THE OPERATIONALIZATION OF INTEGRATED INTERNAL ACTION FRAMEWORKS FOR CLASSROOM IDENTITY DEVELOPMENT AND SELF-REGULATING LEARNERS

Kevin Michael Watson[a]*

*[a]University of the Ryukyus:Global Education Center, 1 Senbaru Nishihara-cho Okinawa, Japan
Ross University: School of Medicine, Lloyd Erskine Centre, 2 Mile Hill, Barbados*

Abstract

In the current 21st century landscape, Higher Education (HE) faculty are challenged to concomitantly create, plan, implement, and evaluate curricula that promote and develop self-regulating lifelong learning skillsets within student populations. This means developing learners who have the knowledge, skills, attitudes, and values to identify, acquire, process, synthesize, analyse, interpret, and operationalize information. This is compounded as global societies challenge each citizen to negotiate ever-changing contexts, differing paces of information flow, and increasing levels of technological sophistication. Despite these challenges, meeting the lifelong learning needs of current HE learners is possible through classroom operationalization of competency-based learning frameworks that focus on holistic self-regulating learning cycles. The concept of Integrated Internal Action Frameworks (IIAF) is one such framework model. IIAF allow students to maximize their learning potential by actively integrating frames of mind and should serve as a launching pad to cognitive and meta-cognitive mobility as a learner. Operationalized from this vantage point through mentorship will allow learning to take shape in an organic way with outcome-supported curriculum learning cycles. The IIAF conflate four main building blocks in the classroom through mentorship and release cycles: (1) "I" Orientation Learner Development (IOLD), (2) Time Released Micro-cycles of Learning (TRML) (3) Integration, Continuity, and Engagement (ICE), and (4) Integrated Student Response (ISR). This article draws together these theoretical underpinnings for effective classroom learning, introduces an IIAF-based curriculum, and shows the implementation curriculum models structure and the initial learning cycle that has been streamed over a 15-week semester of senior Japanese university students within their capstone Advanced Seminar course. This study presents only the first phase of a three-phase curriculum structure.

Keywords: Integrated-Internal-Action-Frameworks (IIAF), Self-regulating Learning, Learning cycles, 4 "I" Orientation Learner Development, Personal Learning Perspective, Differentiated Identity Development

*Corresponding author.
E-mail address:* toronto93@hotmail.com/kwatson2@rossu.edu

1. Introduction

In the discussion of a self-regulating learner, the importance of individuals building a flexible Personal Learning Perspective (PLP) towards a lifelong learning skillset or biography requires significant Differentiated Identity Development (DID). This is particularly important within a classroom environment of homogeneously educated learners for example, in Japan. Not surprisingly, Engestrom (2014) states that "human learning is pervasively shaped according to normative cultural expectations" (p. xviii). Unfortunately, these expectations often produce learners that exude a particularly fixed mindset. This results in many learners entering the classroom with limited mobility of knowledge, skills and attitudes. Thus, in Higher Education (HE) classrooms it is important to sensitively "breach" normative cultural boundaries with students and offer structured opportunities for learners to expand individual learning skillsets.

Over the past 15 years, nascent theories emphasizing the importance of neuroscience in education and learning (Hook & Farah 2013; Gobet et. al, 2001; Tanner, 2012), and flexible mindsets (Duckworth, 2016; Dweck, 1999; Yaeger & Dweck 2012; Yorke & Knight 2004) have taken centre stage. These exciting theories provide new insights into the importance of both instructors and learners' understanding how the brain processes information to learn. Unfortunately, change occurs slowly in institutions and these theories are notoriously difficult to operationalize within the curriculum. Additionally, over the past 40 years or more, Transformational Learning (Mezirow, 1997), Experiential Learning (Dewey, 1933; Kolb, 1984; Jarvis, 1995; 1999; 2009; 2010), self-regulating and metacognitive learning (Flavell, 1979; Moon, 1999; Pintrich, 2002; Winne, 1996; Shon, 1997; Tanner, 2012) and social construction based learning (Bandura, 1977; Vygotsky, 1978) among other theories have highlighted the changing roles of instructors and learners in the human development and learning process. Despite the difficulty to implement, Rogers (2007) declares that the initial focus of teaching must be to "consider learning from a design standpoint: This is the first essential principle of teaching adults successfully and it's a paradox. Teaching is about learning. Therefore, your task as a teacher of adults is to become a designer of learning" (p.6).

Correspondingly, instructors are obliged to mentor learners through learning cycles and to serve as differentiated interventionists or facilitators who experiment with new approaches and explore new teaching methodologies. This view of teaching and learning sounds promising. In the curriculum under review in this study, the impact occurs in the first phase of the curriculum, so while there are three phases to this curriculum, the foundational phase from teacher cognition to implementation is presented (See Table 1 below for overview).

Table 1. Phase 1 of the IIAF Curriculum Process

Course Phase	Instruction Components	Time Frame	Learner Interaction Tasks	Assessment Types
Phase 1	Habits of Mind (IIAF) Differentiated Identity Cycle-based Learning Learning Perspective Experiential Learning	1 - 5 weeks direct instruction Ongoing as individually or collectively needed	Inquiry-based Tasks Integration Tasks Academic Discussion Value of Peer Interaction	Formative feedback Academic Coaching Time-released feedback
	Mentorship Cycles Biography of Learning Presentation skills Visual Aid Creation	1 - 5 weeks direct instruction Ongoing as individually or collectively needed	Critical thinking /Cycle tasks of learning mentorship skills practice Deconstruction Tasks, Academic Discussion	Self-assessment Peer assessment Formative assessment Formative feedback
	Visible learning Operationalization Active Practice	Week 6/7 Ongoing as individually or collectively needed	Begin to actively recall and practice assignments Learners perform a 15-min oral assignment	Self-assessment Peer assessment Formative assessment Peer feedback
	Mentorship Oral Reflection Written Reflection	Weeks 7-8 Following weeks 7 or 8 phase 1 will blend into week 2	Meet 1-1 with mentor Transcribe presentation View Video Discuss work with peers	Formative Assessment

1.1. Four Critical Relationship Areas

The critical relationship between the learner and (1) the environment, (2) curriculum content, (3) peers, and (4) instructors/mentors cannot be understated. Figure 1 shows the contribution of these four critical components towards the development of self-regulating learners. Both the instructor and the learner must understand the interplay between all four elements in order to fully experience the integrated nature of self-regulating learner development in a classroom. This will become clearer throughout this paper as the process of self-regulating learner development is discussed in the context of IIAF. Briefly, the three overarching components that affect the student's relationship within the IIAF curriculum are Integration, Continuity and Engagement (ICE). Each of these leads to empowerment within the environment, empowerment within the curriculum, empowerment with peers and finally empowerment with the instructor/mentor. The Instructor has the ability to mentor and control these three variables in all four phases of the teaching and learning process: (1) preparation/planning, (2) implementation, (3) classroom contact, and (4) assessment.
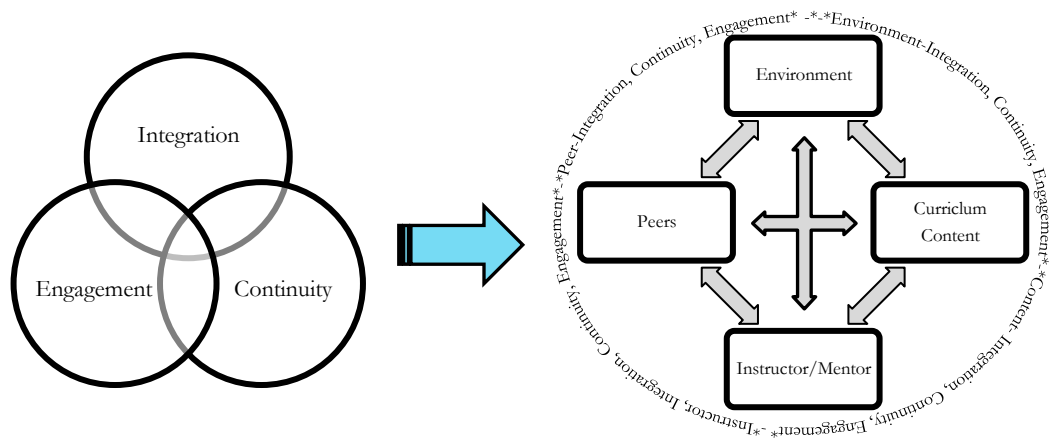
Figure 1. Critical elements of consideration for IIAF Curriculum Planning

With the guiding conceptualized principles of ICE of in the mind of the instructor with the intent to mentor and operationalize them with learners, the IIAF process can begin to take structural shape.

