ASEAN Deep Learning Policy Series

Tantangan dan pendekatan untuk menyiapkan pemuda/pemudi di ekonomi global

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Director of Education

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Menjembatani Kesenjangan:
Dari Kebijakan ke Pelaksanaan/Praktik

Pengalaman Brunei

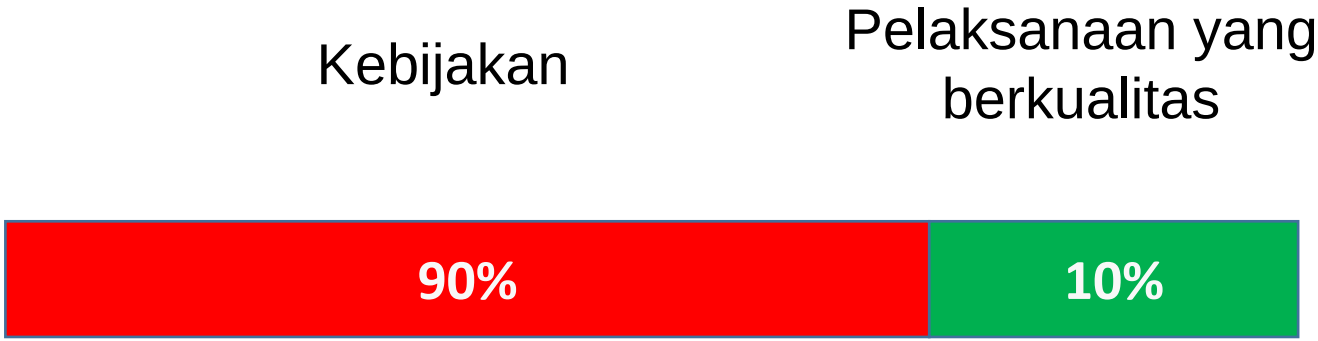
Faktanya!

- Adanya pengangguran tinggi sepanjang masa di kalangan usia muda secara global
- Rendahnya kepuasan pemberi kerja terhadap lulusan baru yang dipekerjakan
- Kebosanan di dalam kelas dipandang secara global sebagai –” *siswa lebih sering tertidur di ruang kelas daripada di tempat tidur mereka”*
- Rendahnya *return on investment* (kebijakan untuk memengaruhi kelas)

?

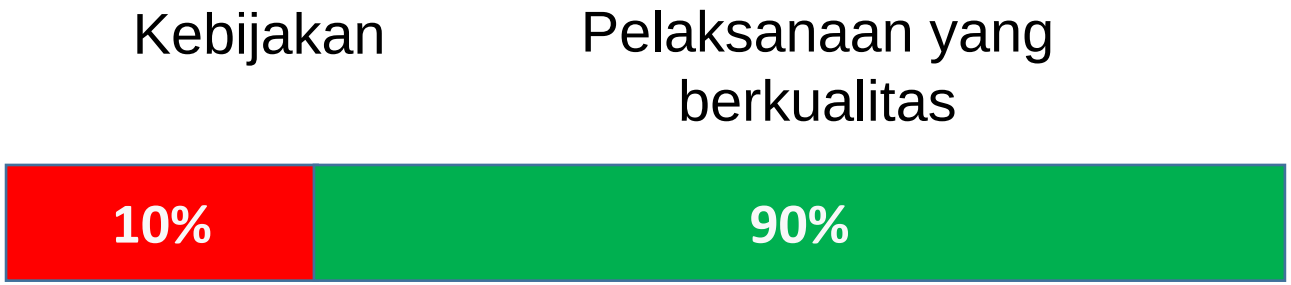
Apa sudah seimbang?

Perbaikan yang gagal menghabiskan 90% upaya pada kebijakan dan hanya 10% untuk pelaksanaan



Dampak yang kuat

Agar perbaikan dapat berhasil, kita perlu mengubah neraca keseimbangannya



New Pedagogies for Deep Learning: A Global Partnership

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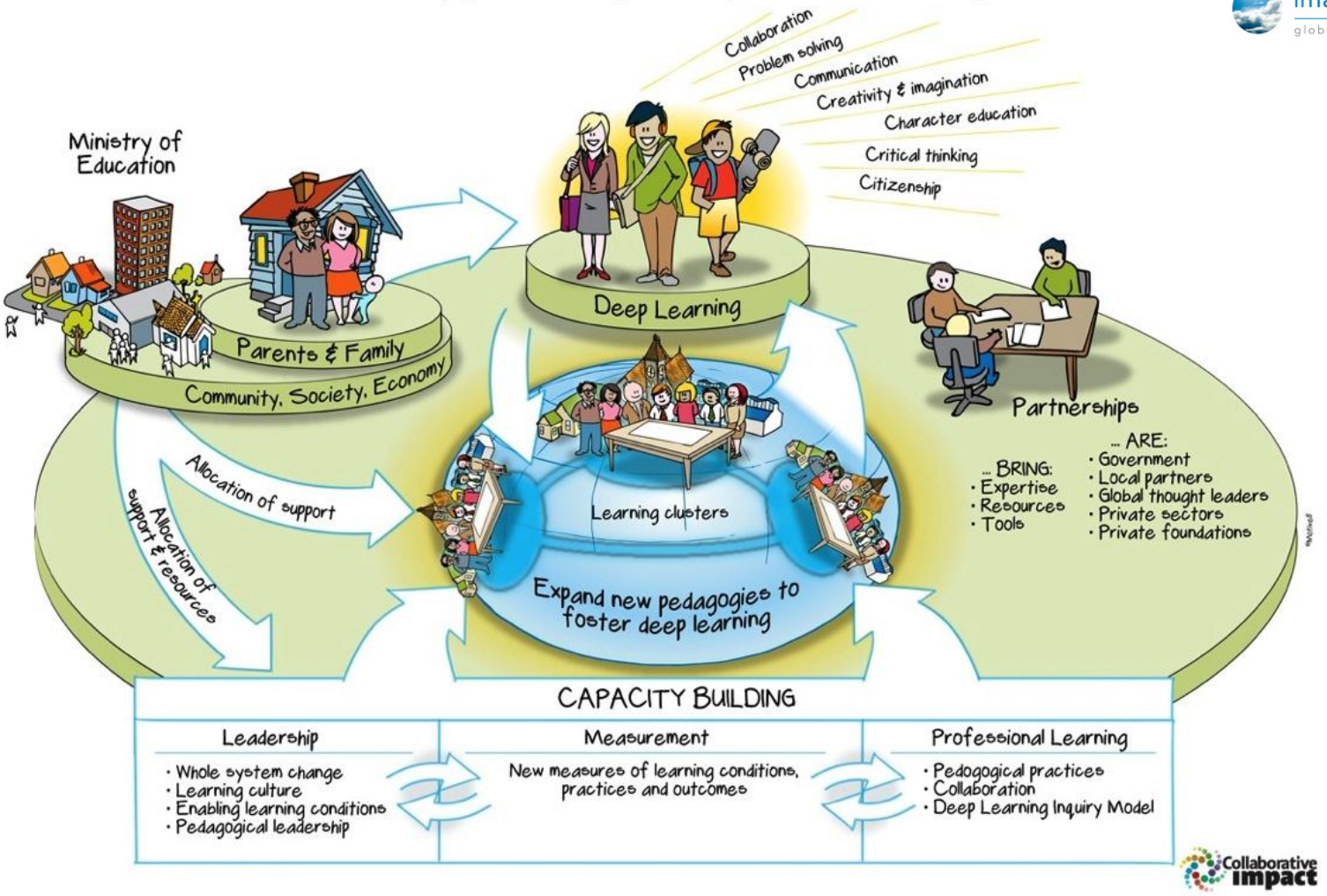
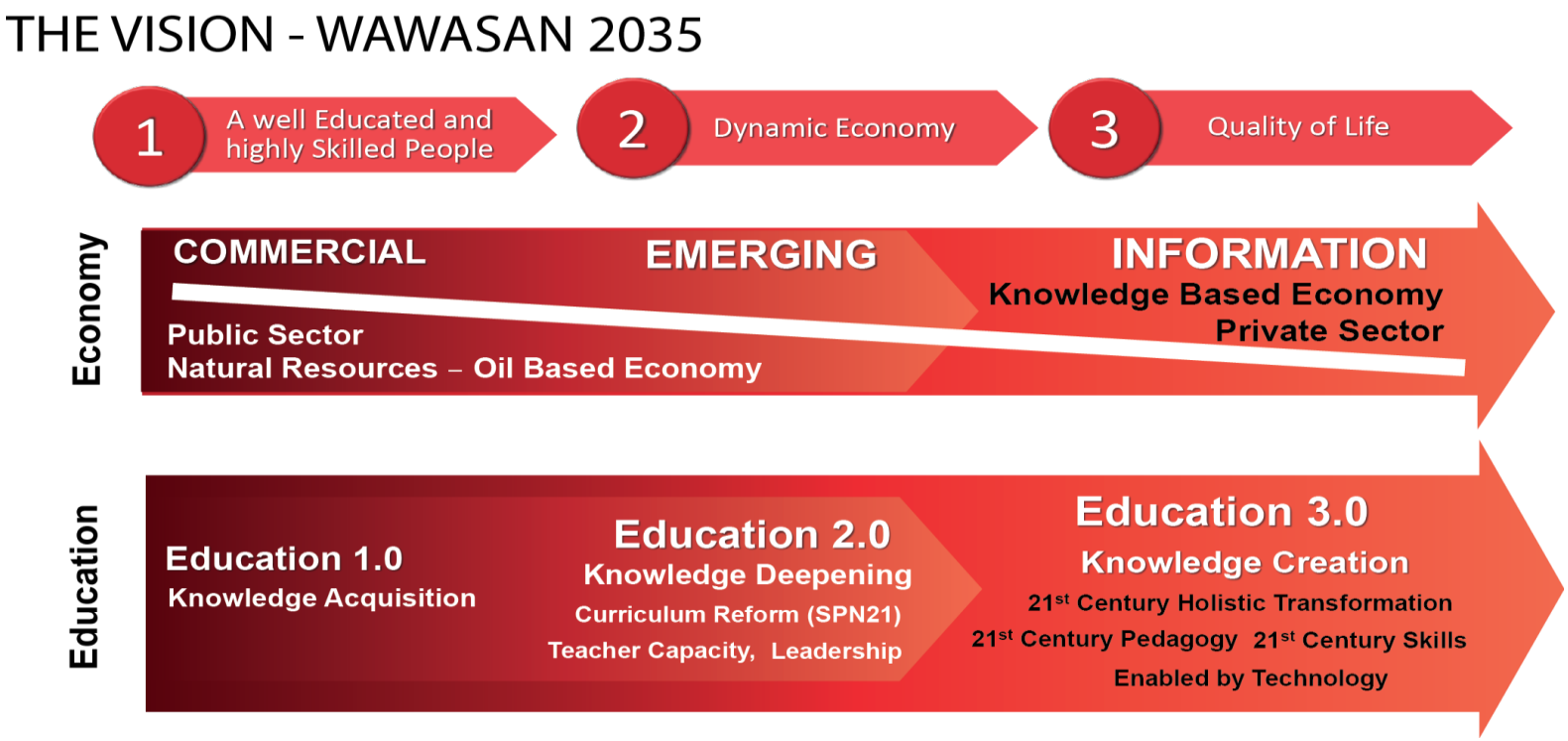


