# FACILITATING THE FAR TRANSFER OF KNOWLEDGE BY METACOGNITION IN ICT ENABLED GLOBALIZED LEARNING.

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## ABSTRACT

*The paper provides a synopsis of the dramatic sea changes emerging from globalization and technological drivers in the form of information and communication technology (ICT) which impact human learning and development in the knowledge economy. The drivers are framed in ICT and business contexts accentuated by the themes of the knowledge economy and its cognitive underpinnings. Metacognitive learning strategies are discussed in the context of actual classes at HELP University's Master's in Managerial Psychology program in Malaysia involving ICT and globalized content for sustainability issues. An advance cognitive model of learning that drives pedagogical strategies facilitated by ICT is presented. Specifically the cognitive model is the Cognitive Literacy Value Chain developed, practiced and published by the author internationally in peer reviewed journals is described. This model facilitates the achievement of higher order thinking outcomes drawn from actual cases of successful teaching and blended action learning practices and principles enabled by technology. The model helps design instructional strategies or facilitating the 'far transfer' of application outcomes with deeper insights gleaned from varied contexts different from the original learning situation. Such an approach helps both the fine grain discrimination of contexts and as well commonalties in higher order principles in varied contexts. It is argued that the rapid obsolescence of content based knowledge and the advent of machine learning necessitates human learning to creatively apply higher order thinking in different contexts and domains radically different from routine procedural thinking which can be automated. Developing higher order thinking enabled by ICT is critical today for leadership beyond functional skills sets. The model utilizes interactive teaching and learning in graduate programs in Malaysia, the U.S. A., and South Africa. Metacognition and active discussion is described in the need for developing 'fluid intelligence' for higher order thinking in a globalized knowledge economy. The development of wisdom through the experience of 'transcending' or unfreezing conventional thinking while sustaining refined cultural values is highlighted in a sustainability case. Sample reflection journals and Moodle online discussion board postings are presented.*

Keywords: blended-learning, globalization, metacognitive, fluid intelligence, globalization.

## LANDSCAPE REVIEW

Into the second decade of this 21st century China has now become an industrialized economy and India is fast becoming a knowledge based power (Drucker, 2004).

There is a sea change that has set an irreversible momentum in postindustrial societies and developing nations which need to be sustainable in terms of engaging and preservation of cultural integrity in the onslaught of globalization. Globalization drivers today appear to impact in parallel not just sequentially with the advent and onslaught of communication technologies and cheap travel. The scope, level and pace of change deeply impacts societies in Asia particularly Malaysia which seems to be at the center stage of the power shifts sandwiched between India and, and being one of the original Asian tiger economies. Malaysia has emerged from agriculture, to manufacturing and is rapidly progressing into the knowledge economy facilitated by proactive government policies. Malaysia sees itself taking on the challenge becoming a high income nation beyond the middle income trap. The high income strategy mandates the need of higher value added thinking and skills in in a knowledge society enabled by ICT. Much smaller than China and India, Malaysia's per capita income is higher than both China and India (World Bank, 2016) This aspiration demands a fresh approach to teaching and learning. Malaysian education has been traditionally, formally and informally dominated by a process of rote based learning as some claim (Shakir, 2009) and Rote learning a bane in tertiary education, Harvard professor warns. (2017, January 20). The Ministry of Higher Education has developed a blueprint for transforming the quality of higher education to enrich, unify and raise the level of learning skills, (MOHE, 2015) where the blended learning approach to actual graduate classes in managerial psychology is exposited and with discussion boards that nudge higher value added thinking enabled by Information and Communication Technology (ICT).

### CHANGE ISSUES

Globalization has received controversial reviews. The relative advantages and disadvantages of rapid development often accompany widening social and cultural gaps commensurate with the rise of social challenges, questionable sustainability in developments and an indiscriminate consumerist culture. Cultural integrity appears to be threatened or thwarted along with political and economic sovereignties of developing countries. The challenges facing the developing world and Malaysia as a culturally diverse and rapidly transforming nation in particular can be framed with the question of how to adapt to globalization pressures by develop higher order thinking skills yet maintain stability. The social and economic drivers seem to unfold in parallel with the technology and innovation drivers to impact challenges for human development especially in the ability to make

wiser choices for individuals and society. This arguably is a psychological challenge in developing intelligence and wisdom encultured by stability.

Learning and development in the human capital context necessitates new ways leaning and critical thinking with active discussion beyond the classroom walls for topical hot buttons.  The ability to think critically, reflect deeply and consider the impacts of managerial actions or policies widely in scope impacts and   further into the future is essential. This challenge is accompanied by the fact that the knowledge economy is intensely compressed for global diffusion far more rapidly than the traditional steady -state incremental evolutionary path of transitioning from agriculture into industrialization. For example technological innovations in information technology enabled services rapidly diffuse the globe in about 3 years. So that means the compression of market offerings of innovative technology is immediately disseminated into work processes compared to 30 years for industrialization in the previous era.  Further, there is no sequential unfoldment as it was the case in industrialization.

We need to identify drivers impacting organizations along with the ability to recommend innovative solutions based on critical and inclusive thinking. Traditional MBAs and textbook approaches may not adequately address these needs.   As both an academic and consultant serving global organizations the author has heard the lament from CEOs "I don't need managers who can just comprehend texts or articles, but who have the ability to connect pertinent business and industry themes inductively in order to effectively respond to global and industry drivers". Engaging learners in topical issues related to the subject matter content in active discussion goes a long a way to develop critical and inclusive thinking.   This then is the relentless demand in this 21st century of change and emerging markets.  This value addition   commands a premium among human capital that is capable of higher value-added thinking that is capable of insights across themes that is adaptable to implement best practices company-wide and nationally, and has the ability to enhance the relationship of business with relevant stakeholders and communities.

### RAPID CYCLES OF KNOWLEDGE OBSOLESCENCE ARE NOW COMMONPLACE.
Given the broader context of drivers introduced, let us  now review the drivers and  challenges in the 21st century and examine more deeply the knowledge economy as it relentlessly impacts emerging Asian countries and their psychological ramifications. The knowledge economy's challenge is that unlike the transition from agriculture to industrialization, it appears to impact not in sequence but in parallel in developing countries, driven by the new media and internet proliferation. Much of the subsequent discussion will involve an understanding of cognition underpinning a discussion of blended learning on topical globalized issues.

