A museum show will formally open worldwide:

#### THE WORLD OF LEARNING

A documentary movie will be on worldwide:

THE WORLD OF LEARNING



# The Journal of B-learning

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## Chapter 1: Our Dreams about the 'World of Learning'

## **Inspired Dream Moments**

These dream-moments have been inspiring us to lead our own pursuing of dreams!

## 'I have a dream' by Martin Luther King

Even though we face the difficulties of today and tomorrow, I still have the dreams. --- ---

I have a dream that one day this nation will rise up and live out the true meaning of its creed: "We hold these truths to be self-evident: that all men are created equal."

I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave\_owners will be able to sit down together at a table of brotherhood.

**I have a dream** that one day even the state of Mississippi, a desert state, sweltering with the heat of injustice and oppression, will be transformed into an oasis of freedom and justice.

I have a dream that my four children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.

I have a dream today.

'There are no boundaries' in American Idol

With every step you climb another mountain Every breath it's harder to believe You make it through the pain, weather the hurricanes **To get to that one thing** 

Just when you think the road is going nowhere Just when you almost gave up on your dreams **They take you by the hand and show you that you can** There are no boundaries There are no boundaries

You can go higher, you can go deeper There are no boundaries above and beneath you Break every rule 'cause there's nothing between you and your dreams

## Our Version of Dreams

Our dreams are our missions, goals. We generate these dreams because of our strong will of helping people, because of our insights and knowledge of the problems about learning and potential solutions.

We have a dream that more people can live a better life because they are becoming better learners

We have a dream that more people can enjoy better learning experience because there are better teachers, peers, and learning tools.

We have a dream that there will be more scientific learning relevant theories that can better inform people's designing learning environment, teaching, and learning We have a dream that there will be fewer gaps between and within innovative theories, innovative technologies, and innovative practices because people are better in learning and applying innovations.

## Why do people need to become better learners?

Learning is a life-long enterprise, in every aspect of living or working. So improving the capacity of learning should be more important than learning any subject matter itself.

A better learner knows why to learn, what to learn, how to learn, and how to be self-regulated.

The problem is that many learners don't systematically learn about how to learn.

## Why do we need better teachers, peers, and tools?

Learning happens because of our experience of and interactions with teachers, peers, and tools; Learning is situated in all these environmental factors, so better learning experiences depend on our environments.

**The problem** is that there are inadequate professional teachers, capable peers, and powerful tools.

## Why do we need more scientific learning relevant theories?

Only good theories can inform good practices.

**The problem** is that current available learning relevant theory is just the tip of the iceberg; we need more systematical and useful theories.

## Why do people need to bridge innovation gaps?

Sometimes, it is the problem of lacking innovative ideas, technologies, or practices. More often, it is the problem of people's failing to access, learn, and apply innovations. B-learning is one of the solutions that we have figured out so far, we hope that it can

assist us to go nearer and nearer to our dreams.

Before introducing B-learning, we would like to share a little more about our dreams by presenting three imaginary scenarios. These scenarios hint a little about our solutions, and with B-learning, it will not be very far to turn imagination into reality.

## Imaginary Scenario 1: A Museum Show on "The World of Learning"

In some day of 2011, ROM (Ontario Royal Museum) formally opens its exhibition named: "The World of Learning". At the same time, a few other major museums worldwide open the similar exhibition too. These museums have collaborated to design and develop this exhibition, and there are both shared components and local-customized components.

When entering the showing hall, visitors can do the following things:

