<b>Professional Learning of Deans, Teacher Educators and Support Staff</b>						
	<b>Professional Learning Culture</b>	<b>ICT Professional Learning Program</b>	<b>ICT Professional Learning Plans of Staff</b>	<b>Mentoring and Peer Coaching of ICT for Teaching and Learning</b>	<b>Conducive Conditions for ICT Professional Learning</b>	<b>Reward and Incentive Structure for ICT professional learning</b>
<b>Proficient</b>	Professional learning culture permeates all levels within the institution.	The ICT professional learning program is developed based on a needs and situation analysis of the staff and institution. However, the ICT program is not linked with other professional learning programs.	Each staff in the teacher education institution develops his/her own ICT professional learning plan and is committed to the plan. Support is given to the staff in developing these plans.	Mentoring and peer coaching of ICT for teaching and learning are planned. The teacher education institution has a system of assigning mentors or peer coaches to individual staff or groups of staff. These mentors and peer coaches are supported and have undergone professional learning.	Conducive conditions for ICT professional learning exist and they include both necessary and sufficient conditions. Necessary conditions include access to ICT facilities and professional learning; and sufficient conditions include leadership support, opportunities for practice and a professional learning community.	A reward and incentive structure for ICT professional learning is an integral part of the staff appraisal and management system. However, the structure is constructed without an institute-wide consultation.
<b>Innovative</b>	Professional learning culture permeates all levels within the institution and the major partners of the institution (including schools and other education agencies).	The professional learning program is developed based on a needs and situation analysis of the staff and institution. The ICT program is linked to other professional learning programs and created opportunities for practice.	Staffs in the teacher education institution develop their individual ICT professional learning plans collaboratively and are committed to these plans. Support is given to the staff in developing and monitoring these plans in their learning communities.	Mentoring and peer coaching of ICT for teaching and learning are planned and they involve working with other teacher education institutions, public and private organisations and schools. Mentors and peer coaches are well supported and have undergone professional learning.	Conducive conditions for ICT professional learning exist and they include both necessary and sufficient conditions. These and other conditions are constantly reviewed and revised by the teacher education institution.	A reward and incentive structure for ICT professional learning is constructed based on an institute-wide consultation and is an integral part of the staff appraisal and management system.

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## **Strategic Dimension 4: ICT Plan, Infrastructure, Resources and Support**

There are 12 strategic foci under the fourth strategic dimension that consists of 4 key components:

### ICT Plan

- Development of ICT Plan
- Implementation of ICT Plan
- Review of ICT Plan

### ICT Infrastructure, Hardware and Software

- Setting Up of ICT Infrastructure and Hardware (support existing practices, leading practices)
- Maintenance of ICT Infrastructure and Hardware
- Choice and Purchase of Software
- Access to ICT Infrastructure, Hardware and Software

### ICT Resources

- Use of ICT resources (adopted, customised, co- or construction)
- Management of ICT resources

### ICT Support

- ICT Support for teacher educators (support from instructional designers. Technical support)
- ICT Support for pre-service teachers (training)
- ICT support for Administration

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ICT Plan, Infrastructure, Resources and Support							
	ICT Plan			ICT Infrastructure, Hardware, and Software			
	Development of ICT Plan	Implementation of ICT Plan	Review of ICT Plan	Setting Up of ICT Infrastructure and Hardware	Maintenance of ICT Infrastructure and Hardware	Choice and Purchase of Software	Access to ICT Infrastructure, Hardware and Software
<b>Undeveloped</b>	Absence of an ICT plan for the teacher education institution.	Absence of an implementation of the ICT plan in the teacher education institution.	Absence of a review of ICT plan for the teacher education institution.	The setting up of ICT infrastructure and hardware is ad-hoc or unplanned.	Absence of maintenance of ICT infrastructure and hardware.	Choice and purchase of software are not based on a needs and situation analysis of the teacher education institution.	Absence of access to ICT infrastructure, hardware and software.
<b>Fundamental</b>	The ICT plan is developed without consultation with staff and students.	The ICT plan is implemented as a directive without consultation with staff and students.	The ICT plan is reviewed periodically by only the senior management of the teacher education institution.	The setting up of ICT infrastructure and hardware is planned so as to support existing policies and practices in the teacher education institution.	The maintenance of ICT infrastructure and hardware is carried out periodically by a designated team or department in the teacher education institution. Each maintenance activity is not documented.	Choice and purchase of software are administered centrally based on the needs and situation analysis carried out by the ICT department of the teacher education institution.	Access to ICT infrastructure, hardware and software is limited to prescribed curriculum time and pre-booked slots for the pre-service teachers and staff.