### TECHNOLOGICAL AND INNOVATION DRIVERS ENABLING LEARNING AND DEVELOPMENT
The 21st century has brought with it an abundance of new technologies as well as challenges for human development including the context of learning and development. More effective ways of teaching and learning are mandated beyond rote.

Globalization and the relentless pace of technological evolution are exerting great pressures on the obsolescence cycles of crystallized, or acquired, knowledge, a dynamic that is commensurate with Moore's Law (Liddle, 2006) which states that raw computing power doubles every 18 months along with an exponentially increasing bandwidth and lowering network costs. The pressures of globalization in an information age are creating challenges for those who do not choose to keep up with the rapidly upgrading ICT as they become available. At the same time, those who choose to increase knowledge via interactive media are being given exponentially growing opportunities.  New platforms are providing lower costs, greater reach, and user-friendly design features. More power in computer processing is enabling higher speeds, greater memory capacities, and increasing network bandwidth.

The advent of machine and deep learning appear to threaten human as routine thinking operators.

### ACTIVE BLENDED LEARNING
We now turn to how these issues and challenges can be effectively utilized in teaching and learning in managerial psychology. These strategies were enacted by the author and his graduate students at HELP University Malaysia's graduate class in managerial psychology and at Maharishi University of Management (MUM) accredited in the United States of America by the Higher Learning Commission and The International Assembly for Collegiate Business Education which is recognized by the Council on Higher Education Accreditation (CHEA). MUM also offered an action learning corporate MBA program for managers at Neotel, a telecommunications corporation in South Africa. All courses were taught in a blocks, or modules, in varied formats amongst the three venues, ranging from two to six weeks in duration but shared the commonalty of one subject matter module at a time. Especially noteworthy was the steep learning curve in which students attained reflective and higher order thinking in the relatively short 6 week period of time.

Content development rigorously infused globalization themes, sustainability and the active deployment of ICT for teaching and learning to secure positive learner experiences with ICT.

To set the tone an ancient quote from the Persian Sufi sage Rumi may be appropriate:
Two Kinds of Intelligence
"There are two kinds of intelligence: one acquired, as a child in school memorizes facts and concepts from books and from what the teacher says, collecting information from the traditional sciences as well as from the new sciences.

With such intelligence you rise in the world. You get ranked ahead or behind others in regard to your competence in retaining information. You stroll with this intelligence in and out of fields of knowledge, getting always more marks on your preserving tablets.

There is another kind of tablet, one already completed and preserved inside you.

A spring overflowing its spring box.  A freshness in the center of the chest. This other intelligence does not turn yellow or stagnate. It's *fluid*, and it doesn't move from outside to inside through conduits of plumbing-learning. This second knowing is a fountainhead from within you, moving out".
~ Jelaluddin Rumi (1207-1273).

## THE SCIENCE OF INTELLIGENCE AND WISDOM

`Fluid intelligence' is the critical ability to process new content and consider novel conditions. In short it is content or domain free process. 'Crystallized intelligence' is the retrieval or recall, and acquisition of prior content (Cattell, 1963).   In the knowledge economy, fluid intelligence may be more critical. It involves processing data into information and then into knowledge through to higher order cognitive activity which results in both knowledge and wisdom (Gurubatham, 2005a). In cognitive psychology, wisdom may be operationalized into higher order and wider intelligence (Sternberg, 1985).  Sternberg describes wisdom as creativity synthesized with intelligence, and empathy. Sternberg's balance theory of wisdom (Sternberg, 1998b, 2001), defines wisdom "as the application of intelligence, creativity, and knowledge as mediated by positive ethical values toward the achievement of a common good through a balance among self-interests (intrapersonal) with the interests of others (interpersonal) and of other aspects of the context in which one lives (extrapersonal), such as one's city or country or environment or even God" (Sternberg, 2009).   Interestingly Sternberg's long and distinguished career in psychology was initiated  by his poor test taking abilities including conventional IQ tests,  as he described , and the deleterious effects of the rote learning environments  that under value wider and deeper intelligence.  Wisdom it appears can also appreciate and anticipate the practical impacts of decisions (Schwartz, 2011).

 The hallmarks of such an approach to wisdom are being visionary spatially i.e., looking at impactful events in terms of places beyond immediate locations and boundaries (non-local) , and temporally, i.e., beyond narrow short term thinking far into the future,  having broad comprehension, inclusivity and scope ( Izak, 2013), and a deep appreciation of decisional impacts ( McKenna, 2004, McKenna & Biloslavo, 2011). Moreover the sustainable impacts of trans-disciplined longer term thinking of interconnections are also emphasized (Max-Neef, 2005) in modern 21st century international education.  This is a central theme in modern education as it rises to meet the onslaught of globalization (Jorgenson and Shultz, 2012), and the pressures of a knowledge economy (Gurubatham, 2005a).

The ability to identify drivers impacting organizations along with the ability to recommend innovative solutions based on critical and inclusive thinking are essential. Traditional MBAs and textbook approaches may not adequately address these needs. The engagement of learners in topical issues related to the subject matter content in active discussion goes a long a way to develop critical, futuristic and inclusive wider-impact thinking.

Hence active discussion was found to be a major means to facilitate wisdom development involving fluid intelligence in the author's classes.

## LEGITIMACY FOR THE LEARNING CASES WITH ACTIVE DISCUSSION

Change drivers and  evolving trends in     sustainability and government or international regulations were actively discussed in classroom settings that utilized  e-learning enabled blended learning – such as , Moodle discussion boards – to help facilitate the 'far transfer' of learning. Far transfer is understood as applying conceptual learning beyond the original learning contexts so that higher order principles with commonalties are gleaned, abstracted, and applied in a variety of seemingly unrelated contexts (Salomon &Perkins, 1989). Teaching strategies involved discovering common themes, comparing, and contrasting, synthesizing models, pushing the boundary conditions of concepts, and analogies, and challenging assumptions, teasing out causal and multidimensional   factors in social issues, reflection with self-inquiry.  Far transfer is effective in mitigating rapid obsolescence in knowledge and skills.