Collaborative impact

Alasan untuk Berubah—contoh dari Brunei



WSID menyediakan pendekatan untuk mencapai peningkatan sekolah secara berkelanjutan dan perubahan adaptif pada penggunaan ICT, pemahaman di era digital, dan pedagogi abad 21 di seluruh sekolah


Why is urine yellow?
Because of the pigment called
urochrome. It is a byproduct of
metabolism.
Why is
-Because
-from dead
brown?
from a
bilirubin.

Bagaimanakah sistem kami?

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1. **Mempercepat produktifitas pembelajaran**

   Bagaimana kami mendukung sekolah sehingga dapat secara signifikan meningkatkan penggunaan semua sumber daya yang tersedia untuk menghadirkan pengalaman belajar mengajar kelas dunia di abad 21

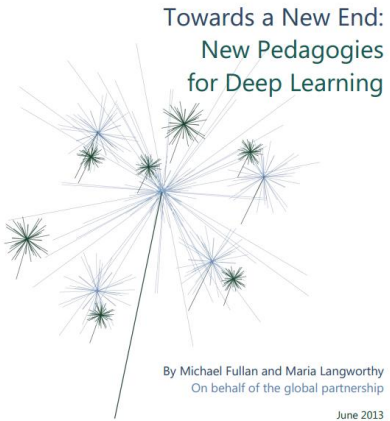
2. **Mempercepat dorongan untuk mencapai keberhasilan**

   Bagaimana kami mengembangkan proses, praktik dan kemampuan canggih untuk semua ekosistem sekolah agar dapat merancang, mengembangkan, dan mengelola budaya yang terus menerus mengedepankan invoasi yang akan mendukung dan mendorong perbaikan sekolah

Visi untuk Pedagogi yang Mendalam

“para pemangku kepentingan di dunia pendidikan tingkat global bermitra untuk menjawab tantangan pendidikan utama: bagaimana pendidik **merancang** dan **mempraktikkan mengajar dan belajar** yang akan menghasilkan **masa depan yang lebih baik** dari semua siswanya

http://bit.ly/1prcAVz



Apakah kita menjadi lebih efisien dalam menyiapkan siswa di masa yang akan datang yang sudah terlanjur hilang?

What might these jobs be?

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Productivity Counsellor
Personal Digital Curator
Microbial Balancer
Corporate Disorganizer
Curiosity Tutor
Alternative Currency Speculator
Digital Death Manager
Digital Detox Therapist
Drone Driver
Garbage Miner
Weather Coordinator

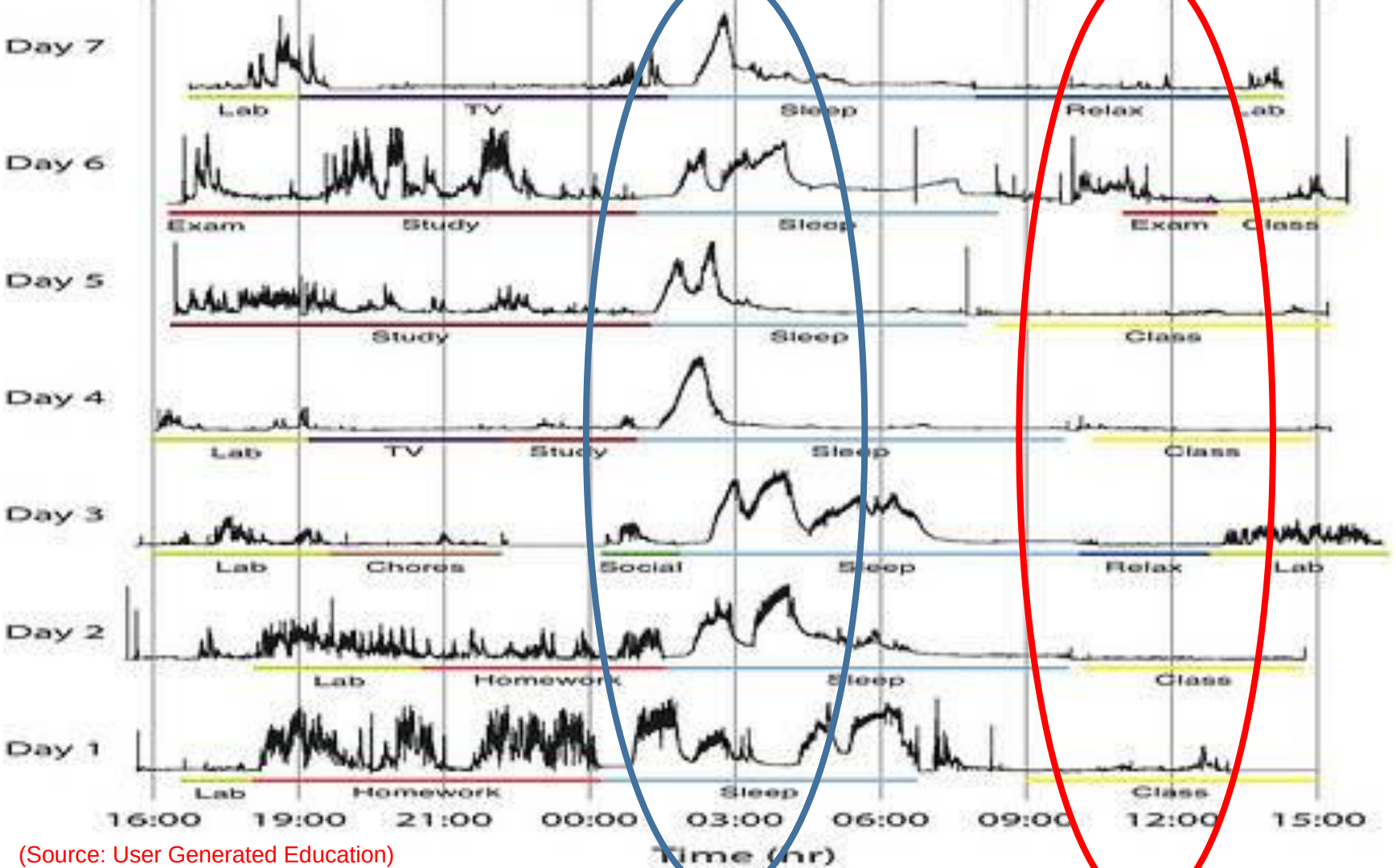
Dapatkah kita menarik siswa belajar dan bukan mendorong mereka untuk belajar?