2. IIAF Foundations

2.1. Habits of Mind, IAF, and IIAF

At this juncture, it is critical to have a working definition of lifelong learning for the purpose of understanding of the proposed model. Lifelong learning is defined as the development of human potential through a continuously supportive process, which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetime, and to apply these with confidence, creativity and enjoyment in all roles, circumstances and environments (Longworth, 2006 p. 62).

The self-regulating lifelong learning process begins even before the learners arrive in the class with instructor cognition. How learners interact with the environment, the curriculum, their peers and directly with the instructor themselves is significantly impacted by the adopted mental approach of the instructor. The thought process of the instructor must reflect a growth-oriented lifelong learning mindset. This mindset leads to the curriculum being operationalized in a positive growth-oriented environment and provides learners with access to non-linear cycles of learning. This is possible by structuring Internal Action Frameworks (IAF) or access points to habits of mind. I define an Internal Action Framework (IAF) as "how the individual engages rationalizes, integrates and ultimately operationalizes the organizational content in their mind (cognitive, metacognitive, conative, and emotional)". This has a great influence on

how each person approaches every single event in their lives. Each individual based upon their own body of experience has, as Mezirow (1997) terms, "frames of reference that define their life world" (p. 5). Further these frames of reference "are the structures of assumptions through which we understand our experiences…shape and delimit expectations, perceptions, cognition and feelings…set our line of action" (p. 5). Essentially an IAF leads to the mentoring of (1) habits of mind and (2) intentions of actions that lead to critical thinking. These habits of mind and intentions of action are influenced by several psychological factors (e.g. prior experience, cognitive load, schema theory, competence, relatedness, locus of control and self-regulation, etc).

For the purpose of effective Personal Learning Perspective (PLP) and Differentiated Identity Development (DID), integration and mentorship of critical thinking is essential for classroom IAF. According to Bowen and Watson (2017) "teaching critical thinking is hard" (p. xxiii). It is this thinking and the experiential operationalization that is critical. In support of this, Mentkowski (2000) states that "when learners connect reasoning and performance, they get an integrated sense of what I know and how I can do this. But…often need to develop their conceptual abilities before they can link the two" (p. 190). Along these lines, operationalizing IAF with Integration, Continuity and Engagement (ICE) serves to create inquiry-based habits of mind that are centered around reflective thought and action to form the basis of Integrated Internal Action Framework (IIAF). Using Integrated Internal Action Frameworks (IIAF), learners actively work to integrate knowledge, skills, attitudes and values in a state of self-awareness. Mezirow (1997) considers this process to be transformative learning: "a process of effecting change in a frame of reference" (p. 5). Mezirow highlights internal processes of thinking that are critical to transformative learning and are based on reflective thinking and awareness of learning (See table 2).

Table 2. Four levels of reflective thinking

Habitual Action: (Taken for granted)	The learner engages in activity that is routinely and frequently conducted with little conscious thought
Understanding	The learner acts to comprehend and apply knowledge within contextual constraints and without recognizing personal significance
Reflection	The learner assesses the problem-solving process and uses this to make reflection
Critical Reflection	The learner makes decisions about what is the best way to approach an issue but without reassessing assumptions on which beliefs are based

(Adapted from Mezirow, 1997)

2.2. Breaching Student Normative Learning Culture

In order to introduce and then subsequently operationalize IIAF, it is critical to inform students on the need to breach their own normative learning culture and to be continually looking to metacognitively monitor and control their learning process.
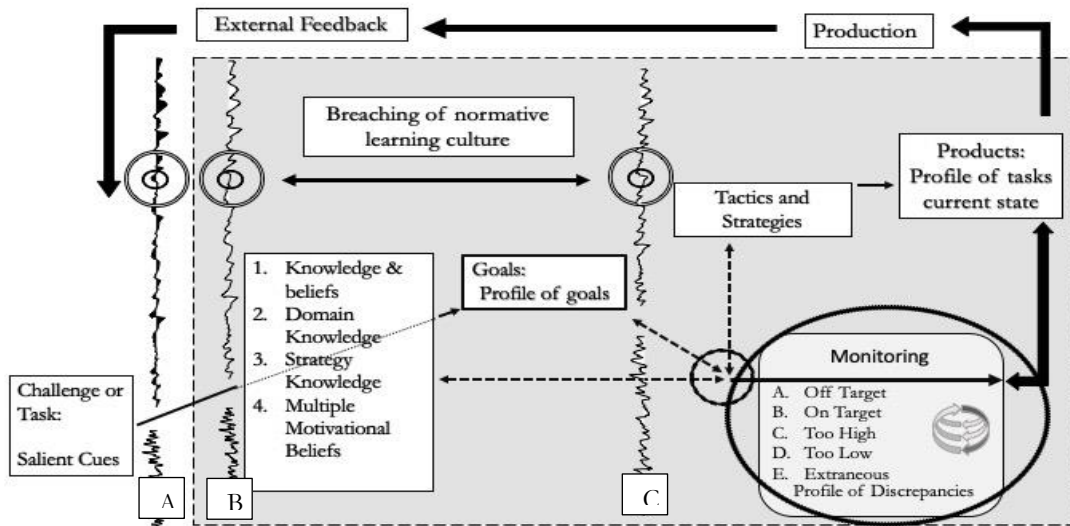

Figure 2. Mentorship-breached self-regulating learning (Adapted from Winne 1996 & Winne and Hardin, 1998)

Considering habits of mind, mindsets and IIAF, Winne (1996) and Winne and Harden (1998) offer a self-regulation and metacognitive monitoring model that I content to be representative of habits of mind. These habits of mind are an example of an internal action framework (IAF). Stated simply, it is a way to cognitively and metacognitively structure information towards self-regulation. Connections to the classroom through mentored cycles of learning empower students to seek production and external feedback with awareness. While similar information processing exists within each person, awareness is the key element. Each learner has their own value system, domain knowledge level, learning strategies, motivational strategies among other components. These are unique to a person's individual normative learning culture and thinking culture, or IAF. Further to this point, each person's external learning approach is different based upon individual history, external tasks, challenges, supports, interests and conditions. It is critical to state that unless mentorship, coaching or at least active exposure to self-regulating learning and habits of mind has occurred, awareness of "other" ways of learning will often be foreign concepts to learners. Consequently, it is commonplace for learners to lack awareness of their own learning process outside of memorization and testing. Memorization and standardized testing are staples of institutionalized learning culture and dominate learner skillsets. As a result, individuals with

limited exposure to self-regulating lifelong learning predominantly rely on a single strategy and on this fixed mindset as a measure of their intelligence and approach to learning. This reliance prevents learners from systematically and purposefully constructing a robust self-regulating learning biography. Figure 2 presents Winne's (1996) self-regulating and metacognitive monitoring model. Considering the light grey box in Figure 2 as inside an individual's brain (i.e., cognition), the construction of our self-regulating learning process is shown.