 'Near transfer' in sharp contrast often involves the low road of learning with strategies by rote, pattern or template matching and impacts only a limited range of variability in the contexts from original learning. Behavioral learning is much like this. In Malay there is a proverb *"Bagaimana acuan bagitu la kueh –nya",* or cookie cutter thinking echoes this pattern.

The learning outcomes are thus not restricted to any one method alone but accrue concomitantly. The overall active teaching-learning strategies as an approach subsume specific methodologies in these cases.  Learner engagement is the underpinning of active learning where online discussion provides the un-moderated flat channel and space.

Active discussion on the Moodle e-learning platform was found to reinforce the development of insightful thinking.  Learning was encultured and encouraged as 'Self exploration' with a 'connectedness to community and cosmos' with the inclusion of affect. Emotional intelligence targeted 'values of the heart' i.e., refined    feeling levels in order to enculture not just higher order thinking but also practical wisdom.  The author also applied active teaching learning strategies, involving 'metacognition', or deep reflective activity.

Oftentimes there is a need to disconnect from conventional narratives and wisdom. Learners also have to make practical, and sometimes hard, decisions in life. There is a need to be more than just 'aware', sensitive or merely just capable of reflection. All the courses included themes as a running thread such as ethics, spirituality, race, interfaith relations, and conflict resolution. Other themes covered were the ways in which globalization is oftentimes  framed as mere consumerism and the ways in which sustainability has to go  beyond just being 'green' to include the preservation of cultural values and relationships.

## ACTIVE DISCUSSION INCLUDING MOODLE FORUMS

The course format was intensive with global business cases in many industries. A block system spanning 6 weeks is used so that students only focus on one subject at a time. There are a minimum of lectures limited to 30 % of the class's face to face sessions. Action learning was intensively used, along with the Moodle open source e-learning platform for posting of articles as an electronic repository and discussion boards with forums. The electronic repository enabled the zero use of paper and content was multimedia enabled with videos and hypertext

Course content was based on current topics and real cases, involving provocative cases with action syndicated learning i.e., 'learning by doing' in groups, and an articulation of the thinking process through student presentations to the class with peer probing and feedback. Additionally, there was Socratic prompting, exercises in 'thinking on your feet', personal reflection in learning journals, and online Moodle discussion boards.
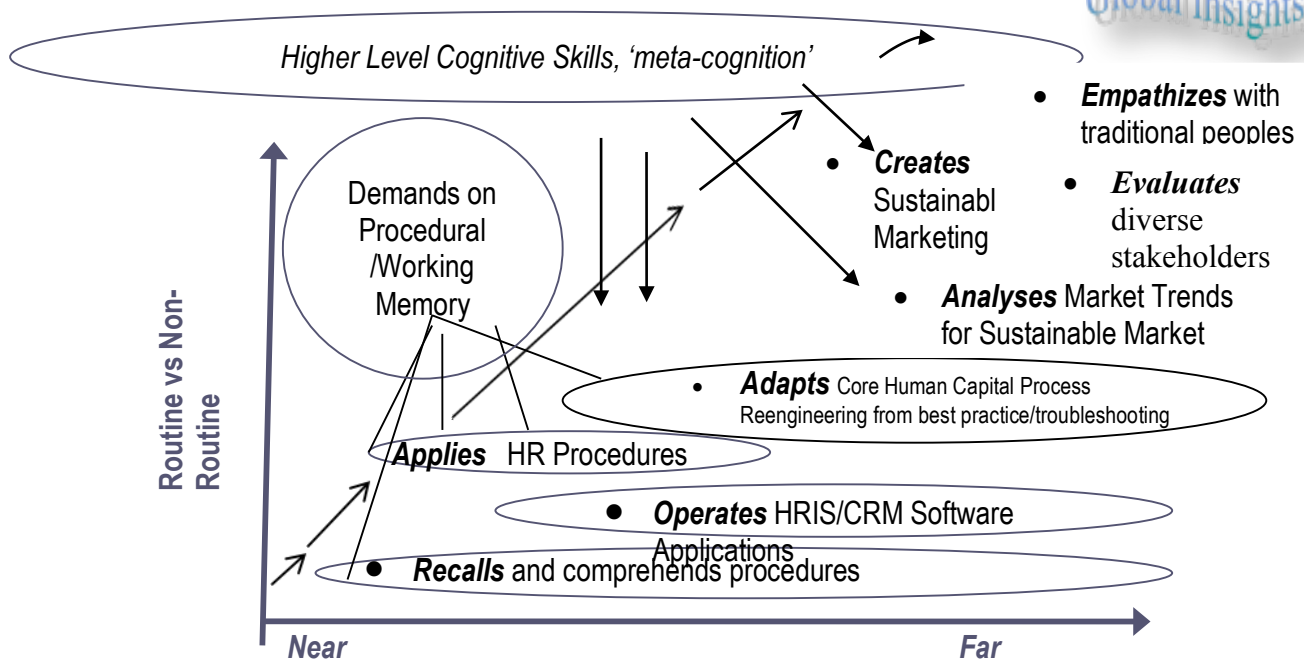
The online discussions required each student to present at least two 'hot button' topics and give insightful responses to two topics posted by other students. The postings had to include not just passive descriptions, but explanations of why the student found it personally interesting, how it could be connected to one's own Self, and how it might be culturally impactful in the 21st century. Learning this way was taking place beyond the classroom walls and enlivening engaged peers. High involvement and high interactivity were design features exploited to engage by information and communication technology (ICT) enabled learning (Gurubatham, 2005b). Interactivity is ergonomic or more concerned with the usability driven features of the Moodle environment. While involvement is psychological bonding triggered upon 'hot button' interests in topics. Learning journals were entered from preconfigured electronic templates containing 'thought' prompts.