- 1. Role-playing to understand the concept of life-long learning
  - Visitors will have the opportunity to role-play a series of roles from the developing fetus, to infant, to young kid, to teenage, and to adult. While playing each role, visitors will be able to see the simulations on how the brain has changed, how the learning capability has changed, and what factors and interactions have determined the changes.
  - Visitors can choose various simulated learning situations, to see what choices they can make in learning, and how their choices will affect their learning
  - For all the activities that visitors have done, the museum computer system can create a documenting file in case that the visitors are interested in keeping the records to inform their future learning.
  - Visitors can role-play as teams, for example parents and kids, or kids together, based on the scripts and available tools, they can simulate the most innovative learning approaches, to actually feel how it likes. There will be volunteer mentors to give them some feedbacks.
- 2. Obtain the systematical knowledge about learning:
  - Visitors will know how learning-relevant theories have been developed, what factors might affect their development.
  - Visitors will have the opportunities to test their knowledge of learning-relevant theories through a series of interactive and fun activities
  - Visitors will have the opportunities to see the future trends and how people are researching about learning-relevant theories.
  - Visitors will have the opportunities to understand how future learning tools can help them enhance their learning experiences
  - Visitors will have the opportunities to role-play successful persons to simulate their learning approaches.

All activities and supportive objects are in the hybrid formats: both digital and physical. Users can re-visit parts of the activities in ROM website or through buying ROM smart objects in ROM gift shops or online shops. However, for those more complicated smart objects and environments, visitors have to actually visit a museum that hosts such an exhibition. (To be continued)

## Imaginary Scenario 2: A Documentary Film on "The World of Learning"

In someday of 2011-2012, a documentary film named "The World of Learning" is played worldwide. This documentary movie starts from a thread of following how people have recovered from economic crisis, and how innovative learning theories, tools, and practices have helped them recover.

Then, the movie will play back a brief history of the development of learning-relevant theories and practices: through the lens of philosophers, tool-designers, educators, and learners. The materials are from previous movie/TV programs, from books, from interviewing of people, and from the actual scenarios of learning: in school and workplace, in family house and museums, in physical shops and online environments.

The movie will focus on all relevant aspects of learning: from psychology, sociology, biology, computer science etc. Audience will be able to relate their own life (which is full of learning) to the stories, opinions, predictions, and tools appeared in the movie.

The movie producer has designed and developed a series of games, toys, and websites to promote the further discovery of the content mentioned in the movie. And a few series of TV documentary programs will follow up the publishing of the movie, with more detailed and enriched stories and case-studies. (To be continued)

## Imaginary Scenario 3: E-music Learning Environment

In some day of 2012, Kate, a teenage girl gets up when the alarming clock rocks. While she is dressing and having breakfast, she plays the song she wrote, sang, and recorded yesterday for her school math project. She used the online software called E-music to learn and design the music and lyric.

This E-music is co-designed and produced by American Idol producer, Google, and Yamaha. As people love American Idol very much, and so many people are engaging in participating this competition, either as a competitor or as an audience; American Idol producer has discovered another 'Mission-&-Enterprise': to teach people how to make their own music; to teach people how to utilize music to create better learning experience in all subject matters. E-music has become a global music school who are accessible by everyone who loves music. Learning scientists have promoted the widely application of the concept of 'making music' in learning any subject. Students can form a team, or do it independently. Music can not only motivate students in learning, but also play the role of emotion-moderator.

Moreover, when integrating some subject content with music, especially when this integration is done by the students: they analyze and synthesize the content, and then transform to the format of lyrics, then they integrate the music component. This making process will promote their active processing of the subject content. They might enjoy both the process of creating the song and the process of repeatedly listening and singing the song. This listening and singing process will naturally reinforce their learning of the subject content.

Therefore, making and enjoying music have gone far beyond as an amusement activity; it has been an important dimension of processing and learning information from other subjects. (To be continued)

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If the above imaginations become reality to certain degree, we hope that

B-learning would have contributed greatly to this pursuing process.

Now, let us see what B-learning is.

## Preview Some Analogies of B-learning: Give You a Little Feel and Guess of it

In Adobe Photoshop, users can manipulate lines, shapes, colors, lights, & patterns etc, to discover and create an image. In B-learning, users can manipulate abstract learning concepts to discover and create a learning solution. Maybe in not too far future, users can manipulate both abstract learning concepts and simulated learning activity to discover and create a learning solution.

In Microsoft PowerPoint and Publisher, users can design professional-look files without having to do the graphic design from scratch; Microsoft has embedded the knowledge and skills of graphic designers into templates. In B-learning, users can design professional learning tools and materials without having to know about learning like a learning scientist does; B-learning has embedded the knowledge and skills into templates.

