A Proposal: ePortfolio for enhancing active learning for the future generation

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It is proposed that, the students’ meta-cognitive reflection being the key to learning, the development of the students’ expressive skills in writing literacy will, indeed, bring about a success in life after graduation. The four years of college education must fill up the “fuel tank of knowledge, wisdom, competencies and skills for lifelong learning”, which must not be depleted for over 40 years until retirement. By nurturing the students’ writing skills as the artifact or evidence for academic learning through meta-cognitive activities, is it possible to conduct the real education, producing graduates of high quality and caliber. The basic assumption of incorporating the development of writing skills in the college curriculum or program is for the propose of making our culture richer and elevating the value of our heritage for the benefit of the better
The basic assumption of incorporating the development of writing skills in the college curriculum or program is for the propose of making our culture richer and elevating the value of our heritage for the benefit of the better future in terms of constructive and humanistic communication. It is seen that ePortfolio has potential to grow into such robust ICT enhanced system for the education in a new paradigm fulfilling the need for transdisciplinarity. This proposal is to put ePortfolio into a bigger picture in higher education, namely, in the realm of ePortfolio for academia, in which the process of learning leads to the benefit of career design and life-long learning. It cannot be denied that the proficiency in academic writing will bring students to a success in career as well as in the life long learning. In other words, the artifact in writing is the mirror of the
It cannot be denied that the proficiency in academic writing will bring students to a success in career as well as in the life long learning. In other words, the artifact in writing is the mirror of the learning mind.

As the IFTF (Institute for the Future) claims that the 2020 skills include Global Awareness and Rich ICT, Media Literacy, as well as Digital Communication/Presentation skills as the essential future skills, the mirror of the reflective learning mind incorporates not only the written information but also the rich media. Thus, the future education fortified with ePortfolio must also incorporate artifact of learning in rich media. While in the past, paper and a pencil were the optimal technologies to reflect the evidence for learning, digital media literacy has been
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No culture to make use of portfolio system in education in Asia

Portfolios turned in by the medical degree candidates

Evaluation of Portfolios: two examiners read Portfolios individually

Prep-meeting by all examiners: agreement formation for standardizing the evaluation measures

Source: Portfolio System by Emit Japan
e-Portfolio:: 3 Types:

1. Student e-Portfolio
   - Show cases for proofs of achievements
   - Purpose: career development, course accomplishment
   - Collection of artifacts
   - Place to share representations, reflections, improvement processes.

2. Faculty Development e-Portfolio
   - Show cases for proofs of academic achievements by professors
   - Teaching strategies to be shared with other colleagues
   - Purpose: professional development as educators

3. Institutional e-Portfolio
   - Collections of student e-Portfolio and faculty development e-Portfolio
   - Evidence for learning and accreditation
What is e-Portfolio?

- What is e-Portfolio?
  - The basic concepts of e-Portfolio.

- Assessment Strategies: The position we take here.
  - Realm of e-Portfolio
  - What to Assess? ------- Corpus for Assessment
  - How to Assess? : Reliability and Validity
  - How to Visualize Results
What we focus on here

We choose the Learning e-Portfolio (#1 & #3 below).

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The Role of a University:
Gas Station for life? Filling the knowledge tank in the students’ brain for the life-long career?
Future Design in Education

The Region that must be included in the Education Model

School Region

Curriculum

Professional Development
Faculty’s Attitudes and Awareness
Goals and Learning
Mission Statement of Individual Courses
Mission Statement of Departments
Mission Statement of Divisions or Colleges
Mission Statement of the University
Social Needs

Executive Board
Staff
Faculty
Parent
Alumni

FD
Future Design
Global Awareness

Future Design in Education

The Region that must be included in the Education Model

School Region

Faculty

Students

Curriculum

PDCA Cycle

Mission Statement of the University

Mission Statement of Divisions or Colleges

Mission Statement of Departments

Mission Statement of Objectives of Learning

Goals and Learning of Individual Courses

Mission Statement of Faculty’s Attitudes and Awareness

Professional Development

Executive Board

Alumni

Parent
the students need to be ...