BELAJAR YANG LEBIH BAIK

PRODUKTIFITAS YANG LEBIH BAIK
PEDAGOGI BARU?

DIDORONG OLEH TEKNOLOGI


kagum
Rasa ingin tahu
keterlibatan
takjub



(Source: User Generated Education)

The Hyper-Connected Learner

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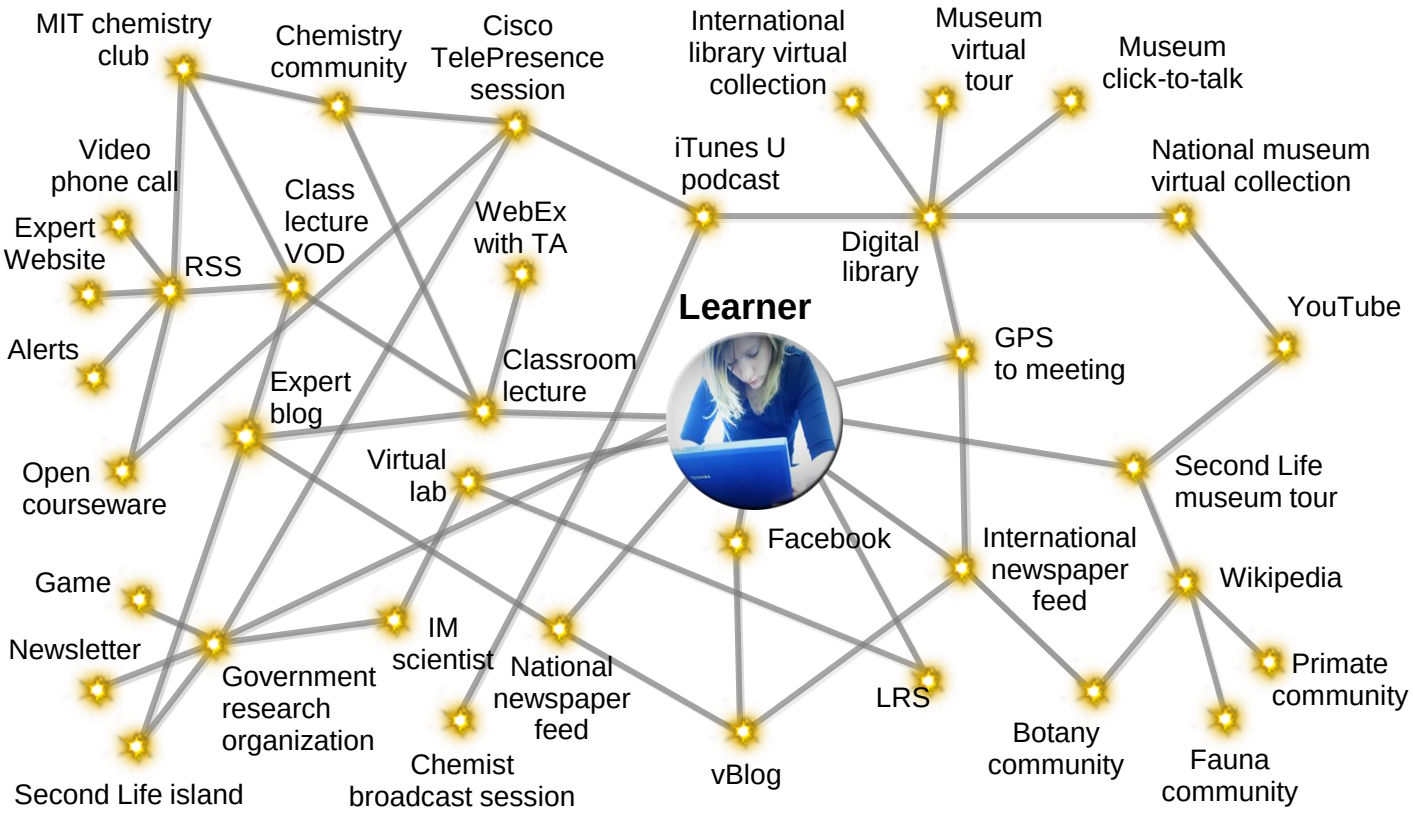

Sistematik, terukur, dan berkelanjutan

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DATA YANG BESAR

DATA YANG KECIL

Sistematik, terukur dan berkelanjutan

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INISIATIF BESAR

Kualitas pembelajaran, perencanaan strategi

Produktifitas Pembelajaran

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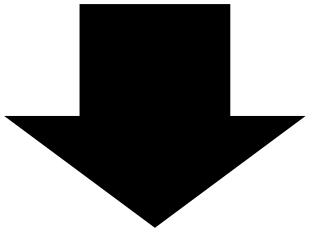
Pelajaran hari ini

Masukan guru	Pemikiran Siswa	Hasil keluaran siswa



Pelajaran esok hari

Masukan guru	Pemikiran dan umpan balik siswa	Hasil keluaran siswa

Bagaimana kita mempercepat produktifitas pembelajaran?

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$$L = T \times Q$$

L	T	Q
Pembelajaran Siswa	Waktu Ajar	Kualitas pengajaran

Bagaimana kita mempercepat produktifitas pengajaran?

L	=	T	x	Q

Pembelajaran siswa

Waktu ajar pada kurikulum termasuk:

- Perencanaan kurikulum
- Waktu untuk mata pelajaran utama
- Kehadiran di sekolah
- Pekerjaan di rumah

Kualitas Pembelajaran termasuk:

- Kualifikasi dan pelatihan guru
- Perilaku dan ambisi guru
- Kepemimpinan dan pengajaran
- Dukungan dan keterlibatan orangtua

Bagaimanakah kita mempercepat produktifitas pembelajaran?

$$L = T \times Q$$

Pembelajaran siswa

Mengembangkan kemampuan guru untuk menjadi Perancang Pengalaman dalam belajar

Bagaimana kita mempercepat produktifitas pembelajaran?

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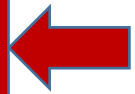
$$L = T \times Q$$

Siswa belajar

Mengembangkan kemampuan guru menjadi perancang pengalaman belajar s

Metrik untuk mengukur pencapaian siswa



Metrik untuk mengukur kualitas rancangan pembelajaran

Agenda Pedagogi **Baru**

“Ketika pedagogi menjadi fokusnya, banyak hal lain yang menjadi mulai dapat dipahami, seperti penggunaan ICT dan peningkatan keterampilan pembelajaran untuk abad 21 dari sisi siswa.”

(‘Who ystem Reform for Innovative Teaching and Learning’ p31-39 Michael Fullan)

Proyek Pengembangan ICT Seluruh Sekolah

Kepemimpinan ICT

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Rationale	To ensure e-Hijrah successfully contributes to enhanced student achievement, school leaders need the capability to effectively lead and manage the change to an ICT culture in schools.
Description and Purpose	Develop school leaders' capability to provide strategic leadership of the transformational integration of ICT, they will participate in an appropriately tailored developmental programme to prepare them to lead the successful implementation of e-Hijrah. This will involve development opportunities, on-going support and access to extra resources.
Outcomes and Indicators	• School leaders with the knowledge, skills and understandings to effectively lead the implementation of e-Hijrah using a Whole School Approach. • An assessment of leadership capability using profiling tools (i.e. PEAKS). • A comprehensive and up-to date ICT strategic plan for their school and community is developed. • The use of ICT enabled learning is supported by strategies that are in the ICT Strategic Plan.

Mengembangkan kemampuan pemimpin sekolah dalam memberikan kepemimpinan strategis pada integrasi ICT di sekolah

Mengenal Teknologi di Era Digital

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Definisi yang jelas, terstandarisasi, dapat diterima secara nasional dan dirujuk secara internasional dari Mengenal Teknologi di Era Digital SPN21 (SPN21 Digital-Age Literacy)

learners as they use ICT.

Mengembangkan Literasi Era Digital yang sama dan umum berbasis standard (SPN21).

Description and Purpose	programmes. This will include clear descriptions of what each Digital-Age Literacy will look like for a range of developmental stages and processes for how they can be assessed.
Outcomes and Indicators	• A defined set of Digital-Age Literacies exist. • Developmentally aligned standards for each Digital-Age Literacy are in place. • Assessment processes for measuring proficiency against the Digital-Age Literacy standards are established and used by teachers.