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ICT Plan, Infrastructure, Resources and Support							
	ICT Plan			ICT Infrastructure, Hardware, and Software			
	Development of ICT Plan	Implementation of ICT Plan	Review of ICT Plan	Setting Up of ICT Infrastructure and Hardware	Maintenance of ICT Infrastructure and Hardware	Choice and Purchase of Software	Access to ICT Infrastructure, Hardware and Software
<b>Proficient</b>	The ICT plan is developed in consultation with staff and students but does not allow for changes in conditions and emergence of new ICT tools.	The ICT plan is implemented in consultation with staff and students but does not allow for customization by staff to better fit the plan to the context.	The ICT plan is reviewed and revised regularly by a committee made up of different stakeholders of the teacher education institution.	The setting up of ICT infrastructure and hardware is planned so as to support the changing needs of the main stakeholders of the teacher education institution.	The maintenance of ICT infrastructure and hardware is carried out regularly by a designated team or department in the teacher education institution. Each maintenance activity is well-documented and monitored.	Choice and purchase of software are administered at the department, cluster or program level based on the needs and situation analysis it carried out locally. The ICT department coordinates, monitors and supports purchases centrally, no other support is given to the department, cluster or program.	Access to ICT infrastructure, hardware and software is open to pre-service teachers and staff as long as the ICT facilities are supervised and manned.
<b>Innovative</b>	The ICT plan is developed in consultation with staff and students, and the plan allows for changes in conditions and emergence of new ICT tools.	The ICT plan is implemented in consultation with staff and students and allows for customization by staff to better fit the plan to the context.	The ICT plan is reviewed and revised regularly by a committee made up of different stakeholders of the teacher education institution. The review is based on an analysis of data collected from multiple sources.	The setting up of ICT infrastructure and hardware is based on the anticipated future needs of the main stakeholders of the teacher education institution.	The maintenance of ICT infrastructure and hardware is the shared responsibility of all stakeholders in the teacher education institution. The maintenance is facilitated, documented and monitored by a designated team or department.	Choice and purchase of software are administered at the department, cluster or program level based on the needs and situation analysis it carried out locally. The ICT department coordinates, monitors and supports the department, cluster or program in its choices and purchase of software.	Access to ICT infrastructure, hardware and software is open to pre-service teachers and staff 24/7 with appropriate security measures taken by the teacher education institution.