When learning a language, we tend to systematically learn and practice a lot in different situations; at novice phases, we might use dictionaries a lot. In B-learning, users can systematically learn about learning, and practice the learned knowledge in different situations. There are dictionaries in B-learning for helping users understand and apply the language of learning, to ensure that the understanding is as precise as possible.

For a programming task, programmers apply a series of functions in a programming language. In B-learning, users can manipulate functions (key decision-making process in learning analysis) for a task: designing a learning solution, or learning about learning.

When navigating a complex place that is new to us, a map, traditional or digital, will help a lot. In B-learning, there are maps for helping users navigating among the sea of abstract concepts and principles of learning-science. In other words, in the journey of conducting learning analysis, users can access to a map-guide when they need to know what to do or what are possible choices in next step.

In a library, you can find books on a subject matter in terms of difficulty level or scope. For example, for all children's books about natural science, they are more or less the simplified versions than high school textbooks. This can be called spiral curriculum. In B-learning, for any abstract learning concept, there are spiral curriculums, so there is a high chance that you can find the one that is relevant and understandable to you.

In the field of accounting, law, medical science, or architecture, there are certificate tests to ensure that the practitioners at least have systematically learned the 'language' in their fields. In B-learning, there are certificate tests for instructional designers and teachers. This is for ensuring and promoting the collective quality of educational practices.

Moreover, since each learner needs to systematically improve their knowledge and skills in conducting a learning analysis (make decisions in what and how to learn), B-learning provides different levels of certificate tests for learners. A driver needs driver license tests to obtain a driver license, so would not a learning-license be helpful in ensuring that a learner truly knows how to learn, just like a driver knows how to drive?

There are lots of other analogical situations that we would like to share and promote the wide discussions about the implication of these analogies, and we are going to discuss them in later issues of The Journal of B-learning. You can visit our website <u>www.beyondinno.com</u> for more information. There will be detailed discussions on each analogical situation, and we cordially invite you to give your opinions on these ideas.

The following list is part of the topics that we are going to cover in later issues:

- 1. How can Maple become an e-learning school in teaching high school math?
- 2. How can Microsoft Office become an e-learning school in teaching people how to write?
- 3. How can Adobe Photoshop become an e-learning school in teaching people how to make arts?
- 4. How can the sit-com 'Friends' be transformed into an e-learning school in teaching people about 'interpersonal communication', 'group dynamics', & ESL (English as Second Language).
- 5. How can Krug's book 'Don't make me think' be transformed into Adobe series of web-design software?
- 6. How can Google help people in learning, how can't Google help? How can Google be transformed for better helping people in learning?
- 7. How can Second Life enlighten learning and how can't they? How can Second Life be transformed for better enlightening learning?
- 8. How can books be published in the future? Will the authors and publishers leave the chances of interacting to the readers themselves?
- 9. What is software's biggest potential (in terms of assisting learning) that has and has NOT been put emphasis on and systematically experimented?
- 10. What can we learn from the operating model of <u>www.amazon.com</u>?

## **Chapter 2: Introducing B-learning**

## What is B-learning?

B-learning is a learning environment that can assist users to create better learning experiences through helping them learn and apply learning relevant theories to practices. Moreover, B-learning promotes the development of learning relevant theories.



## How can B-learning Help People?

In his speech in Waterloo University, Bill Gates mentioned that software designers and producers need to ask people: How can software help you?

If you ask us: 'How can B-learning help me?' We will answer:

## If you are an instructional designer/human performance technologist

B-learning can help you learn how to design a learning/performance solution with a set of approaches that you probably have never seen in other places. You might have seen some of the approaches in other places, but you probably have never seen the whole set of approaches in one single place, in the systematical, flexible, and humane way, like in B-learning.

You will not have to read lots of journal articles to figure out what these articles are talking about before you did not truly understand 'the basic language of learning science'. You will apply principles into your practice in a systematic and appropriate way, to the maximized degree.