Linking to the concept of IAF and to an IIAF classroom curriculum is the external line outside the shaded box in Figure 2 (Marked as A). This represents an external breaching of a learner's normative learning culture as would occur through classroom mentorship or instruction. This external breach in the case of the classroom-based IIAF curriculum would be an instructor intervention (planned or ubiquitous). An example of this intervention would be the scaffolding of cycles of learning and the mental and physical set up for active integration, continuity, and engagement. This intervention can add to a learner's biography. Once a mentor has provided an opportunity for the learner to become aware of potential learning cultural breach opportunities, the learner must then actively and in a self-regulatory manner consider changes to their learning biography. The learner-initiated breaches are marked as B and C in Figure 2. These breaches are critical components of the learners perceiving their learning process and culture as being malleable, within their own internal locus of control, and something that is developable over time to include knowledge, skills, attitudes and values. Additionally, if adopted and developed over time, this will allow learners to actively metacognitively monitor and control their thinking and learning. Ultimately, this is the first step which will impact how a learner approaches new learning environments and creates habits of mind. This awareness provides a foundation, bridging Personal Learning Perspective (PLP) and self-regulating Differentiated Classroom Identity development (DID). One step further will open the learner to consider the bridge between active practice learning cycles and theoretical learning cycles that support one another, leading to the potential of a self-regulating lifelong learner. One final point that is critical that Klaxton (1997) identifies is that the process is ruminative as opposed to acquisitive and needs to be conceptualized in this way.

3. Instructor Mindset

For instructors to develop IIAF habits of mind within students, an instructor's own mindsets must reflect an openness to building and operationalizing a curriculum that works towards learner empowerment through IIAF.
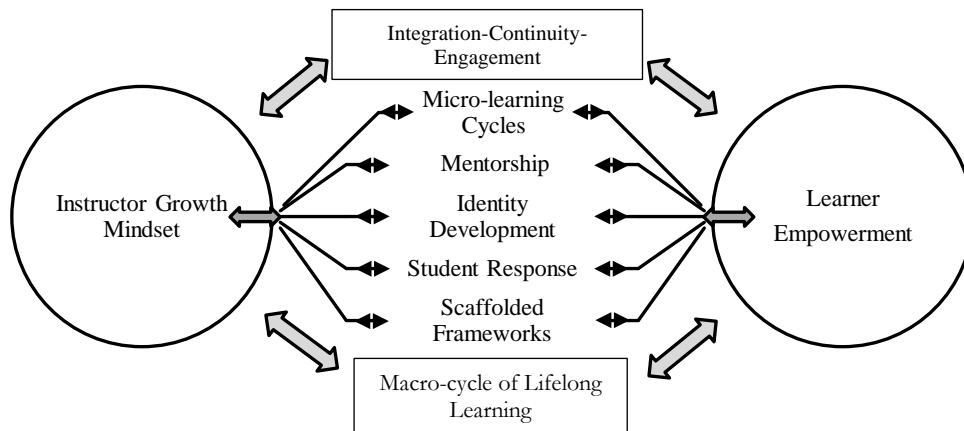
Figure 3. IIAF Classroom Learning Framework Structure (Overall and Pod-focused)

Figure 3 shows an overview of the cycle based scaffolding structure of an IIAF classroom. The cycle begins with instructor cognition (growth mindset) spanning towards learner empowerment. The cycles are operationalized on several bilaterally functional levels. First, a large macro-cycle of self-regulating lifelong learning within the classroom is initiated through the combination of integration, continuity and engagement principles. Within the classroom, learners are given opportunities to explore each of these areas towards developing a sense of empowerment that creates an expandable circuit of learning. These cycles or circuits lead to continual and future growth and development of their PLP and DID. Essentially, this macro-cycle can and should serve as each learner's own guiding learning process throughout the class and hopefully can transfer to a larger cognitive and metacognitive skillset. This can occur on an individual level as well as concomitantly occur on a community level within the classroom. As a result, this allows each learner to become an active participant in their own learning and to also learn at their own pace. Secondarily, foundational learning micro-cycles are introduced in the areas of scaffolded frameworks – micro-learning cycles, mentorship - student response, and differentiated and communal identity. While I have conceptualized and operationalized these as circuits initially, each of these micro-cycles should eventually be crosslinked and integrated at the learner's own pace, level, and commitment. Additionally, these cycles should create continuity within their learning process and ultimately serve as a foundation to a self-regulating lifelong learning mindset.

The inclusion of integration, continuity, and engagement is critical at every stage of the curriculum design, implementation, and evaluation process. While integration and continuity are both important elements, it is the engagement that links together instructor aims

with the student's own learning outcomes. In support of this, Irvin, Meltzer, and Dukes (2007) state that engagement is "critical, because the level of engagement over time is the vehicle through which classroom instruction influences student outcomes (pp. 32-33). Related to this, Figure 3 links the micro-cycles of learning and ultimately the learner's macro-cycle of learning, providing opportunities for the learners to show awareness and attention towards empowerment. The process from dependence on the instructor through mentored and scaffolded cycles to the student building empowerment, is maximized when the instructor views individual students from a dual-pronged perspective while also keeping in mind the learner's place within the community or classroom learning pod. Figure 3 shows the instructor's growth mindset leading to a student learning outcome of Empowerment. From this vantage point, the learners can perceive and validate their learning repertoire (biography) as it is currently constructed. (knowledge, skills, attitudes, and values). This is represented in box 1 of Figure 4 below as Holistic (whole learner) self-development with both the instructor and the learner validating their current skillset. Box 2 of Figure 4 represents the acceptance that the learners have the capacity to develop their biography into the future both with assistance (mentorship, scaffolding, IIAF) and self-regulation. Box 2 shows the emerging and evolving authentic future self. This development is based on self-awareness of the potential of the whole person. This requires both instructor and learner acceptance of the learner's current level and self-awareness and projection towards full potential for knowledge, skills, attitude, and value development. This development is the result of awareness, appraisal, and empowerment that stems from the instructor striving to emancipate the learners.
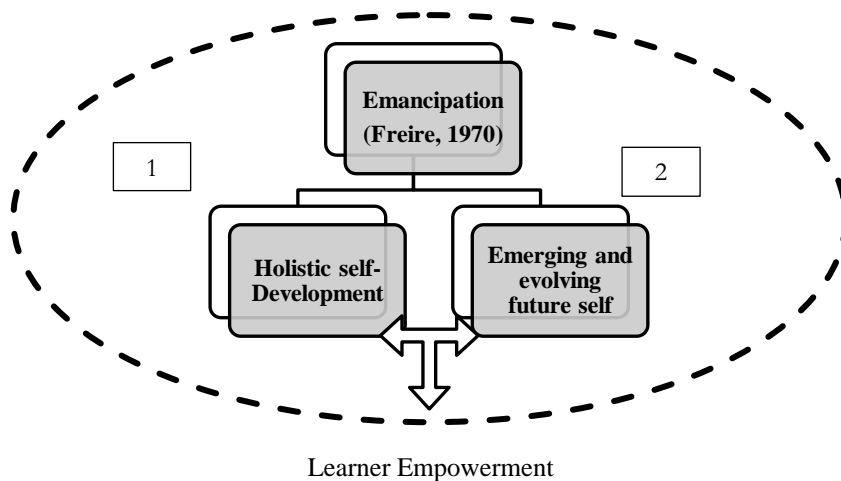

Learner Empowerment

Figure 4. Teacher conceptualization of the IIAF classroom environment and curriculum planning

4. Final Underpinnings

The final critical learning underpinning is the relationship between experiential learning and psychology. This relationship between experiential learning and psychology is critical to the foundation of the IIAF curriculum. Its scaffolding of classroom experiences lays the foundation for self-regulating lifelong learners with robust biographies to have the capabilities to transport their biographies to new communities with confidence. Self-regulating learning depends upon the co-construction between (1) experience/reflection/active practice and (2) psychology and identity development. The IIAF curriculum requires the learner to have an understanding of how the components of experiential learning works and the role of experiential learning in their development. Further, a key component of a robust learning biography is the awareness and ability to solidify, operationalize and, if necessary, modify their identity.