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<b>ICT Plan, Infrastructure, Resources and Support</b>					
	<b>ICT Resources</b>		<b>ICT Support</b>		
	<b>Use of ICT Resources</b>	<b>Management of ICT Resources</b>	<b>ICT Support for Teacher Educators</b>	<b>ICT Support for Pre-Service Teachers</b>	<b>ICT Support for Administration</b>
<b>Undeveloped</b>	Absence of use of ICT resources for teacher educators.	Absence of management of ICT resources in the teacher education institution.	Absence of ICT support for teacher educators.	Absence of ICT support for pre-service teachers.	Absence of ICT support for administration.
<b>Fundamental</b>	ICT resources are used by teacher educators without customization of resources or change of activities.	Limited management of ICT resources where resources are consolidated and tagged whenever new resources are available. All uploads are done only by the ICT department in the teacher education institution.	Limited ICT support is provided for teacher educators mainly in the form of an ICT Helpdesk that deals only with technical issues.	Limited ICT support is provided for pre-service teachers mainly in the form of an ICT Helpdesk that deals only with technical issues.	Limited ICT support is provided for the administration of the teacher education programs that includes registration, access to student database, timetabling and room allocation, and communication with pre-service teachers. No or little professional development is available to use the different administrative systems.
<b>Proficient</b>	ICT resources are customized by teacher educators and/or activities are planned to support the use of ICT resources to enhance teaching and learning.	Management of ICT resources where resources are consolidated, tagged, and reviewed regularly. Teacher educators may upload and share ICT resources using a standard upload template. The ICT department monitors the repository of ICT resources.	ICT support is provided for teacher educators beyond an ICT Helpdesk; instructional designers and multimedia developers are available to support teacher educators in their teaching with ICT.	ICT support is provided for pre-service teachers beyond an ICT Helpdesk; a Learning Support unit is available to support pre-service teachers in their learning and teaching (especially during practicum) with ICT and development of ICT competencies.	ICT support is provided for the administration of the teacher education programs that includes registration, access to student database, timetabling, room allocation, communication with pre-service teachers, curriculum and course outlines, and examination and grades. Although professional development to use the different system is available, most of the systems are independent of one another.

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<b>ICT Plan, Infrastructure, Resources and Support</b>					
	<b>ICT Resources</b>		<b>ICT Support</b>		
	<b>Use of ICT Resources</b>	<b>Management of ICT Resources</b>	<b>ICT Support for Teacher Educators</b>	<b>ICT Support for Pre-Service Teachers</b>	<b>ICT Support for Administration</b>
<b>Innovative</b>	ICT resources are customized or developed by teacher educators and pre-service teachers, and activities are planned by them to support the use of ICT resources to enhance teaching and learning.	Management of ICT resources where resources are consolidated, tagged, and reviewed regularly. Teacher educators and pre-service teachers may upload and share ICT resources using a standard upload template. The ICT department monitors the repository of ICT resources.	Besides an ICT support team or department that addresses the teacher educators' technical and instructional needs, a peer coaching or buddy system is in place for the teacher educators to support one another in the use of ICT for teaching and learning.	Besides the ICT Helpdesk and Learning Support unit, a peer coaching or buddy system is in place for the pre-service teachers to support one another in the use of ICT for teaching and learning	ICT support is provided for the administration of the teacher education programs that includes registration, access to student database , timetabling, room allocation, communication with pre-service teachers, curriculum and course outlines, and examination and grades. Professional development to use the different system is available, and most of the systems are inter-connected.

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## **Strategic Dimension 5: Internal and External Communication and Partnerships**

The fifth strategic dimension consists of 2 key components with 8 strategic foci under them:

### **Internal Communication and Partnerships:**

- Internal Communication Facilitated by ICT
- Inter-Department/Program Partnership on the Use of ICT for Teaching, Learning and Administration

### **External Communication and Partnerships (encouraged, supported, pro-active sourcing):**

- External Communication Facilitated by ICT
- Institutional Approach Towards External Partnerships on the Use of ICT for Teaching, Learning and Administration
- Partnerships with Schools on the Use of ICT for Teaching, Learning and Administration
- Partnership with Education Ministry or Department on the Use of ICT for Teaching, Learning and Administration
- Partnerships with Other Private, Public, National and International Organisations on the Use of ICT for Teaching, Learning and Administration
- Engagements with Local and Global Communities Facilitated by ICT