Pendekatan Pedagogis Abad 21

	ICT can have a transformative role in education when the central focus/emphasis is on supporting and enhancing new desired pedagogical approaches rather than solely on the
Description	This initiative will clearly define the 21st century pedagogies required for the successful
Outcomes and Indicators	• A rich description, framework and model for 21st century pedagogical practices with new and existing technologies (affordances) mapped to the model. • A suite of web-based materials to support training, understanding and use of the model

Mengembangkan pemahaman yang sama tentang pedagogi abad 21 dan mengaitkannya dengan ICT sehingga dapat memaksimalkan kontribusi ICT terhadap pembelajaran.

Inisiatif ini akan dengan jelas menjabarkan pedagogi abad 21 yang dibutuhkan agar dapat melaksanakan SPN21 secara berhasil.

Kompetensi ICT Guru

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Rationale	A world-class education system requires clarity over what are the essential elements in teacher professional practice for ICT. The competencies need to be assessed, support developed and good practice nurtured and sustained.
G	**Mengembangkan Kerangka Standard Kompetensi ICT untuk Guru sehingga guru yang percaya diri dan mampu dalam menggunakan ICT untuk mendukung pembelajaran berbasis pedagogi abad 21 dan literasi digital.**
D	Monitor the expression of these capabilities in learning programmes.
Outcomes and Indicators	• ICT teacher competency standards, linked to 21st century pedagogical practice and digital literacy, are in use. • Professional learning and development programmes support the development and ongoing Guru dapat menggunakan ICT secara efektif sehingga mendukung pembelajaran berbasis pedagogi abad 21 dan literasi era digital

Ministry of Education, Brunei Darussalam

Cakupan dan kerangka waktu

HIJRAH Whole School ICT Development

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PRINSIP

1. Holistik
2. Terintegrasi dan sejajar
3. Siswa adalah fokusnya namun didorong secara pedagogis
4. Praktik terbaik di tingkat global
5. Relevan dengan konteks Brunei
6. Formatif dan bukan sumatif
7. Sesuai dengan prioritas Kementerian Pendidikan
8. Menyeluruh namun mudah dipahami, dapat ditafsirkan dan digunakan oleh sekolah

Proses

Bagaimanakah keterampilan Abad 21 yang dijabarkan dalam SPN21 dibandingkan dengan kerangka lain yang telah diakui?

Dapatkah keterampilan utama SPN21 dan kerangka yang telah diakui lainnya dipetakan ke dalam ranah OECD?

Hasil Temuan

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Ranah OECD merupakan cara yang baik dalam mengorganisir dan mengkonsolidasikan bidang keterampilan untuk Abad ke 21

Menggunakan ranah OECD dengan cara ini dapat membantu dalam memenuhi prinsip “praktik terbaik global”

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Dimensi-Kerangka WSID Terintegrasi

Domains	Ways of Thinking	Ways of Working	Tools for Working	Skills for Living in the World

Process

Dapatkah keterampilan utama dalam SPN 21 dan kerangka yang telah diakui lainnya dipetakan dalam Dimensi 21 CLD?

Dimensi

Cara Berpikir

- *Penyelesaian masalah dan inovasi di dunia nyata*
- *Konstruksi Pengetahuan*

Cara kerja

- *Kolaborasi*
- *Komunikasi yang terampil*

Alat untuk bekerja

- *Menggunakan ICT untuk belajar*

Keterampilan untuk hidup di dunia

- *Pengaturan diri*
- *Kewarganegaraan global Brunei*

Memenuhi prinsip “Holistik” dan “Relevan dengan Konteks Brunei”

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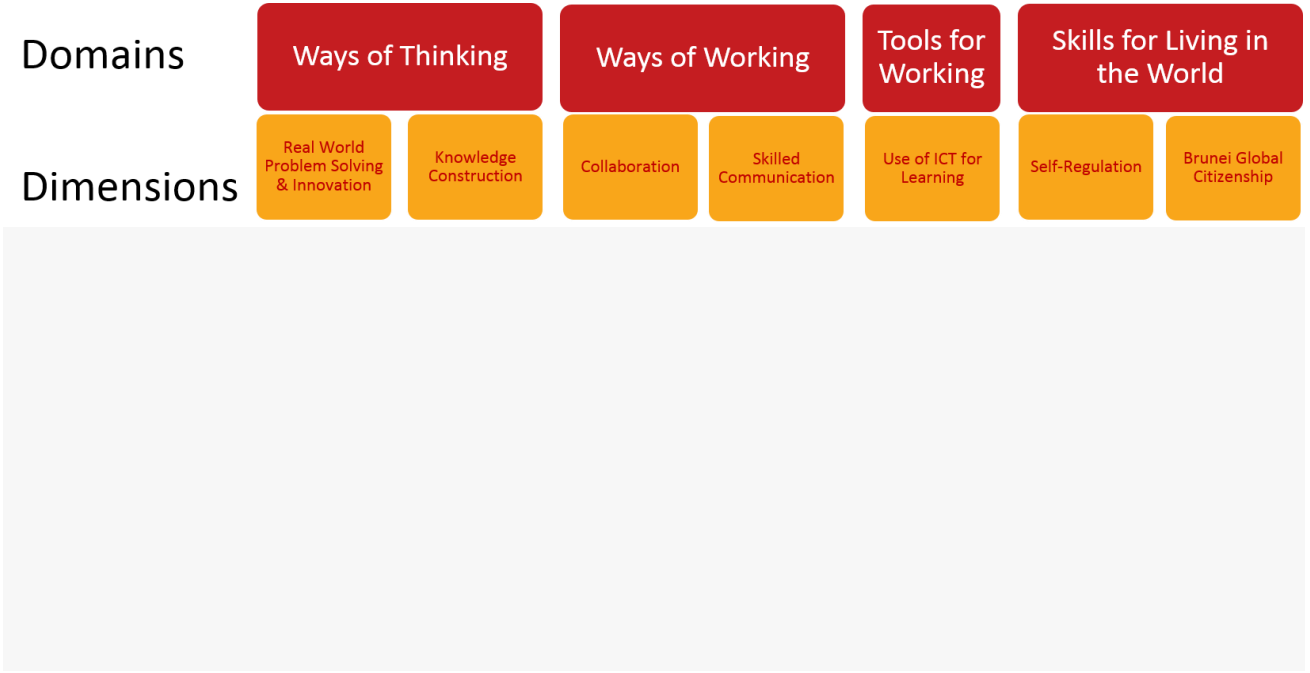
Dimensi kerangka WSID terintegrasi



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Uraian Kerangka WISD Terintegrasi

Menggunakan kerangka kerja – penampang vertikal

Dimension
- Focus – a vertical slice down the framework, e.g. Knowledge Construction

Student Digital Age Literacy
- Identifying the digital age literacy skills to be learnt along with the learning areas ideas or concepts

21st Century Teaching and Learning
- Identifying and planning the learning activities and ICT's that will deliver this knowledge and skills

Teacher ICT Competency
- Identifying the ICT competencies required by a teacher to deliver the planned ICT activities

Leader ICT Capability
- Identifying the Leaders ICT capabilities within the Whole School Approach that are required to ensure the success of the proposed teaching and learning activities