To avoid confusion of terms, for the purposes of this article, Experiential Education (EE) will represent the operationalization of Experiential Learning Theory in an educational environment. EE is simply defined as "challenge and experience followed by reflection leading to learning and growth" (What is Experiential Education, 2018). Mackenzie, Son, and Hollenhorst (2014) contend that there is a need to strengthen Experiential Educational programs by aligning them with underlying and well-established psychological theories. They state that "EE research findings can be improved by situating them within widely accepted psychological frameworks… recognizing the psychological processes that facilitate positive program outcomes can increase efficacy for future EE programming and research" (p. 76). They further highlight that "psychology and neuroscience, have well developed theories of experience, perception, cognition, affect, behavior and learning-all of which are integral EE processes" (p. 76). Specifically, they identify Self-Determination Theory (Deci & Ryan, 1990; 2002) (SDT) as one potential link. In support of this, Stornes, Bru, and Idsoe (2008) state that "A mastery motivational climate is beneficial, promoting adaptive learning and motivation" (p. 316). Further, Stornes et al. (2008) contend that "factors that reduce intrinsic motivation are likely to stimulate a competitive, performance motivational climate" (p. 317), but that facilitating intrinsic motivation within learners would enhance "a mastery motivational climate" (p. 317) and ultimately encourage learning as a constructive process. Essentially, better performance is a direct result of expanding experiential cycles of learning that lead to psychological emancipation and efficacy (i.e., self-regulation); in the end, helping to develop or enhance a mastery motivational climate and flexible mindset as shown above in Figure 2. Viewing EE as the operationalization of Experiential Learning (ELT) Theory, the use of Jarvis' model of ELT provides opportunities for learners to have access to other theories such as SDT.

Without the structure of EE grounded in ELT theories such as this may not ever become a focus of a learner's attention. This includes the learners being aware of their own level and able to utilize the experiential learning as a part of their IAF habits of mind and holistic biography.

As a theoretical basis for the IIAF Jarvis' (1999; 2003) model of experiential learning has been combined with Marcia's (1966, 1980) identity development model in order to create the classroom foundations that are critical to the key elements of PLP development and DID. These are key underpinnings of the of the IIAF curriculum as they provide the scaffolding for learners to develop empowering cycles of learning. These scaffolded cycles of learning (seen in Figures 2, 3, and 4) are critical when encouraging learners to breach their normative learning culture. Building of Dewey (1933), Kolb (1984), and Boud, Keogh, and Walker (1985), Jarvis (1999) purports four routes of learning (See table 3 below) that form the basis of a self-regulating learner and are critical to learners operationalizing knowledge, skills, attitudes, and values. Very briefly, Jarvis' routes involve four main choices for learners once they have been introduced and mentored to learners. It is important to state that each of these routes is not innate and all four require development. Most learners come into the IIAF curriculum with route two (memorization) being the dominant route. This is particularly the case in Japan. This is the result of it being a central component within many classrooms and benchmark assessments within the compulsory stages of an individual's education. As a result, the other three routes have either been neglected, ignored, or not even introduced to many learners. This is not meant to suggest that memorization, working memory and semantic memory are not important. On the contrary, memorization serves as a fantastic launching pad for each individual to make developmental steps in the other three routes in order to become reflective and active self-regulating learners.

Table 3. Jarvis (1999) 4-Routes of Learning: Adapted in format only

Route	Label	Description
1	Non-learning	The learner rejects the opportunity to learn
2	Non-reflective Learning	The learner simply memorizes information
3	Reflective Learning	The learner reflects on the experience and learns
4	Learning by doing (Including reflection or without reflection)	The learner is actively involved in the practice of learning, choosing to reflect or not prior to action

Developing the other three routes (1, 3, 4) begins with the learners building awareness of their ability to initiate disjuncture or crisis. In this context, disjuncture/crisis refers to the process of active consideration when a learner's biography is incongruent with the challenge facing the learner. During identity development and the experiential experiences within the classroom, in the IIAF curriculum, students will have the freedom to commit to a particular classroom identity or to continue to develop through Marcia's stages. Each learner is mentored on how to create "CRISIS/Disjuncture" and is then afforded the option to make an identity commitment while also learning how to work through cycles of experiential learning. A learner's comfort with experiential learning combined with identity commitment provides locus of control over learning from a personal, relational, social and material perspective and creates access to autonomy and agency through routes 3 and 4.

On the contrary, learners who consciously or unconsciously stay limited to route 2 are still able to successfully complete an IIAF curriculum. The option to become a self-regulating learner is simply an option that can be actively chosen or dismissed by the learner. Considering the components of Figure 5, learners enter a new classroom environment armed with their biography. This biography is a collection of their past experiences and contains their knowledge, skills, attitudes, and values. Once an individual enters a new environment (in this case a classroom), they will be confronted with social experiential learning experiences and opportunities to assess and adjust their identity within this new environment. As this point disjuncture/crisis opportunities occur. Disjuncture is recognition of an incongruence between the learner's biography and the knowledge, skills, attitudes or values needed to successfully negotiate the experience (e.g., content, environment, cognitive load, complexity). Through experiences, the learner scan perceive, become aware and attend to the capabilities of their biography when confronted with this new experience and then choose to take one of four routes as outlined by Jarvis. However, the learners must be aware that these learning routes exist and that they are perceived as options to them. This links back to Figure 2 and the importance of the metacognitive monitoring necessary in self-regulation of an individual's learning.
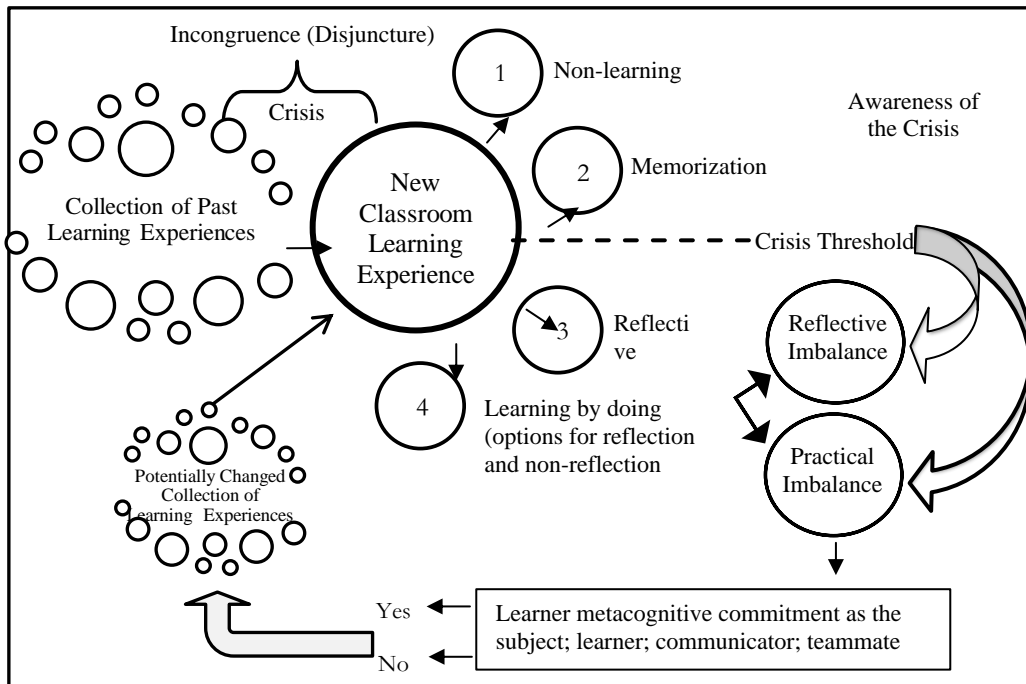
Figure 5. Experiential Learning Theory within the IIAF (Adapted from Jarvis (1999) and Marcia (1966))

At the bottom of Figure 5, depending upon the level of awareness and operationalization of learning and identity capable by the learner, each learner may be able to metacognitively make a commitment to themselves in a new environment as a subject, learner. communicator or teammate. These four areas of commitment are explained below but are an integral part of the experiential learning theory proposed here in the IIAF. They require the development of a learner's identity. Each learner is mentored on whether to make a commitment or not to their own development and have the choice to change biography or not. They can then look towards the next experience.