You will not make some mistakes without being identified by yourself or others, without getting in-time feedbacks. There are many types of feedbacks that you can get in B-learning; and these feedbacks will be communicated to you in a way truly understandable to you.

B-learning understands the difficulties faced by novice instructional designers, and knows how to help novice designers learn the basic language of learning

science. With the assistance of B-learning, designers can speed up their developing of instructional design (ID) expertise.

B-learning sometimes plays the role of a coach; sometimes plays the role of a partner; sometimes plays the role of a discoverable environment; and sometimes plays the role of a communicating platform. It is often up to you and your teachers to choose the types of help that you need most from B-learning.

B-learning can automate some ID decision making processes, so that designers can save time in doing other more important tasks. However, B-learning goes beyond being a non-flexible expert-system. B-learning shows you the inner operating logic of the 'automated parts', in an explicit and understandable way, so you can choose to learn how experts have embedded these knowledge and skills into B-learning.

B-learning believes that most knowledge has the nature of being mutually agreed and being provisional, so B-learning promotes and facilitates the open discussing and developing of knowledge. For every concept, rule, function, map, game, task template, course, certificate and other components of B-learning, it is open for all types of opinions/feedbacks.

You will see how the relative-current B-learning-embedded knowledge is formed with the corresponding reasoning processes and supportive proofs. B-learning encourages you to give your reasoning, in a way as logical and detailed as possible. B-learning creates the semi-structured feedback collecting system, so you will choose the way that is most appropriate for you to give feedbacks, to contribute to the progress of learning science.

B-learning knows that there are both regularities and diversities in our world. So B-learning tries to help people figure out the useful regularities and diversities in learning science. Design-based research, data-warehouse and data-mining are potential helpful ways to figure out regularities and diversities. B-learning tries to create the best data-structure as early as possible in each phase, and after collecting & evaluating some data, B-learning will try to adjust the data-structure in time.

Learning cell, learning pattern, and learning economics are three conceptual tools that are coined by B-leaning, and can help B-learning establish the first-version of data-structure. Learning cell is the basic unit of learning analysis. Learning cell is used to identify the basic dimensions/variables in learning science.

Learning pattern is used to identify the possible values for each dimension or variable; learning pattern is also used to identify the possible ways of grouping different dimensions together, and discover some predictable patterns.

Learning economics is used to understand learning science from an analogical situation as in economics. There will be more detailed discussion on these three concepts in later issues, or you can check online. Some ideas about Learning Economics is presented in this issue.

You might ask: as an instructional designer, why should I care about all the theoretical sides? Because every instructional designer should be an educational researcher, just like every teacher or learner should be an educational researcher too. The collective progress of learning science will empower you more powerful instructional design tools, so contributing to this progress should be the duty of every designer.

Moreover, with going a step further, being a researcher, instructional designer, teacher, & learner are just four roles that should be played by every single person, in different times, to different degrees. You will see the detailed discussion about this role-playing in the Learning Economics part.

#### If you are a teacher/trainer/tutor

B-learning can help you systematically apply ID (Instructional Design) into your teaching practice. Most teachers don't conduct systematic ID activities in their practice. B-learning believes that instructors can enhance their teaching practice greatly with adapting ID activities systematically.

#### If you are a learner

B-learning can help you become a better learner through teaching you how to learn, through helping you embed 'your learning about how to learn' into your learning other subject matters. B-learning believes the collective metaphors about teaching students about learning how to learn: (the learning metaphor + the developing metaphor) as a whole metaphor.

#### If you are a educational researcher,

Just like any designer should be a researcher, any researcher should be a designer too. Refer to the designer part to see how B-learning can help you.

There will be more discussion about B-learning online and future issues of "The Journal of B-learning".

## **Chapter 3: Our Ideas on Learning Economics**

Learning economics is used to analyze learning in similar approaches as in economics: what are the products in learning economics, who are the consumers and producers, how can producers provide better products to consumers, and how can various sides in this economics collaborate with each other in order to create a better macro learning economics, etc?