Future Generation learner

- a critical thinker
- a problem solver
- an innovator
- a communicator
- a collaborator
- globally aware
- civically engaged
- a self-directed learner
- information & media literate
- information & media literate
- financially & economically literate

To succeed in our global community, I will need to be...
The Future, Better Life, Transcendency

Isn’t Learning for making the world / life better?
10 Needs for Future Education

- Sensemaking
- Social Intelligence
- Novel & Adaptive Thinking
- Cross-Cultural Competencies
- Computational Thinking
- New Media Literacy
- Transdisciplinarity
- Design Mindset
- Cognitive Load Management
- Virtual Collaboration
Future Design in Education

- **Constructivism** in Education
  - Learning Effectiveness rather than Teaching Effectiveness
  - Active Learning by the Problem Identifying/Solving Strategies
  - Collaborative Team-Based Learning
  - Learning Outcome from Team Work and Leadership
  - Social Aspects in Classroom...
    - Discussion -> Sharing Information -> Identifying the Problem ->
    - Decision-Making for the Next Step (Project Design) -> Project
    - Management -> Reflection (i.e., Plan-Do-Check-Action Cycle)

- **Course Offered by Clear Goals, Objectives, and Planning in terms of Syllabus**
- **Clearly Stated Institutional Mission and Goal Statements:**
- **Curriculum to implement the above.**
Where we are in education TODAY ...
All parts must be integrated.
Course Contents and Syllabi are consolidated reflections of the School Mission.
How do we design education with ePortfolio?

- Course -> Curriculum Level
- Department/College/School Level
- Institutional Level
- Life-Long Learning & Career Planning Level
How do we design education with ePortfolio?

- Course -> Curriculum Level
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- We need tools to measure the learning results.
- We need tools to trace and monitor the learning.
- We need tools to visualize the accomplishment in learning.
How do we design education with ePortfolio?

- Course -> Curriculum Level
- Department/College/School Level
- Institutional Level
- Life-Long Learning Level

Active Learners with ICT Literacy!
Future Design in Education at the Course Level

- We need a new set of “paper and a pencil” for PBL through TBL.
  - Constructivism in Education
  - Active Learning by the Problem Identifying/Solving Strategies
  - Collaborative Team-Based Learning
  - Team Work: Working on the same page

Gurantees 24/7 team learning environment
Bloom’s taxonomy
Learner’s Activities

Creating
Evaluating
Analyzing
Applying
Understanding
Remembering
### Active Learners

#### The Cognitive Process Dimension

<table>
<thead>
<tr>
<th>Learner’s Activities</th>
<th>Passive Learning</th>
<th>Active Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remember</td>
<td>(knowledge)</td>
<td>(Synthesis)</td>
</tr>
<tr>
<td></td>
<td>(Comprehension)</td>
<td>(Evaluation)</td>
</tr>
<tr>
<td>Apply</td>
<td>(Application)</td>
<td>(Analysis)</td>
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<tr>
<td>Analyze</td>
<td>(Analysis)</td>
<td>(Evaluate)</td>
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<tr>
<td>Evaluate</td>
<td>(Evaluate)</td>
<td>(Evaluate)</td>
</tr>
<tr>
<td>Create</td>
<td>(Synthesis)</td>
<td>(Synthesis)</td>
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#### Knowledge Information given in Class

1. Factual
   - 事実情報
2. Conceptual
   - 概念情報
3. Procedural
   - 手順・プロセス手法
4. Meta-Cognitive
   - メタ認知情報（受講生の成長を促す学習活動）
Active Learners

Most K-12 & University Curriculum
The Learner can:

- Think critically and creatively
- Reflect upon their learning meta-cognitively
- View where they stand
- comprehensively with a bird’s eye view
- Appreciate the value in life and the beauty of life

Ideally Speaking . . .
Active Learners

Social Constructivism
PBL thru TBL
Problem/Project Based Learning Thru Team Based Consensus Agreement

Classroom and Beyond . . .
- No borders in Learning!
- Involving All Stakeholders in the School Community
  e.g. Regional Partnership
  Business/Industry-Academia Partnership
In other words,

Learners must be outside of the fish bowl!
Learners must be outside of the fish bowl!

Who chose the school to be inside the fish bowl?
Learning must happen here!

image source: www.okeanosgroup.com/
The Future, Better Life, Transcendency
Concepts of Learning Portfolio

- Learner as a pilot
- Prof as a copilot
Traditional vs. Active Learning

**Traditional Education**
- Goal (set by the professor)
  - student
  - professor

**Active Learning**
- Goal (set by the learner)
  - student as a pilot/navigator of their own learning
  - teacher as the co-pilot
So far, we have looked at the active learner.
How do we design education with ePortfolio?