The four stages of Marcia's identity model provide a framework encouraging growth by concomitantly introducing the need for identity development (see Figure 6). Additionally, addressing Figure 5, the learner may not have experience within all four routes. Thus, the IIAF curriculum provides mentorship to guide learners through the process. Neuroscience research has demonstrated that without perception and awareness, humans may not place attention on even the most salient of objects, or actions and is termed inattentional blindness (Mack & Rock, 1998). Therefore, it is critical for a curriculum of this nature to ensure that learners are mentored in all four routes during this first phase. The addition of self-regulated reflection and learning by doing are skills that need to be added to the learner's biography in the form of

knowledge and skills. However, they require the development of awareness that these components of experiential learning (1) exist, (2) are critical to lifelong learning and (3) take active practice to develop. On point to this, the mentors/teachers or facilitators must mentor students first to be aware of these elements of experiential learning and then to also allocate time within the curriculum to have the students use scaffolding in order to develop some confidence. The mentor must then also "let the students loose" to break the scaffolding away, allowing the learners to experiment with the content on their own but within an autonomy supporting environment. Essentially, the IIAF curriculum is designed to foster experimental learning by mentoring the awareness of learning, insets and cognition, awareness of meta-cognition, reflection and interleaving, and the awareness of learning process, learning cycles and active practice. Eventually the learners should perceive themselves through cognitive, social, and emotional appraisal to approach a crisis threshold and move towards either reflective imbalance and/or practical imbalance (Both are explained in Figure 6 below).
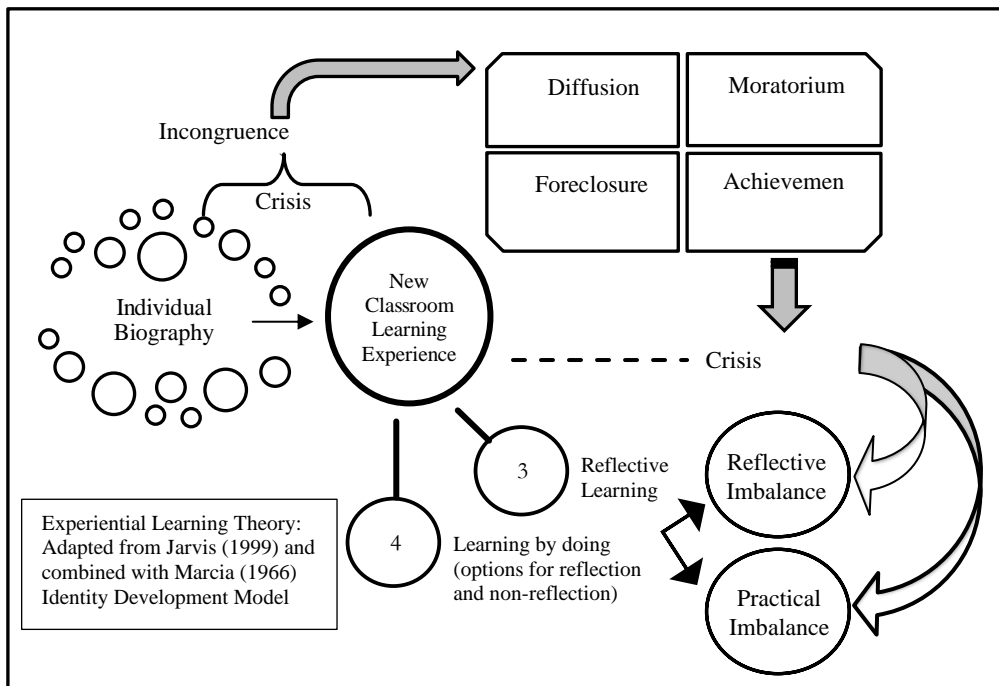

Figure 6. Experiential Learning Theory combined with an Identity Development Model(Adapted from Jarvis (1999) and Marcia (1966))

Figure 6 shows the concomitant mentorship and development of experiential learning and Identity development. As learners encounter disjuncture through experiential learning, they are also exposed to crisis through identity development. It is critical for the mentors/instructors/facilitators to encourage learners towards the crisis threshold. The "crisis

threshold" represents the development of the learner's awareness of their own self-regulating and identity development. Both allow the learners to take a self-initiated role within the new classroom experience without relying on a past identity if they are able to make this choice. The crisis threshold allows the learners to connect their new identity development and to explore that within routes 3 and 4 of experimental learning. In the IIAF curriculum, as with all components, routes 3 and 4 are mentored. Essentially, the learners are mentored on how to reflect by finding gaps in their learning through reflection. Initially, most learners reflect as part of the scaffolding because they are required to so by the instructor; however, with practice, the learners have the opportunity to develop self-initiated reflective balance or the ability to recognize when reflection is the appropriate strategy in any given experience. Along the same vein, learners are mentored on how to develop active practice in order to learn by doing. This is done either exclusive of or in conjunction with reflection. Once again, the IIAF curriculum mentors this with the ultimate goal being to develop the identity and learning ability to self-initiate a practical imbalance or a situation when the learner understands when and how to use active practice cycles. Marcia's (1966) four areas of identity formation are shown below in Figure 7.
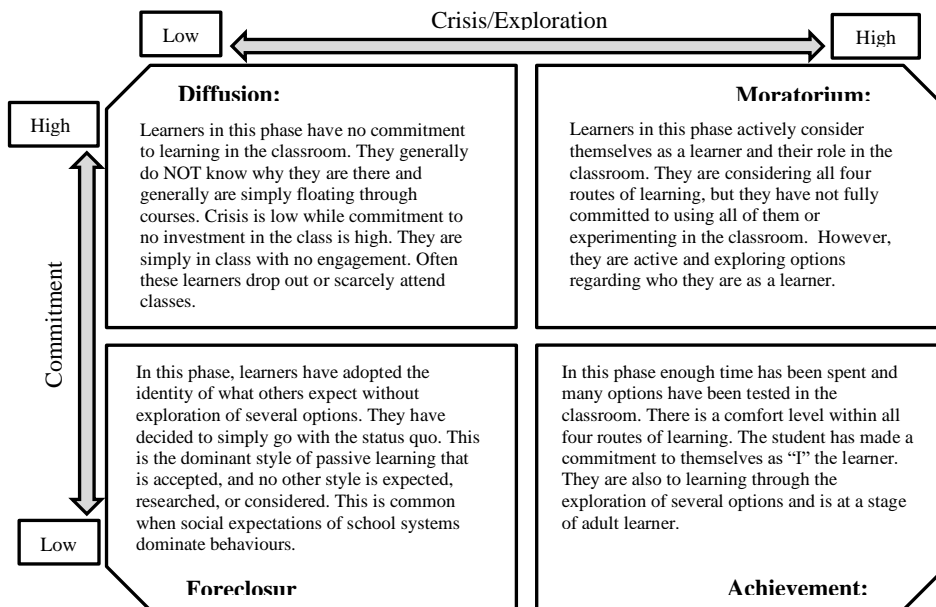