If learning is examined by using an analogy of economics, there are a few categories of learning products/services, and their corresponding providers and consumers. Please refer to Table 1 & 2.

<b>Products/Services</b>	Providers	Consumers
Educational Theory	Researchers	Tool designers, Instructors, Learners
Educational Tools	Tool designers	Instructors, Learners, Researchers
Teaching practice	Instructors	Learners, Tool designers, Researchers
Learning practice	Learners	Researchers, Tool-designers, Instructors

## Table 1: List of products/services, and providers/consumers

All parties in the learning economics are interdependent from each other, so the communication between various parties should be open, clear, in multiple modes, bi-directional, dynamical, and systematical. Every party should try its best to offer best products.

Moreover, all providers and consumers are in a relative sense because the role-playing might shift between or within a learning situation. For example, a learner in a situation might be a designer and teacher, this is learning as designer and teacher; a learner in situation A might be a teacher in situation B.

Since economics is about people's activities through interacting with each other, this is analogical to the situated view of learning. Economics has been a better developed discipline than education. For example, the way of evaluating, documenting, monitoring, and analyzing an enterprise's economic behavior has been done systematically with accounting.

However, in learning-economics, the evaluating, documenting, analyzing, and monitoring of learning/performance behavior obviously lacks a systematical tool like 'accounting'. This is true in terms of each level in learning-economics: a learner, a class taught by a teacher, a whole group of users of a tool etc.

Situations	Charts			
<ul> <li>When "learning practices" are the products,</li> <li>learners are the providers;</li> <li>And other stakeholders are consumers.</li> <li>Instructors need the learning practices to examine, inform, and refine their teaching practices</li> <li>Designers need the learning practices examine, inform, and refine the tools</li> <li>Researchers need the learning practices examine, inform, and refine the educational theories</li> </ul>	instructor learner designer researcher			
<ul> <li>When "teaching practices" are the products, instructors are the providers;</li> <li>And other stakeholders are consumers.</li> <li>Learners need the teaching practices to help them carry out and refine their learning practices</li> <li>Researchers need the teaching practices to examine, inform, and refine the educational theories</li> <li>Tools designers need the teaching practices to examine, inform, and refine the tools</li> </ul>	designer instructor researcher learner			
When "tools" are the products,				
<ul> <li>Designers are the providers;</li> <li>And other stakeholders are consumers.</li> <li>Learners need the tools to help them carry out, communicate, and refine their learning practices</li> <li>Instructors need the tools to help them carry out, communicate, and refine their teaching practices</li> <li>Researchers need the tools to help them carry out, communicate, and refine their educational research</li> </ul>	researcher designer learner instructor			
When "educational research" are the products,				
<ul> <li>Researchers are the providers;</li> <li>And other stakeholders are consumers.</li> <li>Learners need educational research to inform their learning practices.</li> <li>Instructors need educational research to inform their teaching practices.</li> <li>Designers need educational research to inform their</li> </ul>	learner researcher			

## Table 2: Detailed illustrations of the providing/consuming relationship



Table 3: Roles that B-learning can play in learning economics

Therefore, the question is: can we build a 'learning-accounting'? One might argue that learning behavior is much more complex than economic behavior since the measuring itself is complex and difficult. I admit this point; however, there are many useful ideas that can be partially transferred to be applied in learning economics. I think that the true difficulty is that we haven't successfully identified relevant variables in learning cell, and possible learning patterns.

## **Chapter 4: Some Background Information**

#### **B-learning System**

**B-learning system** is the first learning tool designed by Beyondinno. Its central goal is to help people create **Better Learning Experience**, so it is called **B-learning.** 

## The Journal of B-learning

**The Journal of B-learning** is a platform for our communicating with people, about our dreams, our approaches, and our success or failure.

## The Organization/Association of B-learning

We feel that, to create better learning experience should be a mission that carried by people who care about learning, so we propose to set up an organization/association to make such a mission pursued by more people, in a more systematical way. See appendix for the draft of the proposal.