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<b>Internal and External Communication and Partnerships</b>								
	<b>Internal Communication &amp; Partnerships</b>		<b>External Communication &amp; Partnerships</b>					
	<b>Internal Communication Facilitated by ICT</b>	<b>Inter-Department/Program Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>External Communication Facilitated by ICT</b>	<b>Institutional Approach Towards External Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Schools on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnership with Education Ministry or Department on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Other Private, Public, National &amp; International Organisations on the Use of ICT for Teaching, Learning and Administration</b>	<b>Engagements with Local and Global Communities Facilitated by ICT</b>
<b>Undeveloped</b>	Internal communication at the teacher education institute is not facilitated by ICT.	Absence of inter-department/program partnership on the use of ICT for teaching, learning or administration.	External communication of the teacher education institute is not facilitated by ICT.	External partnership on the use of ICT for teaching, learning or administration is not encouraged in the teacher education institution.	Absence of partnership with schools on the use of ICT for teaching, learning or administration.	Absence of partnership with education ministry or department on the use of ICT for teaching, learning or administration.	Absence of partnership with other private, public, national and international organisations on the use of ICT for teaching, learning or administration.	Absence of engagement with local and global communities facilitated by ICT.
<b>Fundamental</b>	Internal communication at the teacher education institute is facilitated by ICT but most of such communication is top-down information dissemination.	Inter-department/program partnerships on the use of ICT are confined to administrative activities such as time-tabling, student enrolment and staff workload, and sharing of curricular information.	External communication of the teacher education institute is facilitated by ICT but most of such communication is information dissemination that is not updated regularly or not well-organised.	External partnerships on the use of ICT for teaching, learning or administration are encouraged by the teacher education institution but there is a lack of formal support structure to develop and sustain these partnerships.	Partnerships with schools are limited to pre-service teachers' placement and their supervision by mentor teachers from the school and teacher educators from the institute or university.	Partnership with the education ministry or department on the use of ICT for teaching, learning or administration is limited to discussion about meeting the demand for ICT competencies among teachers and school leaders in the education system.	Partnerships with other organisations on the use of ICT for teaching, learning or administration are often limited to one-off projects such as co-organising a professional learning workshop or seminar, collaborating on a research and development project, or co-financing the building of ICT infrastructure.	ICT-facilitated engagements with local and global communities are limited to extra-curricular activities and/or after-school programs.

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<b>Internal and External Communication and Partnerships</b>								
	<b>Internal Communication &amp; Partnerships</b>		<b>External Communication &amp; Partnerships</b>					
	<b>Internal Communication Facilitated by ICT</b>	<b>Inter-Department/ Program Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>External Communication Facilitated by ICT</b>	<b>Institutional Approach Towards External Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Schools on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnership with Education Ministry or Department on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Other Private, Public, National &amp; International Organisations on the Use of ICT for Teaching, Learning and Administration</b>	<b>Engagements with Local and Global Communities Facilitated by ICT</b>
<b>Proficient</b>	Internal communication at the teacher education institute is facilitated by ICT with information sharing at all levels.	Inter-department/ program partnerships on the use of ICT include administrative activities and co-development of curriculum and team-teaching of curricular activities.	External communication of the teacher education institute is facilitated by ICT where updated information from all levels is disseminated and organised for different target audience (e.g. Staff, Students, Future Students, Alumni and Visitors).	External partnerships on the use of ICT for teaching, learning or administration are encouraged by the teacher education institution and there is a formal support structure and resources (financial, human, infrastructure, hardware and software) allocated to develop and sustain these partnerships.	Besides pre-service teachers' placement and supervision, partnerships with schools include professional learning opportunities for teachers and school leaders, and research and development projects in the classroom and school. However, most of these activities involve the teacher educator as the resource person or source of expertise.	Partnership with the education ministry or department on the use of ICT for teaching, learning or administration involves the ministry or department commissioning the teacher education institution to undertake professional learning or research and development projects to address the demand for ICT competences among teachers and school leaders in the education system.	Most of the partnerships with other organisations on the use of ICT for teaching, learning or administration are sustainable where there is long term commitment from both the teacher education institute and organisation towards an ICT project or suite of ICT and non-ICT projects.	ICT-facilitated engagements with local and global communities are integral parts of the pre-service teacher education curriculum and assessment. However, these engagements are initiated by either the teacher education institution or the deans/teacher educators.