The Moodle discussion boards provided a highly communal context. The initial rubric based grading of 3 % was dispensed with and combined with reflection journals and face-to-face presentations of totaling 10%. The online discussion process also seemed to acquire a momentum of its own. As a result, at least on a small scale mini-scale, community simulations of networks were initiated and enlivened very much in the manner alluded to in Metcalfe's Law (Metcalfe, 2006). This law suggests that the value of adding additional participants to a network in in a community increases exponentially if value is conceived of as insight spontaneously emerging from harnessing a diversity of viewpoints. This indeed appeared to happen. The discussion based learning was peer-driven, flat, and not moderated by the professor. Sample comments are presented at the end of the paper. There were instructions and a rubric for online discussion evaluation but the examples were samples drawn from over 30 classes in different settings and countries. Frankly, the rubric became less important over time as the author observed the 'buzz' with refinement and respect evolving. Cultural reticence was overcome as the online discussion helped in breaking the ice from direct face to face discussion. Insights and access to participation even for topics deemed too sensitive to broach in face to face discussions in sensitive cultures emerged. The online discussions stimulated the discussions even face to face.

## COGNITIVE MODEL FOR TEACHING AND LEARNING

The core teaching and learning approach drew from the theory of high road learning involving metacognition by Salomon and Perkins (1989). Such an approach demands pushing the boundaries of concept application that transcend localized boundaries in time and space. Cross-cultural applications of best practices were mindfully and critically discussed both face-to-face and online, and explored for their current relevance. Figure 1 presents the schematic called the Cognitive Literacy Value Chain (Gurubatham, 2005a, 2014a, 2014b, 2014c) and is followed by a discussion of the process of activation in the teaching and learning commonalities of underlying themes and principles. The cognitive literacy value chain is the model while online discussion was part of the process not the parcel, in blended learning albeit a major one.

**Figure 1. The Cognitive Literacy Value Chain**

**Range of Knowledge Transfer and Competency Impacts**

Wisdom is at the uppermost level of the cognitive literacy value chain often accompanied with global insights. Wisdom is essentially deeper and wider thinking. Wisdom evaluates, empathizes, integrates, and subsumes the lower cognitive levels of thinking. This is the ability to integrate and evaluate that requires use of the 'lower' levels of mental activity such as perception. More critically, wisdom's effectiveness rests on the ability to yield insight that derives from more than the 'sum-of-parts' of data. This process, which can be modeled on hierarchies such as Bloom's Taxonomy, often involves affective and ethical dimensions of human judgment. Thinking was nudged out of the box and conventional narratives deconstructed from cases and topics, facts as declarative knowledge were presented, and actively discussed by the instructor while being available as electronic content. At the top right section of Figure 1 is shown, i.e., Non-Routine Thinking and Far Transfer Competency Impacts, Socratic prompts asked were "who are the protagonists" and "what are the drivers impacting an organization, a country, a region, and a culture". Subject matter here are Global Strategic Management , Ethics, & Conflict Resolution, Strategic Human Resources as examples. These were analyzed with appropriate tools by discussion and then prioritized and quantified. For example, the process of stakeholder mapping for conflict resolution was illustrated by involving a business case of a timber monopoly in East Malaysia, its business activities were threatening, traditional peoples such as the Penan; stakeholder values were carefully identified, explored and analyzed with strategic tools from both an industrial and from sustainable perspectives.

Unfreezing or transcending from the given status quo schema of conflict began with a negotiation of interests and values, escalating to a consideration of rights, and culminating in the resolution of issues of power which were found to be positive, resulting in win-win outcomes for all parties. 'Etic' and 'emic' perspectives i.e., from within the stakeholder culture and externally neutral stances from outside the stakeholder were exchanged by syndicated learners in stakeholder role analysis. Similarly, other stakeholders were identified and their roles scoped, for example, the logging company and its employees, shareholders, the state government, environmental activists, and sustainability conscious consumers.

Cases were explored from multiple perspectives through active discussions in both face-to-face and online forums. Engaging videos from different stakeholders' perspectives were presented and shared electronically as 'Youtube' links. The use of this media for active blended learning engages and involves (Gurubatham, 2005b. Gurubatham 2016) learners by being able to see hear and feel the perspectives and emotions of different roles and contexts. Additionally the uses of central and peripheral routes of persuasion (Petty & Cacioppo, 1986) are attention arousing and engaging. Peripheral routes make use of graphics, audio, and music to attract attention. Central routes are more deeply cognitive to activate audience schemas by engaging with compelling narratives. High involvement and high interactivity were design features exploited in information and communication technology (ICT) enabled learning (Gurubatham, 2005b, 2014). Interactivity is ergonomic or more concerned with the usability driven features of the Moodle environment that provide the learners the functionality to respond, comment, and post. While involvement is higher order thinking and emotional bonding which is triggered upon hot button interests in topics. Additionally there were presentations of diverse viewpoints and role plays by learners. Evaluation, analysis, and the creation of plans and policies involved lively discussions, which were interactive, reflective, and oftentimes resulted in the unfreezing of the learners'

unconscious assumptions and biases. Critical thinking within syndicated peer groups together with instructor coaching provided the checks and balances necessary when using strategic thinking tools in inductive learning. Online discussion boards on Moodle were not moderated, were respectful, and captured controversial themes.

The lower half of Figure 1 illustrates the more localized impact of routine thinking in subject matter such as procedural Human Resources.   Teaching and learning at this level does not have to invoke higher order critical thinking, nor does it have to unfreeze unconscious assumptions or biases – except, perhaps, for the purpose of adapting best practices to locally or organizationally specific needs. Troubleshooting is another example. Troubleshooting best practice methods can be stored in electronic repositories so that learners have only to read, understand, refer, and apply with coaching. Troubleshooting outcomes here emphasize procedural accuracy or 'template matching 'from pattern recognition paradigms. Troubleshooting skills require operational flexibility beyond routine thinking but not necessarily higher order thinking. They are low level and knowledge management is more appropriate, and not necessarily online higher order thinking discussion. The transfer of prior learning to current tasks is thus still relatively 'near'. In the hierarchy of knowledge, data represents the lowest value of information.  For example, much of Human Resource Information Systems (HRIS) today are procedural, and is enacted typically at an operational level that can be outsourced or automated by information technology so as to require little or no vigilance by human operators. In the 21st century, this level of the chain has little competitive advantage. For example, process checks in quality control can be automated.  These lower half competences can be well superseded by machine learning.