## Who is Kathy?

## I am a person who loves education, and has kept on pursuing my dreams for many years

- I was the one who tutored the highest number of classmates when I was in primary and high school. But I did not realize my passion during that period.
- At the age of 22, I truly realized that my passion and dream is about teaching others. I tutored a young kid and experienced the unbelievable fulfilling and happy feeling that I had never felt before.
- With holding accounting and mathematics degrees, I never truly enter the work field of accounting or mathematics because of my persistent choosing a job relevant to education; however, I am so amazed at the fact that how my multiple-discipline background can enlighten my understanding and contributing to education.
- Without my systematical learning in the master's program of Educational Technology at Concordia University, I would not have cultivated a sophisticated and critical view about the science of learning.

## I am NOT a learning scientist

- although my dream is to become a learning scientist
- although I think that I have seen some problems and figured out potential solutions that might have not been solved by many learning scientists
- I haven't published any article in any formal journal, but I have my unique opinions towards many published works.

## Do I have to get wide feedback from people through publishing my ideas?

- If so, can I publish these ideas by myself first, through mails, emails, and online publishing?
- If there are ways that people can access to it, people are interested in my ideas, people are convinced somehow by my arguments
- If I create the convenience for people's giving me some feedback

#### Then

- Wouldn't I be clearer about the validity of my ideas?
- Wouldn't I have a bigger chance to have my ideas published in a formal journal?

That is the reason why 'B-learning' and 'The Journal of B-learning' has been generated!

## There are many types of scientists; the type that I hope to become is a learning scientist

- who will not only contribute to education in theoretical sides, but also will communicate these theories effectively with all people who care about learning
- who will not only communicate learning science to people, but also will help people apply and contribute to the science of learning
- who will try to borrow any useful elements from other disciplines to inform the science of learning, and promote other people's borrowing behavior.
- who will self-design and collaborate with others to design learning tools and environments, and assist other people's designing powerful learning tools.

I feel extremely lucky and blessed to encounter many people who have inspired, taught, and helped me. It is time for me to give back to people, in the best way that I can think and try. And I hope that more people can inspire, teach, and help me!

## **Appendix:** Propose the Setting Up of B-Learning Organization

We are looking for partners who can collaborate with us to set up this organization, and the following are some ideas about the missions of B-learning organization.

## Mission

B-Learning Organization aims to help people create better learning experiences. To achieve this general mission, a set of sub-missions are defined:

- 1. To promote the developing of useful learning-relevant theory.
- 2. To promote the educating and applying of useful learning-relevant theory.
- 3. To promote design-based research-&-practice to integrate the achievement of

sub-mission 1 & 2 closely.

- 4. To promote the transforming of implicit, unsystematic life-long learning approach to explicit, systematic life-long learning approach.
- 5. To initiate a sub-discipline called learning-economics
- 6. To initiate a set of functional standards that help people optimize and benchmark their learning-relevant activities.
- 7. To initiate a set of tools that can facilitate the achievement of the above missions.

## 1. To promote the developing of useful learning-relevant theory

B-Learning Organization believes that innovative ideas/theories are the most powerful tools that can enhance practices. However, compared to other disciplines, especially natural science and engineering, learning-relevant theory is only in its infancy status.

Since learning is one of the most fundamental factors of determining the tomorrow of human being, why haven't learning-relevant theory drawn enough attention and effort?

Based on this insight, we feel that it is our mission to attract more attention and effort in systematically and intensively developing learning-relevant theory. Ideally, we can develop a science of learning.

## 2. To promote the educating and applying of useful learning-relevant theory

For existing useful learning-relevant theory, people's understanding and applying of them are inadequate. Many people who are in the positions of designing and delivering learning have not well mastered learning-relevant theory. This can be seen not only in their designing/teaching practice, but also in their own learning practice. Many learners have not found out the best ways of learning.

Some educators have put emphasis and efforts on teaching students how to learn and think. There have been some successful cases; however, this success is far from enough, both in terms of its scope and depth.

There might be a few reasons/difficulties for successful teaching students about how to learn and think.