Ministry of Education, Brunei Darussalam

WHOLE SCHOOL ICT DEVELOPMENT INTEGRATED FRAMEWORK

HIJRAH

	Ways of Thinking		Ways of Working		Tools for Working	Skills for Living in the World	
	Real World Problem Solving and Innovation	Knowledge Construction	Collaboration	Skilled Communication	Use of ICT for Learning	Self-Regulation	Brunei Global Citizenship
Student Digital-Age Literacies	Student Digital-Age Literacies are the competencies people have, and need to develop, to live and learn today and in the future. They provide the basis for ways of thinking, ways of working, and tools for working and skills for living in a progressive and challenging world.	The ability to think creatively to develop and implement innovative solutions to real world problems. • **Solve problems** • **Real world settings** • **Innovative and entrepreneurial**	The ability to construct knowledge through the generation of new ideas and conceptual understandings and apply this knowledge in different contexts • **Knowledge construction the main effort** • **Conceptual understanding** • **Applied**	The ability to work together with one or more people, sharing responsibility fairly and making substantive decisions together to discuss an issue, solve a problem, or create a product. • **Working together** in pairs or groups • **Sharing responsibility fairly** • **Making substantive decisions** • **Interdependent results**	The ability to communicate to a target audience over an extended period and/or using multi-modal communication supported by sufficient evidence. • **Extended Communication** • **Multi-modal** • **Supporting Evidence** • **Target Audience**	The ability to actively use ICT to support knowledge construction and the design and development of solutions and products. • **Student use of ICT** • **Knowledge Construction using ICT** • **Designers of ICT products**	The ability to successfully plan and monitor their work to achieve learning goals and meet success criteria, they are aware of in advance, and to improve their product by incorporating feedback. • **Learning Goals and Success Criteria** • **Planning** • **Improved Quality**	The ability to participate and contribute as knowledgeable, ethical, skilled, creative and globally aware citizens of Brunei Darussalam. • **Self-Responsibility** • **Responsibility to family, neighbours, and community** • **Responsibility to nation and the environment**
21st Century Learning and Teaching	21st Century Learning and Teaching pedagogy is student centred and actively involves students often working collaboratively and supported by the integration of ICT to construct new knowledge, solve problems and take action for real purpose in authentic and meaningful contexts. It is central to the development of digital-age literacies, the capacity to learn and learning to be a life-long learner in an increasing global world.	The ability to design learning activities that: • ask students to complete tasks for which they **do NOT already know a response** or solution • require students to work on solving **real problems** • represent **innovation** by requiring students to implement their ideas, designs or solutions for audiences outside the classroom. • Innovative and **entrepreneurial**	The ability to design learning activities that ask students to **interpret, analyse, synthesize, or evaluate** information or ideas.	The ability to design learning activities where students are **working with others**, and have **shared responsibility** for their work. The learning activity is designed in a way that requires students to **make substantive decisions together.**	The ability to design learning activities where students are asked to produce **extended** or **multi-modal communication** that is **substantiated**, with a logical explanation or examples or evidence that supports a central thesis. The students must craft their communication for a **particular audience.**	The ability to design learning activities where **students use of ICT directly** to complete all or part of the learning activity. The educator's use of ICT to present materials to students does not count as student use:	The ability to design learning activities where students are self-regulated thinkers and learners who can **take responsibility** for their lives, their work, and their ongoing learning. It requires individuals to **monitor** their own work and to **incorporate feedback** to develop and improve their work products.	The ability to design learning activities that enable students to develop the **skills required to participate and contribute** as knowledgeable, ethical, skilled, creative and **globally aware citizens of Brunei Darussalam.** These would include self-responsibility, a responsibility to family, neighbours, and community and a responsibility to nation and the environment
Teacher ICT Competency	Teacher ICT competencies are the key skills and abilities that teachers require to make the most effective use of ICT in their teaching and to develop pedagogy and practice capable of supporting the development of 21st Century Skills and Digital Age Literacies.	The ability to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support Problem Solving and Innovation. • **Investigate** • **Create** • **Communicate** • **Manage**	The ability to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support Knowledge Construction. • **Investigate** • **Create** • **Communicate** • **Manage**	The ability to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support Collaboration. • **Investigate** • **Create** • **Communicate** • **Manage**	The ability to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support Skilled Communication. • **Investigate** • **Create** • **Communicate** • **Manage**	The ability to flexibly use a variety of subject-specific tools and applications to support students learning. They must have the skills to manage complex projects, work with others to support their own professional learning, play a leadership role in training and supporting their colleagues, and be able to articulate how their classroom practices align to their school's policy & vision for a culture of ICT.	Teachers must be able to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support Self-regulation. • **Investigate** • **Create** • **Communicate** • **Manage**	Teachers must be able to create flexible classroom learning environments. Within these environments, teachers must be able to integrate student-centred activities and flexibly apply technology to support the development of Brunei Global Citizenship. • **Investigate** • **Create** • **Communicate** • **Manage**
Leaders ICT Capability	Leader ICT capability is the effective **use of ICT** to create a school culture where ICT is used to support: • Student Centred learning • Effective professional learning and development • The creation of conducive learning environment • The involvement of parents in school programmes and activities; • Community-related programmes that develop a caring and sharing community	The ability to apply problem solving tools and to arrive at innovative solutions in real world settings. • **Solve problems** • **Apply in authentic settings** • **Being Innovative**	The ability to construct knowledge through the generation of ideas and conceptual understanding and apply this: • **Knowledge Construction** • **Conceptual Understanding** • **Application of Knowledge** • **Interdisciplinary Application**	The ability to work together with one or more people, sharing responsibility fairly and making substantive decisions together to discuss an issue, solve a problem, or create a programme. • **Working together** in pairs or groups • **Sharing responsibility fairly** • **Making substantive decisions** • **Interdependent results**	The ability to communicate to a target audience over an extended period and/or using multiple modes, supported by sufficient evidence. • **Extended Communication** • **Supporting Evidence** • **Target Audience** • **Multi-modal**	The ability to use ICT to build knowledge to develop authentic solutions. • **Knowledge building using ICT** • **Authenticity**	The ability to successfully plan, execute and monitor their work to achieve goals and to meet predetermined success criteria. • **Goals Development** • **Planning** • **Improved Quality**	The ability to participate and contribute as knowledgeable, ethical, skilled, creative and globally aware citizens of Brunei Darussalam • **Safe and Responsible Use** • **Active Citizenship and Participation** • **Digital Literacy** • **Social Networking** • **MIB**

WSID Knowledge Construction Planning Guide

PEDAGOGY REQUIREMENTS

1. Knowledge is **new** to the student
2. Requires **Interpretation, analysis or evaluation** by the student
3. The constructed knowledge shows **conceptual understanding**
4. New knowledge is **applied**
5. **Inter-disciplinary**

SEQUENCE of LEARNING ACTIVITIES

TUNING IN
Time to:
- engage students,
- determine prior knowledge, and
- prepare them

FINDING OUT
Time to locate and gather information

SORTING OUT
Students organise and process ideas

MAKING CONNECTIONS
Students draw conclusions, articulate and validate new understandings

GOING FURTHER
Provide other activities to apply the new knowledge

TAKING ACTION
Provide opportunity for students to consider the bigger picture and make cross-subject links

The pedagogical requirements to be met for it to be "Knowledge Construction"

STUDENT DIGITAL-AGE

- Demonstrate current knowledge and understanding
- Organise, analyse, synthesise, evaluate and use information and ideas
- Identify, describe, and interpret different points of view, and distinguish fact from opinion
- Identify trends and relationships

...pply new knowledge in other ...arning or knowledge ...onstruction

construction

TEACHER ACTIVITIES

Knowledge	Skills	Attitudes/Values/Ethics
Design learning activities that require some knowledge construction Design learning activities where the main requirement is knowledge construction Design learning activities where students are required to apply their knowledge in a new context Design learning activities that are inter-disciplinary	• Design appropriate learning activities including a variety of tasks and approaches • Set up appropriate conditions for learning to take place • Provide opportunities for monitoring, feedback and evaluation (including peer to peer) • Provide multiple assessment opportunities including assessment for learning and assessment of learning • Select and provide appropriate ICT for the completion of the task or tasks	• Be aware of individual student backgrounds including: • Prior knowledge • Learning preferences • Background and interests • Social circumstances • Provide multiple opportunities for students to show their understanding • Encourage and ensure the safe and ethical use of ICT

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Provide opportunity for students to consider the bigger picture and make cross-subject links

Select and incorporate appropriate ICT for the completion of any or all tasks.

STUDENT DIGITAL-AGE SKILLS

- Demonstrate current knowledge and understandi

...pply new knowledge in other ...arning or knowledge ...nstruction

TEACHER ACTIVITIE

Knowledge		...s
Design learning activities that re... construction	• Set up appropriate conditions for learning to take place • Provide opportunities for monitoring, feedback and evaluation (including peer to peer) • Provide multiple assessment opportunities including assessment for learning and assessment of learning • Select and provide appropriate ICT for the completion of the task or tasks	...udent backgrounds including: • Learning preferences • Background and interests • Social circumstances • Provide multiple opportunities for students to show their understanding • Encourage and ensure the safe and ethical use of ICT
Design learning activities where the main requirement is knowledge construction		
Design learning activities where students are required to apply their knowledge in a new context		
Design learning activities that are inter-disciplinary		

Tujuannya adalah untuk merancang tahapan pelajaran yang memenuhi persyaratan Konstruksi Pengetahuan secara pedagogis dan membantu siswa mengembangkan literasi era digital dalam Konstruksi Pengetahuan