This level of information processing involves the interpretation of data. Typical activities at this level include quickly recognizing critical quality parameters such as in statistical process control, inputting unique customer data in Customer Relationship Applications (CRM) while on-line, and recognizing key or salient customer information in call-centre tasks. These activities elicit lower level perceptual competencies that can be superseded by machine learning.

### SELF-EXPLORATION AND LEARNING HOW TO LEARN
In addition another modality, a meditative technique popularly known as Transcendental Meditation (TM) a non-religious mental technique, was learned and practiced by many students at Neotel in South Africa, at MUM in the U.S.A., and at HELP University in Malaysia. This was not a random assignment of subjects to meditation as a treatment variable, such as would have been the case in a formal comparative study with pre-test and post-test evaluations.  The experiential comments below, which were reported by these meditating students, are explored in the context of unfreezing prior schemas to facilitate higher order thinking and creativity, to enable insight, transparent thought processes, and deeper and wider thinking.  Empirically, there have been several controlled published peer reviewed   studies on research in TM that have shown increased creativity and wisdom, or 'thinking out-of-the-box'.    What emerges as salient is the ability to process information as opposed to just recalling and recognizing learned data or information. However TM was also found to improve lower level perceptual cognitive tasks such as these. More importantly however is the ability to learn new content. Such ability as described before is dubbed 'fluid intelligence'. Processing data into information then into higher order cognitive activity results in knowledge and wisdom. This is a central theme in modern education with the onslaught of globalization pressures in the knowledge economy (Gurubatham, 2005a). Most mainstream standardized tests of intelligence test or IQ tests utilize both fluid and another type of intelligence called 'crystallized intelligence' (Cattell, 1963).

Status quo thinking is routine. *Fluid intelligence transcends the 'frozen' contexts.* Invocation of fluid intelligence for unfreezing contexts, processing information into knowledge and insightful practical wisdom across contexts is part and parcel of reflection metacognition and active blended learning with the use of online discussing and multimedia presentations of different perspectives.

 Crystallized intelligence involves acquired knowledge, is content based and where content can be revised. Fluid intelligence is process based and is said to be highly vulnerable to aging, (Lee et al., 2005) peaking at the early twenties. Therein lays the challenge for lifelong learning and nurturing productive human capital.

How can fluid intelligence be enlivened and sustained for the information onslaught posed by ICT? Also how can adaptation pressures be balanced with the wisdom of sustainability and preserving cultural integrity?  A brief review of previous research follows.

Creativity was suggested to have been enhanced in TM practitioners (Travis, 1979, Jedrczak, Beresford, and Clements, 1985). Divergent thinking is highly correlated with low frequency EEG psychophysiological states of consciousness. Self-reports describe a process free of mood control and manipulation; rather, an innocent, fluid, and spontaneous experience. Again, highly relaxed states of consciousness in transcending are correlated with spontaneous creativity (Molle et al, 1996). The noted British psychologist Guy Claxton (2002) has argued that 'creativity is lost without an instinctive ability to access free-floating mental states' (2002). Others  (Gordon,  Godwin, Hunter, Bezek, Lieberman, Elkin-Frankston, Romero, &  Schumacher, 2017)  have shown the brain at rest or a default state is positively correlated with creativity.  Creativity and optimal brain function have been linked to faster processing involving diverse connections in Swedish product engineers, and not mere routine practice or drills (Travis & Lagrosen, 2014).   In comparison, TM is reported to be a natural process of contacting the source of thought, which is experienced as a field of pure creative intelligence.  Fluid intelligence, as well as general intelligence, has been found to significantly increase with TM as shown by longitudinal controlled studies and random assignments.

The practice of TM is found to: increase intelligence as measured by standardized tests (Jedrczak, Beresford, and Clements, 1985; Dilbeck et al, 1985; Jedrczak, Toomey, and Clements, 1986); develop culture fair intelligence as operationalized in terms of inspection time with control groups (Tim, S.K. & Orme-Johnson 2001); result in higher levels of moral reasoning as shown in

longitudinal studies with children, as well as in studies with adult inmates in maximum security incarceration in California, according to Kohlberg's stage development mode as reviewed by Alexander (Alexander, et al. 1993); and culture 'wisdom' as shown in a 10-year longitudinal study (Chandler, 1990). Other studies on TM have shown increased field independence, which is indicative of perception that is not unduly influenced by the environment (Gelderloos, Lockie, Chutoorgoon, 1987); increased flexibility of perception and improved verbal problem solving (Dilbeck, 1982); increased creativity along with increased fluid and culture fair intelligence (Dillbeck, Assimakis, Raimondi, Orme-Johnson, & Rowe, 1986; Tim, S.K. & Orme-Johnson, 2001); and increased brain wave coherence, which is indicative of orderliness of thinking (Travis, Tecce, Arenander , Wallace, 2002).

In this era of globalization, there is a critical need for higher order, or higher value-added thinking, facilitated by high road strategies such as metacognition. The pressures of globalization demand responses, or optimal responses, to meet the challenges of change drivers that are apparently relentless. What is needed, today, is the cognitive ability to synthesize from cultural schemata the patterns of shared norms and values that exist in latent groups, patterns that can be identified by using cues, appreciating other cultures with more refined values of consciousness, and being cognizant of the universality in humanity while being respectful of differences (Gurubatham, 2001). There is a need to be grounded in one's own 'transcendent Self' while, at the same time, appreciative of the cherished and diverse values of cultural integrity and political sovereignty. Spiritual aspirations of this goal can be found in both eastern and western psychology. For example, Maslow (1971) refers to the 'Psychology of Being' and the Veda or 'knowledge' in Sanskrit espouses the value of transcendence and the essential unity underling diversity, which is expressed in the Sanskrit phrase ' vasudeva kutumbutam': 'The world is my family.' Established in one's true transcendental Self beyond the ego in being, one never feels threatened by outside influences. William James (1996) wrote of this same state of consciousness in the Pluralistic Universe. Also contributing to the conversation were Martin Heidegger (1962) and Soren Kierkegaard (1985).