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<b>Internal and External Communication and Partnerships</b>								
	<b>Internal Communication &amp; Partnerships</b>		<b>External Communication &amp; Partnerships</b>					
	<b>Internal Communication Facilitated by ICT</b>	<b>Inter-Department/ Program Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>External Communication Facilitated by ICT</b>	<b>Institutional Approach Towards External Partnerships on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Schools on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnership with Education Ministry or Department on the Use of ICT for Teaching, Learning and Administration</b>	<b>Partnerships with Other Private, Public, National &amp; International Organisations on the Use of ICT for Teaching, Learning and Administration</b>	<b>Engagements with Local and Global Communities Facilitated by ICT</b>
<b>Innovative</b>	Besides information sharing at all levels in the teacher education institution that is facilitated by ICT, there are regular face-to-face dialogue sessions and online discussion forums that involve all staff.	Inter-department/ program partnerships on the use of ICT involve multi-disciplinary teams of teacher educators from different departments/programs co-developing and implementing common assessment tasks across curriculum. Most of these tasks involve the use of ICT.	Besides the dissemination of updated and well-organised information, there are opportunities for future students and visitors to engage in the institute's activities such as online forums and conferences, and online chats with existing students and staff.	Besides encouragement and support by the teacher education institution for external partnerships on the use of ICT for teaching, learning or administration, teacher educators and deans are proactive in identifying and building external partnerships.	Partnerships with schools involve not only activities where teacher educators serve as resource persons but also activities where teachers and school leaders serve as resource persons such as being involved in the design and development of the curriculum and assessment tasks and teaching in the pre-service teacher education program.	Besides undertaking commissioned projects by the education ministry or department, the partnership with the ministry or department on the use of ICT for teaching, learning or administration involves education officers and directors engage in the design and development of the curriculum and assessment tasks and teaching in the pre-service teacher education program.	Besides long term commitments on a project or suite of projects, the partnerships with other organisations on the use of ICT for teaching, learning or administration involve secondment of teacher educators and deans to the organisations and/or secondment of the staff from the organisations to the teacher education institution.	ICT-facilitated engagements with local and global communities are initiated by all stakeholders of the teacher education institution and are integral parts of the pre-service teacher education curriculum and assessment.

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## **Strategic Dimension 6: Research and Evaluation**

In the sixth strategic dimension, there are 2 key components with 7 strategic foci:

Research and Development:

- Evidence-Based ICT-Mediated Practices and ICT-Related Policies
  - Constant revision is needed to be in tandem with the ICT advancements (evidence-based policies and practices)
  - Integrated and informed research (based on needs and anticipated trends) –link between research and practice
- Research and Development Funding
- Research and Development Support
- Impact of Research and Development on the Pre-Service Teacher Education Program
- Impact of Research and Development on Schools and the Education System

Evaluation:

- Audit of Existing ICT-Mediated Practices and ICT-Related Policies
- Evaluation of the Use of ICT for Teaching, Learning and Administration