Pemilihan ICT yang tepat untuk diselesaikannya salah satu atau semua tugas


HIJRAH
Whole School ICT Development
WSID Knowledge Construction
Planning Guide
PEDAGOGY REQUIREMENTS
1
Knowledge is new to the student
2
Requires Interpretation, analysis or evaluation by the student
3
The constructed knowledge shows conceptual understanding
4
New knowledge is applied
5
Inter-disciplinary
SEQUENCE of LEARNING ACTIVITIES
TUNING IN
Time to:
• engage students,
• determine prior knowledge, and
• prepare them
FINDING OUT
Time to locate and gather information
SORTING OUT
Students organise and process ideas
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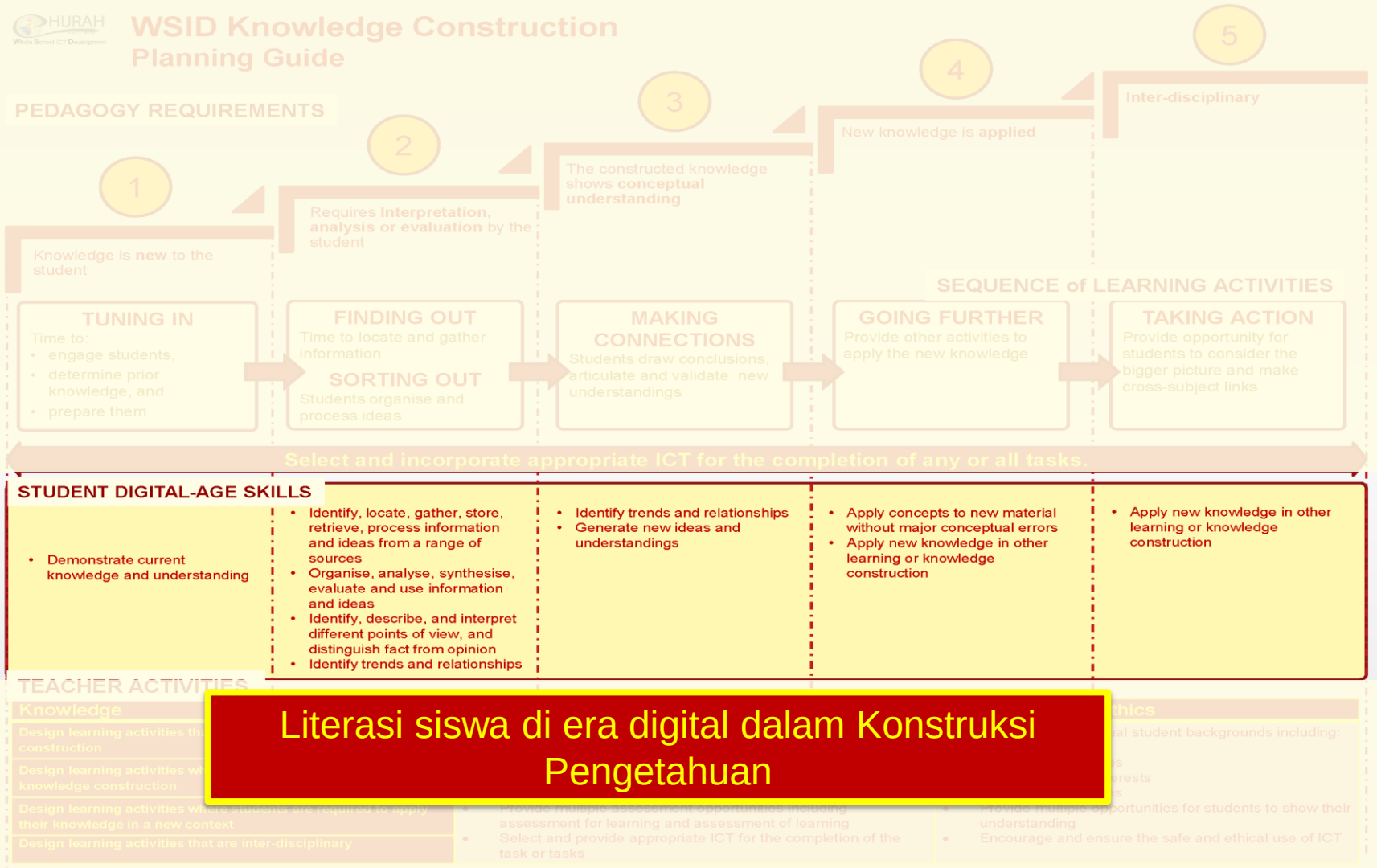
Students draw conclusions, articulate and validate new understandings
GOING FURTHER
Provide other activities to apply the new knowledge
TAKING ACTION
Provide opportunity for students to consider the bigger picture and make cross-subject links
Select and incorporate appropriate ICT for the completion of any or all tasks.
STUDENT DIGITAL-AGE SKILLS
Kegiatan guru membutuhkan tahapan kegiatan pembelajaran yang memenuhi persyaratan "Konstruksi Pengetahuan secara Pedagogis "
TEACHER ACTIVITIES
Knowledge
Design learning activities that require some knowledge construction
Design learning activities where the main requirement is knowledge construction
Design learning activities where students are required to apply their knowledge in a new context
Design learning activities that are inter-disciplinary
Skills
• Design appropriate learning activities including a variety of tasks and approaches
• Set up appropriate conditions for learning to take place
• Provide opportunities for monitoring, feedback and evaluation (including peer to peer)
• Provide multiple assessment opportunities including assessment for learning and assessment of learning
• Select and provide appropriate ICT for the completion of the task or tasks
Attitudes/Values/Ethics
• Be aware of individual student backgrounds including:
• Prior knowledge
• Learning preferences
• Background and interests
• Social circumstances
• Provide multiple opportunities for students to show their understanding
• Encourage and ensure the safe and ethical use of ICT


WSID Knowledge Construction Planning Guide
PEDAGOGY REQUIREMENTS
1
Knowledge is new to the student
2
Requires Interpretation, analysis or evaluation by the student
3
The constructed knowledge shows conceptual understanding
4
New knowledge is applied
5
Inter-disciplinary
SEQUENCE of LEARNING ACTIVITIES
TUNING IN
Time to:
• engage students,
• determine prior knowledge, and
• prepare them
FINDING OUT
Time to locate and gather information
SORTING OUT
Students organise and process ideas
MAKING CONNECTIONS
Students draw conclusions, articulate and validate new understandings
GOING FURTHER
Provide other activities to apply the new knowledge
TAKING ACTION
Provide opportunity for students to consider the bigger picture and make cross-subject links
Select and incorporate appropriate ICT for the completion of any or all tasks.
STUDENT DIGITAL-AGE SKILLS
• Demonstrate current knowledge and understanding
• Identify, locate, gather, store, retrieve, process information and ideas from a range of sources
• Organise, analyse, synthesise, evaluate and use information and ideas
• Identify, describe, and interpret different points of view, and distinguish fact from opinion
• Identify trends and relationships
• Identify trends and relationships
• Generate new ideas and understandings
• Apply concepts to new material without major conceptual errors
• Apply new knowledge in other learning or knowledge construction
• Apply new knowledge in other learning or knowledge construction
TEACHER ACTIVITIES
Knowledge
Design learning activities th
construction
Design learning activities w
knowledge construction
Design learning activities where students are required to apply their knowledge in a new context
Design learning activities that are inter-disciplinary
• Provide multiple assessment opportunities including assessment for learning and assessment of learning
• Select and provide appropriate ICT for the completion of the task or tasks
• Provide multiple opportunities for students to show their understanding
• Encourage and ensure the safe and ethical use of ICT
Literasi siswa di era digital dalam Konstruksi Pengetahuan

WSID Knowledge Construction Planning Guide

HIJRAH Whole School ICT Development

PEDAGOGY REQUIREMENTS

1. Knowledge is **new** to the student
2. Requires **Interpretation, analysis or evaluation** by the student
3. The constructed knowledge shows **conceptual understanding**
4. New knowledge is **applied**
5. **Inter-disciplinary**

SEQUENCE of LEARNING ACTIVITIES

TUNING IN
Time to:
- engage students,
- determine prior knowledge, and
- prepare them

FINDING OUT
Time to locate and gather information

SORTING OUT
Students organise and process ideas

MAKING CONNECTIONS
Students draw conclusions, articulate and validate new understandings

GOING FURTHER
Provide other activities to apply the new knowledge

TAKING ACTION
Provide opportunity for students to consider the bigger picture and make cross-subject links

Select and incorporate appropriate ICT for the completion of any or all tasks.