## CONCLUSION

Globalization and the relentless pace of technological evolution are exerting great pressures on the obsolescence cycles of crystallized, or acquired, knowledge, a dynamic that is commensurate with Moore's Law (Liddle, 2006) which states that raw computing power doubles every 18 months along with an exponentially increasing bandwidth and lowering network costs. The pressures of globalization in an information age are creating challenges for those who do not choose to keep up with the rapidly upgrading ICT as they become available. At the same time, those who choose to increase knowledge via interactive media are being given exponentially growing opportunities. New platforms are providing lower costs, greater reach, and user-friendly design features. More power in computer processing is enabling higher speeds, greater memory capacities, and increasing network bandwidth. Curiously, the ICT enabled outward-looking, global knowledge economy also demands that we turn inward and 'learn how to learn'. Both self-knowledge and active engagement with other learners are necessary. Social media and online Moodle discussions give the student exposure to different perspectives and a potential for enriching value exponentially (Metcalfe, 2006). However, interactivity per se is not enough. A high level of involvement is required. Topics must be 'hot buttons' that are close to the student's heart, engaging personal interests and values (Gurubatham 2005b). Using this strategy along with the lively discussion of such topics with peers, facilitates further insights into one's own values and outlook.

Overall, in the amalgam of classroom cases spanning 4 years and 3 countries, 80 percent of the students' attained mastery of concepts as measured in terms of the higher value added outcomes such as utilizing strategic management tools in scenario planning, analyzing, prognosticating and recommending strategies in contemporary global managerial psychology and business cases. As this is a position paper highlighting the emergent theme of higher order thinking, formal evaluations are not presented here because of space considerations. Nonetheless, all classes had ongoing and summative evaluations. At both HELP University and MUM, accreditation boards such as the Malaysian Quality Assurance and the U.S. Higher Learning Commission and The International Assembly for Collegiate Business conduct regular audits of the teaching and learning strategies with their formalized learning outcomes. It was noteworthy because many of the students had little or no prior knowledge of neither psychology nor business content in their prior majors. Often times the higher levels of strategic evaluation invoked a richer understanding of global business drivers, balanced with a fine grain understanding of diverse stakeholder psychology. Globalized content and active debate is enabled by blended learning that allows for reflection beyond the classroom walls, and forays into a virtual world via videos, and links to foreign websites. Frankly, the rubric of evaluating online discussion became less important over time as the instructor observed the buzz with refinement and respect evolve and reticence overcome with insights and access to participation even for topics deemed too sensitive to broach in face to face discussions in reticent cultures. The online discussions stimulated the discussions even face to face.

## SAMPLES

Sample Moodle discussion comments are presented in the Appendix 1 & 2. Brief sample comments are culled from the individual Reflection Learning Journals which students are required to document in a standard template are presented below. As stated at the beginning, no formal systematic content analysis was employed other than the rubric for insight and why it was important to the learner.

**Malaysian graduate from HELP University in Malaysia's Master's in Managerial Psychology in metacognition (transcendence and self-exploration), blended active learning, and fluidity in the cognitive literacy value chain:**
*Explore a learning experience…*

*Awareness (transcendence and self-exploration).*
*Fluidity leading to Insight and Evaluation/Application (for far transfer via active blended learning).*
*Content into (fluidity in the cognitive literacy value chain) awareness. What have I learnt?*

"…I felt as if I am *moving upwards a stairs pretty quickly, being able to see more things clearer as I go higher*. Interestingly, I managed to go up higher by going deeper into myself and spend time doing reflection after learning something new. I am new in terms of career building and I am glad that I am learning so much to *be able to adjust my views accordingly*. Personally, I felt that I see how one can develop even further in various ways…"

"…I truly appreciate that I have the *opportunity to learn the module in various ways and where most of the methods were fun and interactive*. In both *online discussion and classes, everyone was allowed to share freely and respect was showed, even between course leader and students*. The reading was actually made easy as it was a short course and good reading materials have been handpicked and the only thing we need to do is just read*! Reflection was also essential for me to often check my progress and clarify my thoughts…"*

### Process (How) into Insight (fluidity and active blended learning) How did I learn/do it?
"…The different models of learning allowed me to learn and think critically in different ways.
*I felt as if learning took place all the time as after classes, there were online discussions and brainstorming on group projects, I mainly learned much from course mates rather than theorists in books…*"

"… Learning never stopped after the module ends as to be frank; I still have some reading materials that I was not able to finish reading during the modules…"

### Application into Evaluation (transcendence and self-exploration).
"…It is relieving to know that many times spirituality plays a role too. It *is important to pay attention to self* and tune in with nature. I always feared that I may not know enough to live a better life, not knowing enough vocabularies to understand concepts but instead, *it turned out that I have learned how important it is to not let words shape our thinking*. It is true*; our mind is too magnificent for us to label its processes.* Ironically, the process to succeed is simple enough, to summarize in words like 'Just follow your bliss'…"

### Strategic Human Capital Management by an African Corporate MBA student:
### Content (what) into Awareness (fluidity and active blended learning in the cognitive literacy value chain).
"…The beauty of this was how easily we managed to relate to internal challenges within Neotel. *Working with large teams* is indeed challenging as we try to derive maximum productivity, efficiencies whilst also trying to keep them constantly motivated..".

"…Highlighted in the process was competency levels – *where we actually are and where we would like to be at various periods and just as importantly how we can utilise competency levels to our advantage…*"

### Process (How) into Awareness (fluidity and active blended learning)
"…I must admit the current process is different to learning experience to date. Whereas in the past I have become accustomed to a physical presence of an instructor during classes, *this course has somewhat become a combination of distance learning with the use of technology to create a virtual impression instructor presence (video conference, Skype etc.).* Being from Durban we felt we were at a disadvantage compared to the Johannesburg team…"

### Content into Insight (active blended learning)
"…As a group *we brainstormed all factors (internal and external), strengths, weaknesses, opportunities and threats* to list key issues relating to competency within our department in Neotel (Field Services).  We looked at our successes, and how we actually delivered on those. We also looked at strengths and weaknesses and how best we could utilise these to positively differentiate us from our competitors. After quantifying this we were able to pick key strategic initiatives that were actually worth focusing on…"

### Content into Evaluation /Application (far transfer fluidity)
"…As an organisation we are driven by revenues and customer satisfaction.
Mapping key areas highlighted against models (Ulrich and Brockbank HR Value proposition and Value maps), we were able to illustrate how strategy and assessment of organisation relates to this. It proved to be very valid and *also brought about different approaches to thinking.*

### Strategic Analysis and Management by an American student in term of invoking *fluid intelligence* and metacognition (transcendence and self-exploration) for *higher order far transfer applications*:

*Explore a learning experience…*
*Awareness leading to Insight and Evaluation/Application*
*Higher order thinking applied to content in the cognitive literacy value chain into what have I learnt?*

"I've learned how to *think broadly* in terms of scalability, planning, managing, organizing and prioritizing. I also learned how to *think critically* by learning how use strategic tools. By also leveraging online knowledge tools, I was able to clearly see that one can develop a balanced method of *strategically planning* be it for an organization *or one's own life*".