Figure 7.   Experiential Learning Theory combined with Identity development model (Adapted from Jarvis (1999) and Marcia (1966))

Looking at Figure 7, the four components of Marcia's base (1966) model of identity development, the four titles of the identity development categories/stages remain intact to avoid confusion and to also provide continuity. These titles remain as "Diffusion, Foreclosure,

Moratorium, and Achievement. However, the criteria of each stage (box) has been adapted to fit the parameters of structured IIAF classroom learning (Educational Environment). Each of the identity stages has identified specific characteristics that remain relatively true to the foundations of Marcia's model. The most salient change is the description of a learner or individual at each stage has been reduced in scale to represent how a learner defines their identity not in the larger social world but within a classroom. As classrooms are microcosms of the larger world, several elements are transferable which is one of the stated goals of the IIAF curriculum; to be able to transfer knowledge, skills, attitudes and values to other environments following successful mentorship, reflection, and active practice. That stated, this adaptation remains true to Marcia's descriptions of what the underlying characteristics of an individual at each stage would be: whether the individual was contemplating, exhibiting, or initiating their identity. In terms of the structure of the model, Marcia contended that the balance between commitment and crisis/exploration was critical to an adolescent's development of their identity. In the classroom, I would argue that those are also essential to a learner's success in terms of learner's ability to become effective lifelong self-regulating learners and develop active classroom identities that facilitates their own holistic learner development.

Overall, combining Jarvis' Experiential Learning Theory with Marcia's Identity development model offers learners cognitive and metacognitive mobility within a classroom environment.

For example, this synergy not only allows learners the opportunity to become aware of their own greater potential from the standpoint of learning knowledge, skills, and attitudes but also allows learners to concomitantly become more aware of their own needs, roles and objectives as an individual.

This is accomplished as both models require learners to develop an awareness of imbalance within their own knowledge, skills, attitudes and values while also stressing the need to consider and act through cognitive and physical exploration. Once under development within the IIAF, the learner can concomitantly make choices and fluctuate back and forth between identity stages and learning routes.

This directly serves the purposes of the IIAF curriculum as modeling Micro and Marco-cycles of learning. This synergy speaks to current research regarding learner perception, attention, memory, senses and emotion as they relate to cognitive psychology. The combination of both models together allows the learners to develop at their own pace in terms of learning skills and identity by validating their current biography and readiness levels.

The IIAF curriculum structure with this experiential learning and identity development at its core serves as the foundational components that structure a learner's holistic classroom identity within the IIAF.

A holistic classroom identity requires the learner to place "not the content as the subject but rather "I as the subject". While many students come to the classes thinking the former, it is the later that is an essential consideration.

This is ultimately connected to identity development since, regardless of content within the classroom, the learner is now focused on their own development of knowledge, skills, attitudes and values through their own development.

This development in the context of the IIAF curriculum is in the four "I" Orientation of Learner Development which will be explained below as the key compost to operationalizing the IIAF curriculum. Therefore, it is critical that instructors provide the foundation of experiential learning to the students and to push them towards the crisis (Exploration). It is key here to remember that crisis is defined in this context as exploration and is also used in conjunction with disjuncture.

Therefore, as a learner explores and develops the confidence to approach and experiment with the crisis threshold, they are also learning how to self-initiate disjuncture. Stated another way, this is the learner being mentored on how to identify all four routes of Jarvis' Experiential learning model and also providing learners with the "how" and "when" to operationalize each of these learning components.

The overall goal is to create self-reflective lifelong learners that take distinct advantage of approaching learning as the opportunity to configure and reconfigure their learning biographies. In this mindset, they are the learners and they are the subjects to be developed. In doing this, the instructor must also break normative learning cultural mechanisms from the classroom and create an environment that allows for choice. However, choice is not something that comes easily to Japanese students and as a result the teacher must be growth-oriented enough to allow students to approach the threshold for reflective and active learning. This discussion of learning, experience and identity is the perfect segue into the fundamental components of the IIAF curriculum.

4.1. Fundamental Components of IIAF

Figure 8 below shows the foundational components of the IIAF curriculum. First, the graphic on the left of figure 8 shows the importance of mindset, structure, environment, and perceived student learning outcomes of phase 1.

This graphic represents four critical structural realities for curriculum development and building a positive growth mindset within a new learning environment for self-regulating. These are: (1) the recognition that while course timelines (e.g. weeks, semesters) are linear, individual learning is not linear.

In fact, learning is cyclical with each individual progressing at his/her own pace, and engagement level; (2) each individual learner has a unique biography (knowledge, skills, attitudes, and values) that positions them at a specific individual readiness point for learning; (3) learners' PLP must be considered by both the instructor and the learners in order for the learners' current readiness point to be validated and operationalized; (4) Learner DID development must be identified and developed by the learner with support from the instructor, peers, and an autonomy supporting environment.
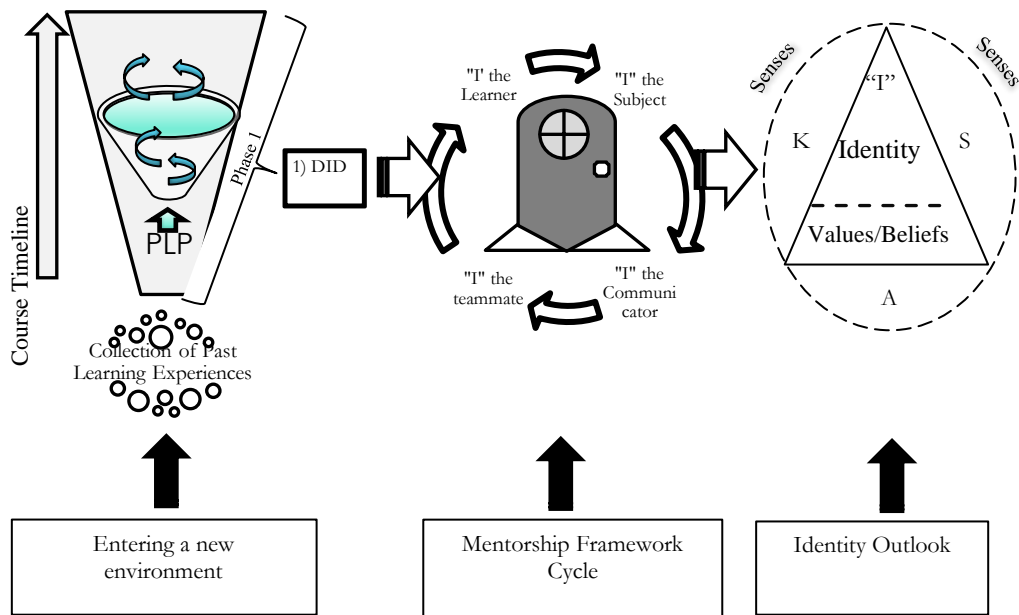

Figure 8. Base elements of Phase 1 of the IIAF model of curriculum development

In particular, the cyclical self-paced nature of learning is highlighted through phase 1. Graphic two in the centre of Figure 8 represents the initial framework that allows instructors and learners to address and work to achieve the four stated structural conditions from graphic one. Specifically, graphic two shows a mentored learning cycle that operationalizes the learner's current skill-set and initiates improvement of his/her perceived competence and efficacy as a self-regulating learner (Each stage of this learning cycle is explained below). This

process includes Time Released Micro-cycles of Learning (TRML) (Mentorship), including points of intervention where the instructor may intervene but also where students can learn to self-regulate or exit learning cycles of their own volition. Graphic three on the right of Figure 8 shows the learners' self-regulating identity outlook that should continue to develop as the learners develop integration, continuity and engagement regulation. Graphic three also represents the foundational values and beliefs that form the core of a differentiated identity and the supporting knowledge, skills and attitudes that link the individual to their environment. Taken as a whole, figure 8 simply represents the first phase of this curriculum, showing the complexity and importance of conceptualization, set-up, and implementation of self-regulating learning (This is expanded on in the implementation below).