STUDENT DIGITAL-AGE SKILLS

• Demonstrate current knowledge and understanding	• Identify, locate, gather, store, retrieve, process information and ideas from a range of sources • Organise, analyse, synthesise, evaluate and use information and ideas • Identify, describe, and interpret different points of view, and distinguish fact from opinion • Identify trends and relationships	• Identify trends and relationships • Generate new ideas and understandings	• Apply concepts to new material without major conceptual errors • Apply new knowledge in other learning or knowledge construction	• Apply new knowledge in other learning or knowledge construction

TEACHER ACTIVITIES

Knowledge	Skills	Attitudes/Values/Ethics
Design learning activities that require some knowledge construction Design learning activities where the main requirement is knowledge construction Design learning activities where students are required to apply their knowledge in a new context Design learning activities that are inter-disciplinary	• Design appropriate learning activities including a variety of tasks and approaches • Set up appropriate conditions for learning to take place • Provide opportunities for monitoring, feedback and evaluation (including peer to peer) • Provide multiple assessment opportunities including assessment for learning and assessment of learning • Select and provide appropriate ICT for the completion of the task or tasks	• Be aware of individual student backgrounds including: • Prior knowledge • Learning preferences • Background and interests • Social circumstances • Provide multiple opportunities for students to show their understanding • Encourage and ensure the safe and ethical use of ICT

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Resource Kit

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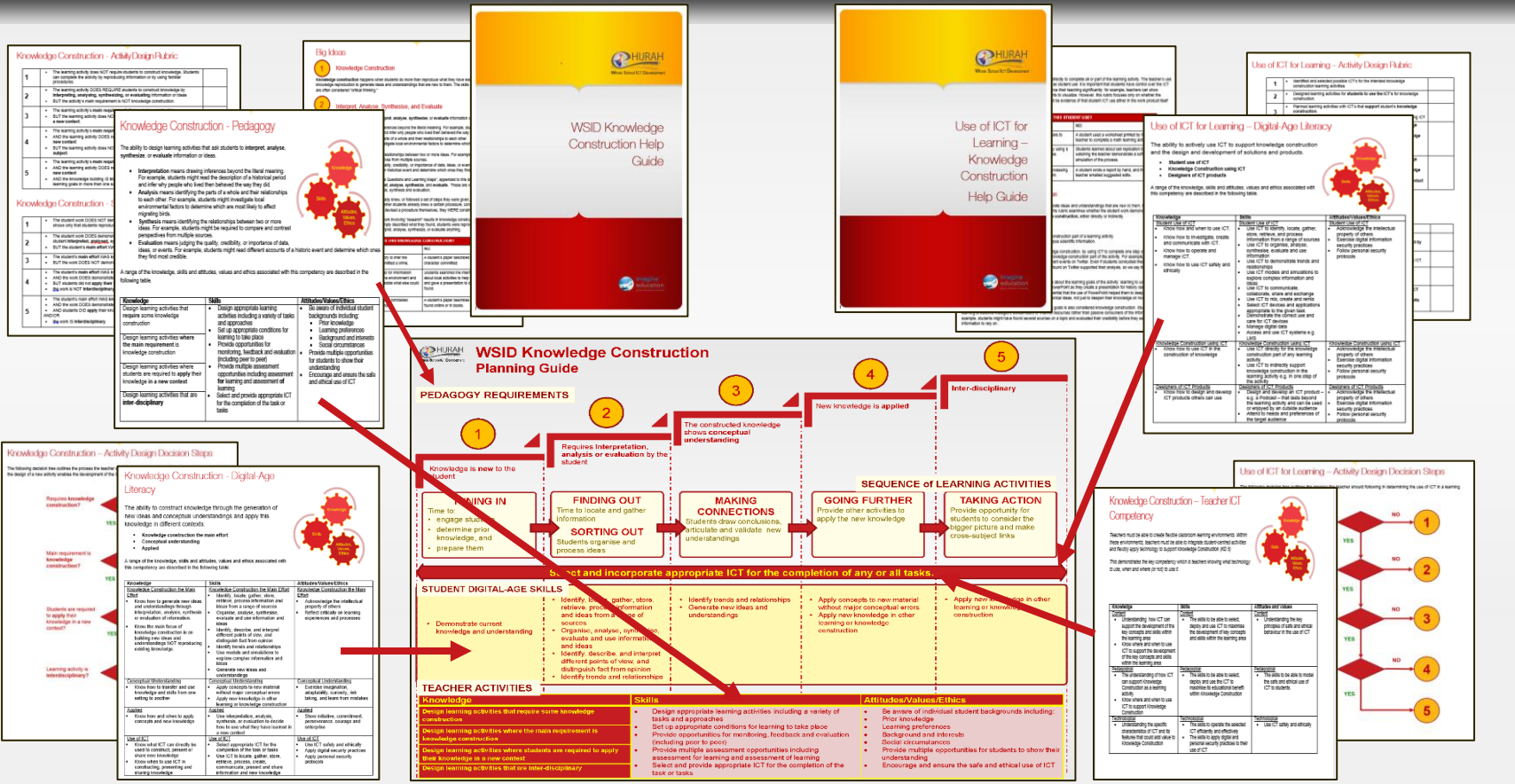
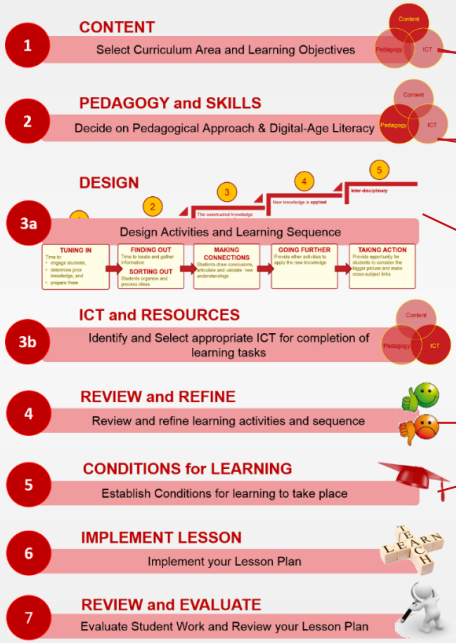


Template Perancangan Pelajaran



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Knowledge Construction Lesson Plan

Topic:		**Duration:**	
Content Learning Objectives		**Pedagogical Approach(es):** (Highlight or circle)	Real World Problem Solving and Innovation Knowledge Construction Collaboration Skilled Communication Use of ICT for Learning Self-Regulation Brunei Global Citizenship
Digital-Age Literacy Skills:			

Learning Activities	Teacher Activity Considerations	ICT and Other Resources
Tuning in:		
Finding out:		

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Template Perencanaan Pelajaran

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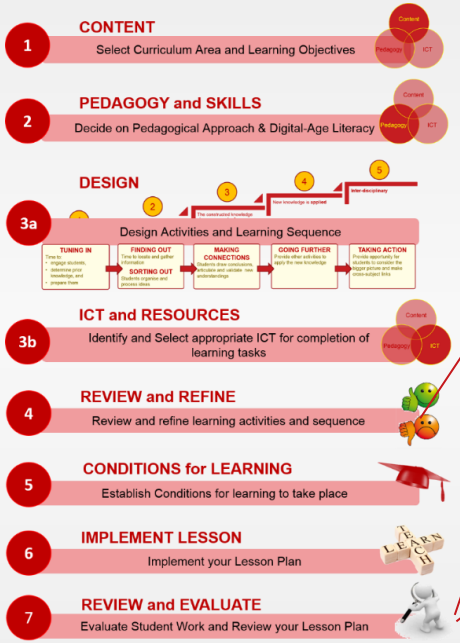

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Knowledge Construction Lesson Plan

Knowledge Construction Activity Design Rubric		Teacher	Peer
1	• The learning activity does NOT require students to construct knowledge. Students can complete the activity by reproducing information or by using familiar procedures.		
2	• The learning activity DOES REQUIRE students to construct knowledge by **interpreting, analysing, synthesizing, or evaluating** information or ideas • BUT the activity's main requirement is NOT knowledge construction.		
3	• The learning activity's **main requirement** IS knowledge construction • BUT the learning activity does NOT require students to **apply their knowledge in a new context**.		
4	• The learning activity's **main requirement** IS knowledge construction • AND the learning activity DOES require students to **apply their knowledge in a new context** • BUT the learning activity does NOT have **learning goals in more than one subject**.		
5	• The learning activity's **main requirement** IS knowledge building • AND the learning activity DOES require students to **apply their knowledge in a new context** • AND the knowledge building IS **interdisciplinary**. The activity DOES have learning goals in more than one subject.		

Peer Review Comments:

Knowledge Construction Student Work Rubric		Teacher
1	• The student work DOES NOT demonstrate knowledge construction. The work shows only that students reproduced information or used familiar procedures.	
2	• The student work DOES demonstrate knowledge construction. It shows that the student **interpreted, analysed, synthesised,** or **evaluated** information or ideas. • BUT the student's **main effort** WAS NOT knowledge construction.	
3	• The student's **main effort** WAS knowledge construction • BUT the work DOES NOT demonstrate **conceptual understanding.**	
4	• The student's **main effort** WAS knowledge construction • AND the work DOES demonstrate **conceptual understanding** • BUT students did not **apply their knowledge** AND • the work is NOT **interdisciplinary**.	
5	• The student's main effort WAS **knowledge construction** • AND the work DOES demonstrate **conceptual understanding** • AND students DID **apply** their knowledge OR • The work IS **interdisciplinary**.	