### What is the underlying benefit of this process? Metacognition (transcendence and fluidity in learning how to learn).

"*Learning to think* in such a manner helps one to develop a clear picture of the outer (business, economic, social, political, environment, etc.) and inner (consciousness, Self-knowledge, spirituality, etc.) landscape of life".

"*The inner and outer landscapes are both part of the transcendental* therefore they can be transcended. What this means is that much like the way we use the *TM technique to develop and refine our inner landscape, we can use tools of analysis to strategically manage or align the outer landscape*".

### How (fluidity) do I come up with a good strategic plan?
"To come up with a good strategic plan be it for life or an organization, one has to observe, *analyze* and continuously *survey the inner (mental) and outer landscape (objective)*. This allows one to be in tune with nature and refine that subtle awareness that can be used to help one spontaneously obtain deep and clear insights into whatever is the current focus of one's attention".

### Process (fluidity) how did I learn/do it? Enlivening blended active learning with peers online and face-to-face.
"By being exposed to management issues (online discussion) from companies and growing economies that buck the trend when it comes to management, economic and social policies. *Being able to discuss openly and collaborate with other people from diverse work and ethnic backgrounds facilitated a deeper comprehension of the topics discussed simply from hearing other people articulate perspectives and opinions*".

### How effective is this strategy (higher order thinking applied to content in the cognitive literacy value chain)?
This strategy allows one *to appreciate the concepts by being able to not only fully comprehend them but also by being able to take practical and actionable steps to implement them immediately*. For example, after learning how to use the Environmental Factor Evaluation and other tools we started to analysis the Nokia Finland case thereby speeding up the process of comprehending the tool and its purpose.

### How can I make this strategy more effective (higher order thinking applied to content in the cognitive literacy value chain)?
By realizing that there's no way to completely eliminate or avoid all the risks inherent in life. However, by *focusing ones awareness and being constantly open to change, allows for spontaneity and creativity* in solving personal and business strategic management issues.

**Meditating Muslim graduate from HELP University in Malaysia's Master's in Managerial Psychology from the Maldives on the experience of** *transcendence and self-exploration; and fluidity in perceptions of unity in diversity***:**
"…Now after several months of meditation, I am more lively, energetic and happy. I feel light and its easier for me to concentrate and be attentive. I feel more motivated and hopeful towards life. On a second note, I noticed just after I meditate all my senses are sharper. The moment I open my eyes, I see things more clearly, as if I'm seeing for the first time. I take a deep breath and feel fresh air spill my lungs and I feel so great to be alive. I feel thankful for being me and appreciate every little thing that has made me who I am. The positive energy and *clear consciousness and relating to the inner being help me see the world in a different way and appreciate life*. That makes me treat others and everything around me in a caring and loving way because *the enlightened state of mind awaked to appreciate and care for every little thing in my surrounding. I feel responsible and bounded to every life on earth*.."

**APPENDIX 1**
**Learning how to learn sample Moodle online discussion board from HELP University Malaysia :**

Re: Decoding Resistance to Change

by XXX from Malaysia - Saturday, 14 January 2012, 10:39 AM

http://hbr.org/2009/04/decoding-resistance-to-change/ar/1

As discussed, concepts are easy to understand but the resistance to change makes execution tough.

Attached article stated that even difficult people can provide valuable input when you treat their communications with respect and are willing to reconsider some aspects of the change you're initiating.

Supposed to have 5 ways in the article but because I am not willing to pay, we can only see 2.

Take a guess of what are the other possible ways that we can use employee's resistance to effect change more productively?

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Re: Decoding Resistance to Change

by XXX from Zimbabwe - Thursday, 26 January 2012, 03:10 AM

There are key important issues that draw my attention from this article Catherine which according to my understanding are key issues worthy discussion. It seems the article is using the long route, only to explain the importance of communication when it comes to organizational change. People tend to think communication in the organization is as easy as it sounds familiar, however, in actual fact there are a lot of variations when it comes to the impact a vehicles of communication have on employees. The millennium generations may require some recent vehicles of communication like Facebook, organizational forums etc while the generation X and the baby boomers may still inclined to meetings, memos, notice boards etc. So in other words forms of communications should target all diverse groups within the organization. 2. Emotional intelligence sounds very key from the article, because it sounds like for a leader to understand others and even to influence others it requires a degree of emotional intelligence.

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Free space for posting -> Why Change Is Necessary – Change The Road -> Re: Why Change Is Necessary – Change The Road

by XXX - Thursday, 26 January 2012, 02:06 AM

Wow, its metaphoric nature makes it more interesting. i remember a quote which i once came across which says he who rejects change is the architect of decay. The only human institution which rejects progress is the cemetery. In other words change is part of living humanity. Change will always stimulate the sympathetic nervous system of many employees because they don't want to move out of their comfort zones, and they cannot envision the future state. We must learn to view change as a natural phenomenon to anticipate it and to plan for it, as the article expresses. The future is ours to channel in the direction we want to go. we must continually ask ourselves, "What will happen if...?" or better still, "How can we make it happen?". This cannot happen overnight, it requires commitment, determination, motivation and courage from the leadership to the whole organizational parts, structure and systems

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See this post in context

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Entrepreneurship is the highest form of philanthropy

by XXX Malaysia  - Thursday, 4 October 2012, 10:45 AM

1. Dear everyone,

2. *"Entrepreneurship is the highest form of philanthropy."*

3. This is a quote by Flip Filipowski, Executive Chairman and CEO of SilkRoad, during his recent interview on BFM radio. Filipowski is one of the world's most successful high-tech entrepreneurs, philanthropists, and industry visionaries.