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<b>Research and Evaluation</b>							
	<b>Research and Development</b>				<b>Evaluation</b>		
	<b>Evidence-Based ICT-Mediated Practices &amp; ICT-Related Policies</b>	<b>Research and Development Funding</b>	<b>Research and Development Support</b>	<b>Impact of R&amp;D on Pre-Service Teacher Education Program</b>	<b>Impact of R&amp;D on Schools and the Education System</b>	<b>Audit of Existing ICT-Mediated Practices and ICT-Related Policies</b>	<b>Evaluation of the Use of ICT for Teaching, Learning and Administration</b>
<b>Undeveloped</b>	ICT-mediated practices and ICT-related policies are not evidence-based.	Absence of research and development funding.	Absence of research and development support.	There is no impact of R&D on pre-service teacher education program.	There is no impact of R&D on schools and education system.	Absence of audit of existing ICT-mediated practices and ICT-related policies.	Absence of evaluation of the use of ICT for teaching, learning and administration.
<b>Fundamental</b>	Only some ICT-mediated practices and ICT-related policies are evidence-based, the majority of the practices and policies are ICT-driven.	There is limited funding for research and development of ICT in education; most of the funding is external and on an ad-hoc and one-off basis.	There is limited support for research and development of ICT in education where most of the support is administrative in nature such as identification of available research funds, submission of research proposals, and preparation of research agreement or contracts.	The impact of the R&D on the pre-service teacher education program is confined to the courses/units that are taught or coordinated by the teacher educators who have been involved in the R&D projects.	The impact of the R&D on the schools and education system is at the micro-level where it is confined to the classrooms or schools that the R&D projects are conducted in.	The audit of existing ICT-mediated practices and ICT-related policies is carried out either on an ad-hoc basis or by a top-down approach that involves only a small group of staff from the institution.	The evaluation of the use of ICT for teaching, learning and administration is summative and is usually carried out at the end of the academic year.

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<b>Research and Evaluation</b>							
	<b>Research and Development</b>				<b>Evaluation</b>		
	<b>Evidence-Based ICT-Mediated Practices &amp; ICT-Related Policies</b>	<b>Research and Development Funding</b>	<b>Research and Development Support</b>	<b>Impact of R&amp;D on Pre-Service Teacher Education Program</b>	<b>Impact of R&amp;D on Schools and the Education System</b>	<b>Audit of Existing ICT-Mediated Practices and ICT-Related Policies</b>	<b>Evaluation of the Use of ICT for Teaching, Learning and Administration</b>
<b>Proficient</b>	Most ICT-mediated practices and ICT-related policies are evidence based but these evidences are based on secondary data (through literature review).	External funding for research and development of ICT in education is complemented with internal funding from the teacher education institution. This facilitates continual funding that supports the sustainability of projects. However, funding is managed at the project level rather than the institution or research centre level.	Besides administrative support for research and development of ICT in education, there is support for the preparation of research proposals that includes working out a budget, undertaking literature review, consulting research designs and methods and providing feedback.	The R&D on ICT in education has enhanced ICT-mediated practices, ICT-related policies, curriculum and assessment in the pre-service teacher education program at the teacher education institution.	The R&D on ICT in education has enhanced ICT-mediated practices, ICT-related policies, curriculum and assessment in schools and their associated education system.	The audit of existing ICT-mediated practices and ICT-related policies involves all stakeholders of the teacher education institution to identify the gaps in practices and policies; however, there is no follow-up activity to address the gaps.	There is both formative and summative evaluation of the use of ICT for teaching, learning and administration. Evaluation data collected and analysed is discussed at the department or program level and follow-up activities are also carried out at the department or program level.
<b>Innovative</b>	Most ICT-mediated practices and ICT-related policies are evidence based and these evidences are from both primary (data collected from the teacher education institution itself) and secondary data.	There are both external and internal funding for research and development of ICT in education; these sources of funding are managed at the institution's or research centre's level to ensure better synergies between and across projects.	Support for research and development of ICT in education is provided by the teacher education institution at all stages of the research project; that is, from the identification of sources of funding and preparation of research proposal to the project implementation and submission of final research report.	The R&D on ICT in education has enhanced not only the ICT-mediated practices, ICT-related policies, curriculum and assessment in the pre-service teacher education program at the teacher education institution, but also the pre-service teacher education programs in other institutions.	The R&D on ICT in education has enhanced ICT-mediated practices, ICT-related policies, curriculum and assessment beyond the schools and their associated education system, to schools in other education system.	The audit of existing ICT-mediated practices and ICT-related policies involves all stakeholders of the teacher education institution to identify the gaps in practices and policies and there are follow-up activities to address the gaps.	There is both formative and summative evaluation of the use of ICT for teaching, learning and administration. Evaluation data collected and analysed is discussed at the teacher education institution level and follow-up activities are also carried out at the institution level.

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