Comments:

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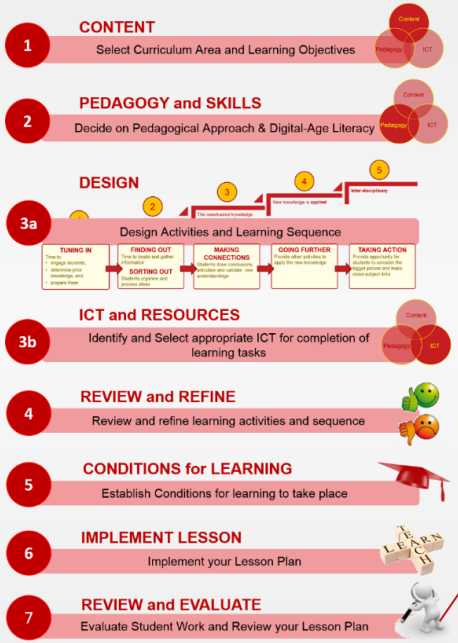
Template Perencanaan Pelajaran



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Knowledge Construction Lesson Plan

What worked well?	What would make it better next time?
What didn't work well? and why?	What would be required in the future to increase your use of ICT with your students in knowledge construction?

Name of Teacher: _____

Name of Peer Reviewer: _____

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Kerangka Pendekatan Seluruh Sekolah

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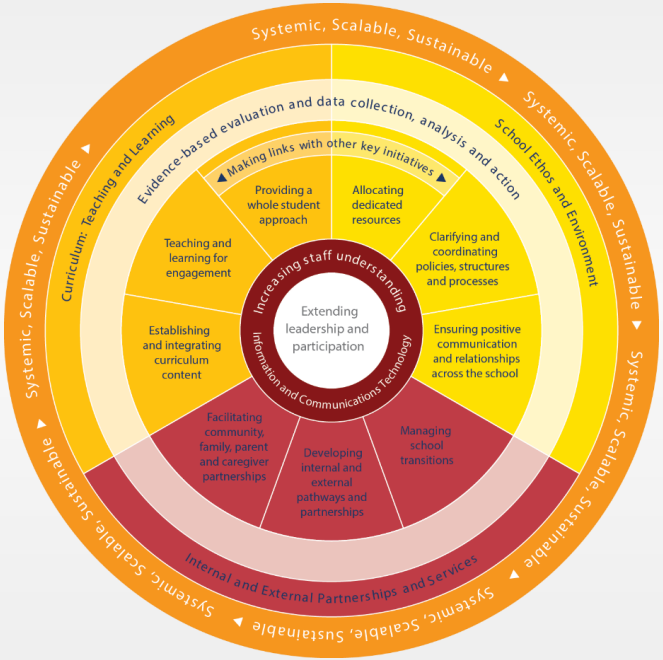

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Empat *enabler*

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Enabler Pertama

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Enabler kedua

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Enabler ketiga

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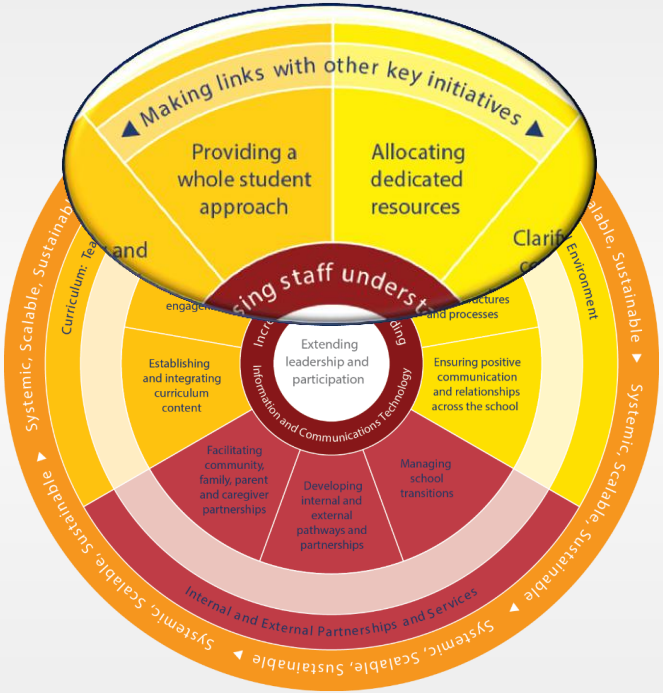

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Ranah dan Dimensi Kerangka WSA

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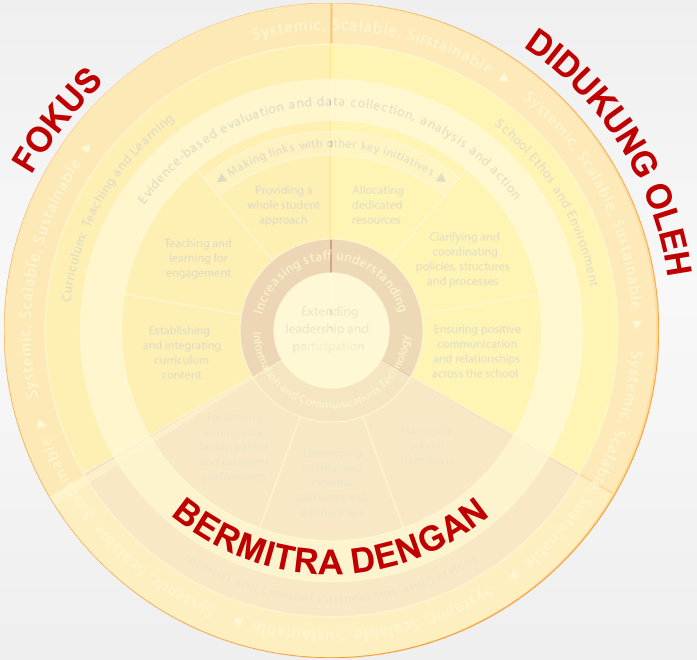

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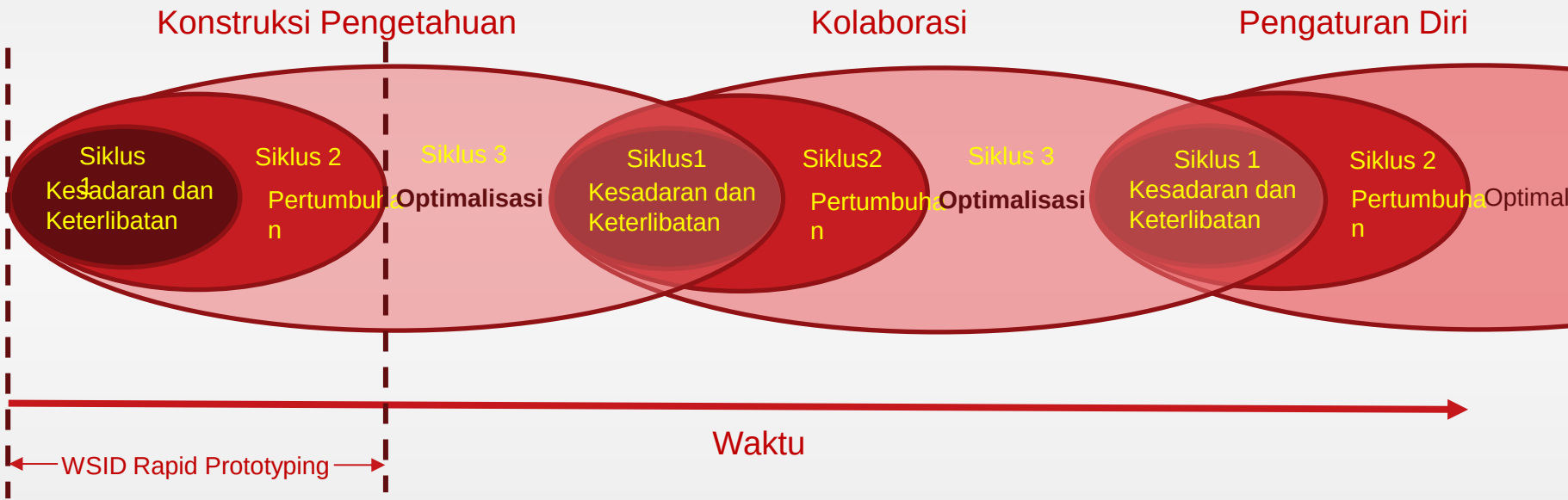
STATUS SAAT INI

PETA STRATEGIS



Lokakarya berbagi sistemik, terukur dan berkelanjutan

Cluster 2

BDTA

Terimakasih

Baldev@imagine.education