- Learning-relevant theory itself is not well developed enough; without a powerful theoretical tool, it is difficult to expect perfect practice.
- Successful teaching about how to learn requires two things: one is that it should be taught explicitly as an independent subject; and the other is that it should be integrated systematically into teaching other subjects.

Unfortunately, neither case widely exists.

- The knowledge and skills of how to learn and think should be taught to students in a spiral way, from simple to complex; in terms of long-term goal, from when they are very young, and evolves to a life-long goal.
- This teaching should be not only in formal education situations, such as in school and textbook, but also in daily learning situations, such as in a movie, TV program, museum, game, or toys.
- The misconception of 'how to learn and think'. How to learn and think goes far beyond how to remember and store information into mind.

B-learning aims to promote the solving of all above problems and more.

## 3. To promote design-based research-&-practice to integrate the achievement of sub-mission 1 & 2 closely

Educational research and practices should be integrated and intertwined. Practice should be based on systematically applying of theories; and the feedback data should directly inform the refining of theories.

The traditional independent roles of researcher, designer, teacher, and learner should be transformed into a new role-pattern:

- everyone might play the role of researching, designing, teaching, and learning at the same/proximate time
- the difference is the varied weight of each role in a given situation
- everyone's practice is providing feedbacks to others or himself/herself; therefore, everyone's success depends on all relevant data
- in each given situation, there should be a prominent role identity for each person, the communication and collaboration between all stakeholders should be systematic and close.

With this new role-pattern, the concept of ID (instructional design) should be systematically learned and applied by each person. Teachers need it to make teaching process more scientific and systematic; learners need it to make learning process more scientific and systematic. And since it is called design-based research-&-practice, it is obvious that researchers and designers need it.

The key for the success of design-based research-&-practice are a series of learning environments, through which all stakeholders can perform, document, and communicate with each other.

## 4. To promote the transforming of implicit, unsystematic life-long learning approach to explicit, systematic life-long learning approach

Learning is for everyone, for anytime in whole life; so learning-relevant theory should be explicit and systematic in life-long activities. This implies all social organizations are responsible for creating environments and opportunities to support this transforming process.

## 5. To initiate a sub-discipline called learning-economics

By accepting a premise that learning is a situated enterprise, we can assume that there is a dimension of economics called "learning-economics".

In learning-economics, there are the macro and micro parts. For the macro part, we should be concerned about how to optimize the collective benefits of learning activities; for the micro parts, we should be concerned about how to optimize a unit enterprise of learning. The unit enterprise might be a person, a class, a group of users of a tool/textbook etc.

This learning economics should reflect key factors and interactions in the above situations, and be able to inform people in making learning-relevant decisions.

Since economics itself is a combining of natural science, social science, and arts, the approaches used in economics and its relevant fields should be able to enlighten the development of "learning-economics" as a discipline.

For example, the approach of accounting can be used to inform how we can build a model to evaluate, document, monitor, and analyze learning behavior.

Besides economics, all subjects can potentially enlighten this learning-economics. The disciplines tagged design-science might be nearer, for example: architecture and food design. Since learning is about human and the environment, biology and physics might enlighten from the 'God' or 'Nature' part.

## 6. To initiate a set of functional standards that help people optimize and benchmark their learning-relevant activities.

With the developing of learning-relevant theory, it is possible to set a few sets of standards and index to help people have a set of standard 'language' to evaluate, monitor, and communicate their learning-relevant activities.

## 7. To initiate a set of tools that can facilitate the achievement of the above missions.

With information technology, it has become feasible to design a few sets of tools to facilitate the achievement of all above missions.

**Note**: I don't put any reference here; this is a version without a reference list, a version understandable to people without requiring them to refer to original works, this is my ideal of a journal article. My ideal is that any journal has more than one version, to better communicate with readers: novices, JPFs (Just plain folks), or experts; people in or outside of our field.

Definitely, there will be a version on <u>www.beyondinno.com</u> with a reference list (A place reflects my efforts to admit those works that have helped me).

Thank you for your time! We hope that you can enjoy these ideas, and

We hope that this is only the start of our GREAT FRIENDSHIP!