Expanding of Figure 8, Figure 9 below shows the initial phase of an IIAF curriculum in greater detail. There are three main sections of phase one. Section one is demarcated in light grey. Students enter their new learning environment with their biography. Their biography is the culmination of all of their past knowledge, skills, attitudes and values (Box 1). This allows the instructor to be well aware of each individual learner's skillset and will allow them to adequately judge their readiness for the curriculum. The instructor intervenes into the student's biography by creating what Jarvis (1999) terms "disjuncture" or Marcia (1966) terms "crisis" (Box 2). This is the learner becoming aware of a difference between their own biography and the challenges at hand. This is the beginning of the first learning cycle. The instructor highlights that intervention with the stated outcome of: Students becoming aware of the necessity to self-initiate disjuncture in the future. It is also the initiation of a structured learning framework that will initially scaffold learning with cultural and normative learning cultures being breached with a new framework. This self-initiation would be the beginning of the development of a self-regulating learner (i.e., Challenger/risk-taker). Stated another way, the learner would search out for challenge to build their biography intentionally. This challenging is representative of what Marcia (1966) calls "crisis". Lastly, the IIAF arrow from the top, labelled IIAF, indicates the structured thinking process initiation point. Together, the IIAF combined with the awareness of "Disjuncture" and "Crisis" form the building blocks of a self-regulating learner through systematic mentorship.
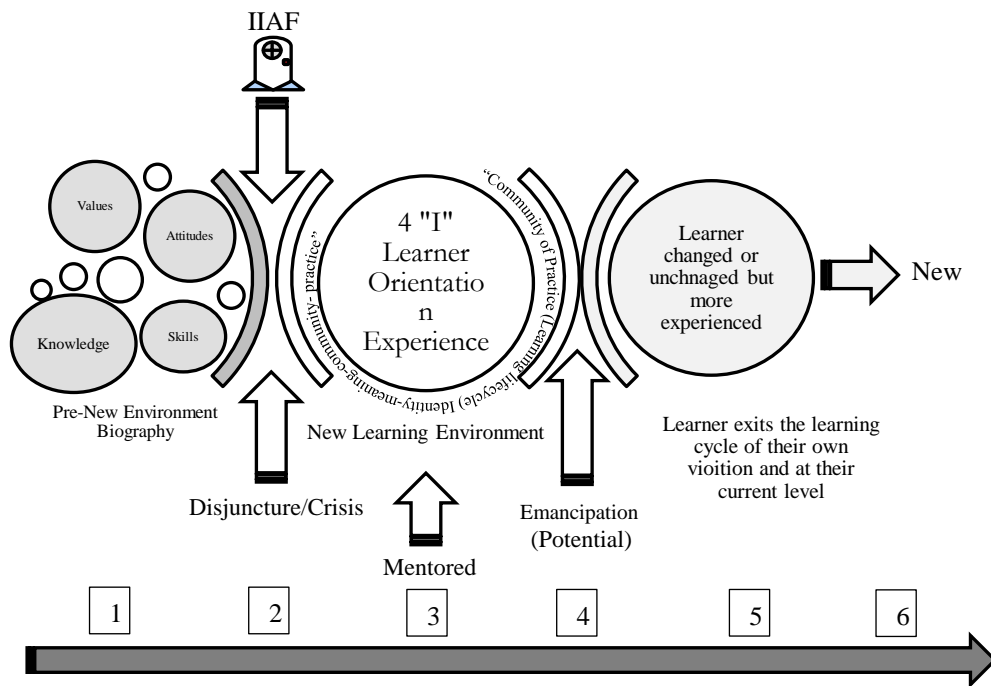
Figure 9. Initial Mentorship stage of an integrated internal action Framework

In addition, this represents an opportunity to cross-link potential growth and learner identity development. This is represented between the grey and white sections of Figure 9. This is the very first opportunity for the instructor to mentor the learner by creating awareness of a new framework of IIAF and a new community of practice environment. The course content is of reduced consequence initially because the importance of developing a growth oriented self-regulating identity is the initial goal. While this may seem counterintuitive to effective learning, taking the time to build this mindset within the students allows for deeper knowledge and skill development once the content is introduced. The phase in the centre is the mentored "I" Oriented Learner Development or IOLD structure. This includes the development of a cycles-based learning process through an immersive community environment as part of an integrated curriculum. Moving through the centre phase also includes TRML with specific individual, small group and whole class group mentorship tasks that once again provide opportunity for learners to move toward the potential of being an emancipated self-regulating learner (Box 4). Between the centre mentorship cycle and the changed or unchanged learner there is an opportunity for the learner to become emancipated from the confines of any learning environment and to embrace their own learning identity and process from that of the instructor. This is a critical moment that can potentially occur or not

occur based on the learner's own development. Last, the dark grey phase where the learner has either changed or remains unchanged but is overall more experienced and able to "bank" that experience into their biography (Box 5) and on towards a new experience (Box 6). Within the initial mentorship process stage, there are five significant areas of potential areas of awareness for students. These are:

1. The personal learning process (non-linear learning lifecycles)
2. Personal learning identity and the learner's role within this process
3. Validating the learner's Individual Level (Strengths and Weaknesses)
4. Communicative necessity (Academic Discussions)
5. Learning purpose

4.2. A Learning Lifecycle (The 4 "I" Orientation of Learner Development)

Developing a learner lifecycle that creates opportunities for each learner to build a robust, versatile, integrative self-regulating learning *requires* according to de Corte (2000) a synergy between four areas of development. These areas are: (1) a well-structured, fluid and accessible domain-specific knowledge base, (2) heuristic structures for critical analysis and problem solving, (3) metacognitive knowledge and self-regulating skills, and (4) positive mindset based on beliefs and emotions related to the context and content. Each of these should be familiar as they are all significant components of the IIAF curriculum described above. Each of these categories culminate together as components of mentorship in the 4 – I Orientation of Learner Development. During the first phase of the IIAF curriculum, as seen above in Figure 9, the 4 - I Orientation of Learner Development (IOLD) is a key component because it provides the operationalization structure. The initial structure in the classroom framework development is to focus on the individual and their PLP and DID. The development of a four-category learner orientation framework that offers the individual the opportunity to develop an inquiry-based identity focus that integrates classroom experiences from four specific identity vantage points: (1) "I" the learner (2) "I" the subject (3) "I" the communicator (4) "I" the teammate. Initially, these vantage points are mentored in a cycle (see A of Figure 10) but once the mentorship component is over, the cycle has the potential to be a self-paced engagement framework that is not necessarily cyclical (see B of Figure 10). This identity orientation serves as scaffolding to replace the breached SSM, a validation mechanism for each learner's readiness point, a foundation for new habits of mind and a transformational learning pillar. This IIAF provides learners with the opportunity to think, integrate, and act at

their own volition (Empowered). Also see table 4 for key questions for learners to consider while working through the "I" orientations of learning.
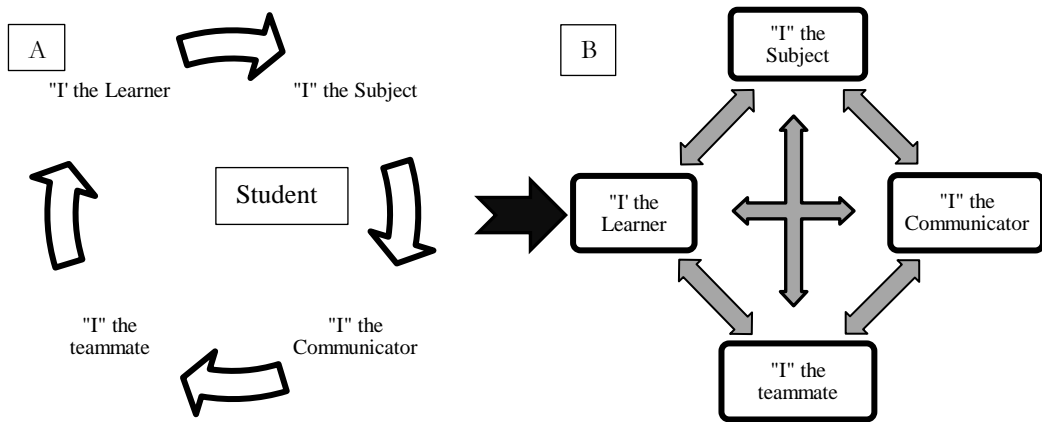

Figure 10. Initial Mentorship Stage of an Integrated Internal Action Framework (IIAF)

Connecting the four "I" Orientation learner development process to self-regulating metacognitive skills as presented in Figure 2 and also to reflective practice is critical. While this process is complex, Table 4 below shows some relevant metacognitive questions that learners should have at the forefront when entering a new learning environment. This reflective metacognitive monitoring is mentored in the IIAF curriculum.