4. He is also the former COO of Cullinet, the largest software company of the 1980's, and also the founder and CEO of PLATINUM technology, inc. Flip grew PLATINUM into the 8th largest software company in the world at the time of its sale to Computer Associates for $4 billion dollars, the largest such transaction for a software company at the time. Upside Magazine named him one of the Top 100 Most Influential People in Information Technology.

5. A recipient of Entrepreneur of the Year Awards from both Ernst & Young and Merrill Lynch, Flip has also been awarded the Young President's Organization Legacy Award and the Anti-Defamation League's Torch of Liberty award for his work fighting hate on the Internet.

6. **Interesting excerpts from the interview**

7. Values that guide him: "*Entrepreneurship is the highest form of philanthropy* – if one is capable of taking the risk, start a business & creating jobs then one is doing more for society than one is capable."

8. "If you have the skills of creating jobs and engaging people, then you owe that to society to continue doing that than to retire."

9. **Is everyone meant to be entrepreneur?**

10. His opines that "It is not for everyone. It is a rare trait that involves the ability to stomach risk and the ability to eliminate all rational thoughts from your behaviour".

11. To hear more, here's the link to the podcast: http://www.bfm.my/raise-your-game-flip-filipowski-silkroad.html

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Re: Entrepreneurship is the highest form of philanthropy

by XXX Malaysia - Monday, 8 October 2012, 05:25 PM

Hi Fauzi,

Thank you for your response. You brought up a very fair point and one which has been and continually being addressed by the business & corporate communities. For the past couple of decades, there have been growing pressure by various stakeholders e.g. customers, consumers, NGOs, the local governments etc. for large corporations/businesses to be more transparent in the way they run their business and to be sustainable in all aspects of its operations – from mitigating its environmental impact, ensuring that it provides conducive working condition for its people, good governance and to ensure that the communities in which it operates are not negatively impacted by its operations.

Traditionally, successful business people, corporations, leaders have been too focused on the **social** component of Sustainability i.e. Corporate Social Responsibility CSR). You mentioned Foxconn & Apple, which is a good example! Terry Gou, CEO of Foxconn, dubbed "Samaritan of the Poor" is one of the greatest philanthropist, giving away millions annually to charity. You would not think that a person like him would jeopardise the health and safety of his people who helped grow his empire. However, as stakeholders are becoming more sophisticated, issues of appalling working conditions, poor labour practices at Foxconn factory in Northern China came to light and causes uproar among the public and also within the business community.

My personal view, if I may is that situation at Foxconn should not detract us from appreciating & reflecting on what these entrepreneurs through their multi-million businesses have done to the local communities by creating jobs, empowering its local communities etc. In running a successful business, there will inevitably be a trade-off, it is not about running a perfect business which should not cause any negative impact to the environment etc but it is about striking a good balance – which realistically is

a very hard thing to do.

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Re: Entrepreneurship is the highest form of philanthropy

by XXK Zimbabwe - Friday, 12 October 2012, 11:11 PM

Fauzi i like your insight there, I believe many companies they come in the camouflage of Job creation to acquire glory and honor in the heroic faces that misrepresent their actual faces of profit making, and as result their external image will cover up their environmental immorality in the name of making societal difference. This is definitely affecting sustainability as Dinor commented.
I remember in our previous module , we encounter a British Tobacco company that donated a lot of money for medicine related research. So this was done in the name of saint /saviour face of that company but with self interests to cool down anti tobacco campaign. So the bottom line of point is, an ideal entrepreneurial of our time, should be people of virtue and integrity who operates business with high ethical principles.

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**APPENDIX 2**

Table 1. Sample reflection journal from a Malaysian  student at HELP University  :

| *Explore a learning experience…* | | |
|---|---|---|
| **Awareness**  ··············▶  **Insight**  ·············▶  **Evaluation/Application** | | |

| Content (What) | I have a new perspective looking at entrepreneurs. Locus of control and the strengths concept were my interests of studies. The course emphasizing following one's bliss and differentiates a truly successful entrepreneur with a mere business owner triggered me to think further. Apart from that, probably because I am new to the module, I also learned concepts like value network, unique selling proposition and many more. | Internal/External- Believes that result is the cause of own action/thoughts or it is the result of luck/chance factors. I have always think that people with internal locus of control would be more successful as they will be more willing to make changes on their actions to lead to a more desirable outcome. I am glad that research proved the fact too.

The concept about strengths changed my thinking paradigm towards a person's development

Other theories also served as a good reminder of what I have learned and also introduced me to more research concepts. | Although Rotter's loc research is quite old, I believe that if tested, it is still quite valid and reliable. Furthermore, researches could probably relate it with other factors, not just entrepreneurial success.

I think that the strength theory pretty much changed my stand in education. I felt that our old education needs to be changed so that social problems can be reduced, people are not labelled as talented or slow. Slow learning is merely a sign of weakness and people should not dwell in it. The theory can also be applied in other industries, specifically how its learning and development training works. |
|---|---|---|---|

| Process (How) | I truly appreciate that I have the opportunity to learn the module in various ways and where most of the methods were fun and interactive. *In both online discussion and classes, everyone was allowed to share freely and respect was showed, even between course leader and students.* The reading was actually made easy as it was a short course and good reading materials have been handpicked and the only thing we need to do is just read! Reflection was also essential for me to often check my progress and clarify my thoughts. | The different models of learning allowed me to learn and think critically in different ways.<br><br>I felt as if learning took place all the time as after classes, there were online discussions and brainstorming on group projects, I mainly learned much from course mates rather than theorists in books.<br><br>Learning never stopped after module ends as to be frank, I still have some reading materials that I was not able to finish reading during the modules. | It allowed me to open my eyes to see how steep a learning curve can be in a short period of time. I am able to change my perspective towards a course, knowing that learning a lot does not equals to stress and reading dry materials. It can be very fun and interactive. I am pretty glad that this course is not based on analysing journals and concepts of research. It is true that sometimes researches are confusing themselves and one can be successful in another way. |
| --- | --- | --- | --- |

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