Question:

How can we assess such active learning?

- Course -> Curriculum Level
- Department/College/School Level
- Institutional Level
- Life-Long Learning Level
How do we design education with ePortfolio?

<table>
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All Levels must be included!
Realm of ePortfolio

Future Design in Education

The Region that must be included in the Education Model

School Region

- Alumni
- Parent
- Faculty
- Students

Curriculum

PDCA Cycle

FD
- Professional Development
- Faculty’s Attitudes and Awareness

Objectives of Individual Courses

Goals and Learning

Departments

Mission Statement of Divisions or Colleges

Mission Statement of the University

Social Needs
Our Approach
Purpose: Visualize and Share with all stakeholders the information of where we are in the course of development, how we are doing, and how we can improve in education to reach the institutional mission.

e-Portfolio Way

- Assess what? ---> Corpus
  - Mostly Skills and Competencies specified in the learning objectives

- Based on . . .
  - Students’ proofs of accomplishments in reflective writing
  - Sources for the assessment
Qualitative, rather than Quantitative

Sources for assessment:
- Students’ reflections of learning activities in the course of learning
- What is in the MIRROR of the curious LEARNING MIND?
- Using probe questions to extract what students accomplished/learned/mastered/gained confidence…/
- Students’ proofs of accomplishments

How?
- Competency based assessment – rubrics
- MGTA
- NMF
So far, we have implemented

Writing Programs to enhance and promote students’ comprehensive meta-cognitive reflection from learning.
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Writing Programs to enhance and promote students’ comprehensive meta-cognitive reflection from learning.

Writing:
JPN as Second Language

ICT-Enhanced Interactive Writing Program
for International Students
- A Plagiarism-free Writing Program

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Academic Writing Program
for international students
What was found:

The development of Reflective Writing skills in Second language will transfer and reshape the reflective writing skills in the native language.
So far, we have implemented:

- Writing Programs to enhance and promote students’ comprehensive meta-cognitive reflection from learning.

**How to support students’ learning and career development**

**Identified Problems of the current Entry Sheet system for recruitment from the view points of various stakeholders**

**Student**
- Poor skill of writing and meta-cognitive reflection
- Difficulty to relate his/her learning and experience to answers of questions of an ES
- Temptation of copying a text of manual and others, and pasting it on his/her ES
- Failure to appeal his/her competencies to work
- Some ESs are not original, clear, correct, credible

**Career advisor**
- Takes a lot of time to correct and give advice
- Visualized data of process of correct and advice are not stored and shared between advisor and student on the computer
- No combination ePortfolio system for enhancing active learning with career support
- Management of effective and high-quality advice are difficult

**Company**
- Difficulty to make a judgement that ES is the original written by the students.
- Risk of failure to get promising human resources
- Nonproductive Recruiting activity

**University**
- No combination ePortfolio system for enhancing active learning with career development and life-long learning
- Students’ learning outcomes are explained sufficiently to stakeholders in society

**2-3. How do students reflect their experience?**

- Students’ meta-cognitive reflection to explain
- What they learned through the experience
  - The Experiential Learning Cycle (Kolb 2014)
  - Concrete Experience
  - Active Experimentation
  - Reflective Observation
  - Abstract Conceptualization
Let’s compare the actively learning mind to an iceberg.
Empathy Sharing

Trust Building

Win - Win Relationship

Visualization of Risks to be avoided

Visualization of ZOPA (Zone of Possible Agreement)

MISSION >> VISION

statement

BATNA (Better Alternative to Negotiated Agreement)

Academic Approach

Long-term win - win relationship

Collaboration

Critical Thinking

Active Learning

Peer Learning

Student Initiated Learning

Dialog -> Team
Empathy Sharing

Trust Building

Win-Win Relationship

Visualization of Risks to be avoided

Language

Visualization of

ZOPA (Zone of Possible Agreement)

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Dialog -> Team
The Mirror of the actively learning mind.

Empathy Sharing
Trust Building
Win-Win Relationship
Visualization of Risks to be avoided
Visual Organizer
MISSION
VISION
MISSION
VISION

Language

Cannot be observed directly!

COLLAPSE

BATNA (Better Alternative to Negotiated Agreement)

Academic Approach
Long-term win-win relationship
Cannot be observed directly!

Collaboration
Critical Thinking
Active Learning
Peer Learning
Student Initiated Learning
Dialog -> Team
Special Thanks

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Thank you for your attention!