Table 4. Key Questions for "I" Orientation Learner Development

I Orientation	Key Questions answered within each "I" Area through mentored learning
"I" the Learner	Why am I in this learning environment?
	What is my role in my own learning?
"I" the Subject	What is the current level of the knowledge and skills within my biography?
	What is the current level of my attitudes towards my own learning process?
	What do I expect to learn here in this classroom?
	What are my values towards my own learning process?
"I" the Communicator	How and why do I communicate?
	What is my current level of knowledge and skills regarding classroom communication?
	What is the value of reflective intra-communication and inter-personal communication?
"I" the Teammate	What is the value of others in my process of personal development?

During the first phase of the classroom (1 - 4 /5 weeks) the instructor mentors the learner to be aware of the IOLD and offers an experiential doorway to each stage. I postulate that this is the overall macro cycle of learning that is essential for learners to develop a classroom-based self-regulating mindset leading to the potential for a lifelong learning mindset and skillset that can transfer to other learning contexts. This promotes the learner being aware of an internal locus of control over their learning process and their role within that process. This "I" orientation is what allows learners the access to other elements of learning theory and process that they may not have an awareness of without this type of mindset. Further, this mindset allows leaners to actively proceed at their own pace while operating within the structure of the curriculum without falling behind other learners. Additionally, this mindset validates the individual learner's current level and allows learners the confidence to build a new Personal Learning Perspective (PLP) through relationships in five essential component areas for classroom learner development. These are (1) Themselves, (2) Classmates, (3) Content, (4) the Environment and (5) the Instructor. Through focussed experiential tasks and by developing an "I"-awareness, the learner can also develop a positive differentiated identity within the classroom. Norton (2013) considers identity as an ever-changing process that includes sites of struggle or identity milestones. Examples of an identity milestone could range from simply starting a conversation/discussion to challenging another student in a debate/argument. Identity milestones are distinctly personal and can be paced in a differentiated manner. As a learner's identity changes, he/she may continue to need further interventions, but for those whose pace is faster, they can begin to create identity milestones on their own. In support of this, Molden and Dweck (2006) show how "different ways of representing the self and others interact with general principles of information processing, motivation, and self-regulation" (p. 5).

5. Implementation

Once the foundations for the IIAF have been set, it is critical to consider the implementation of the IIAF. Implementation of an IIAF learning cycles curriculum requires the instructor and the curriculum designer to meticulously plan each learner touchpoint or student contact by first considering the environment. In the final section of this article, I will highlight (1) the curricular environment set up, (2), and the first holistic cycle that encourages effective growth mindset through experiential learning and identity development. Each of these are essential implementation components that serve the lifelong learning needs of each and every student within the classroom. Implemented correctly, the instructor will guide not only the class but also every learner will have the opportunity to become a self-regulating lifelong learner should they choose to transfer their IIAF knowledge, skills, attitudes and

values to other learning environments. From the theoretical components above: Integration, Continuity, and Engagement (ICE) towards lifelong learning biography development are central components of the implementation of the IIAF model.

Many curricula are based around a single curricular model that guides the implementation; however, the IIAF curriculum is based around the synergy of four main curricular implementation models that allow the foundations described above to impact learners. These are all implemented concomitantly and require an experienced HE instructor to implement. Figure 11 below shows the four main implementation models. First is immersion, where all curriculum content is filtered through five distinct lenses. There are five areas of immersion for this curriculum that were used in its current context. These are language, process of learning, experiential based learning, whole self-appraisal and mentorship, and senses. This means that the instructor will set parameters that immerse the students within each of these areas and mentor the students on how to function within this immersion environment. These immersion areas expose each learner to their individual process of learning where the students develop a trust in their senses, embrace their current level of biography and have the opportunity to see learning as a process. Taken in the aggregate, these five areas of immersion serve to create a Community of Practice (CoP) (Wenger, 2000; Wenger, McDermott, & Snyder, 2002) and to create the safe environment for the 4 "I" orientation of learning.

Secondly, a threaded model is used to create continuity within the classroom cycles of learning by having active practice of learning cycles link to one another on a task to task basis while also extending to a class to class basis. Once again it is tantamount to note that as shown above in Figures 3, 8 and 9 that these learning cycles will be mentored in phase one of the curriculum and based upon the IIAF models will provide learners with the opportunity to explore mentorship of the cycles. As seen in curriculum implementation model two, there are five cycles of learning that are introduced in the first phase of the IIAF curriculum (See Figure 12). While there are others that are also included, these five are the first cycles to be mentored in order to provide the learners with experience in (1) initiating their identity, (2) developing a safe sense of community, (3) developing effective methods of discussion, (4) effective reflective practice within a learning environment, and (5) experiencing mentorship in effective peer feedback combined with coaching and also instructor formative feedback. The first two implementation models fit together in a complimentary way and also work towards several of the foundations within the theoretical underpinnings of the IIAF curriculum.

Thirdly, is the integration model. The learners have the opportunity to receive mentorship in the area of individual integration of knowledge, skills, attitudes and values within their own learning biography. The learners are given classroom time to explore each of

the 4 "I" Orientation of learning positions as they are asked to integrate content together while also being asked to integrate new knowledge, skills, attitudes into their biographies. This provides opportunities for changes in values and adaptations based on disjuncture and crisis. Learners are encouraged to update their PLP and DID during these opportunities. This is a critical area of the curriculum, as it encourages the learners to develop a growth mindset through the content and the experiences in the class within the threaded cycles that are presented in area two within the immersion areas of the classroom.

The fourth and final implementation area is the social networking model (not solely digital). Learners are mentored how to communicate within the classroom initially within a discussion cycle which extends into cycles of argument, presentation and beyond. This offers the learners the opportunity to become effective in communicating in academic discussions and to effectively learn how to use the Zone of Proximal Development (ZPD) (Vygotsky, 1978). Very quickly, ZPD is essentially the use of an individual's biography restricted to and stretched beyond the limits of its knowledge and skills as it is combined with another learner's biography. Learners work together to create shared meaning, develop new knowledge and skills, questions each other's understanding and to also validate each other's strengths and weaknesses. Learners work together in the social networking model in order to expand understanding and to go beyond where their own limits may have ended. The only issue that I have with implementing ZPD is that many teachers/instructors hold that simply putting learners in pairs or groups is sufficient to produce ZPD or an enlarged learning potential. I would suggest that mentoring learners how to work effectively in groups is critical, so that learners work together effectively to self-initiate ZPD rather than waiting for it to spontaneously happen. Once again this shows the engagement component of the IIAF and this curriculum implementation area is critical to the social part of nature and also represents the social constructivist side of experiential learning.

As explained above and shown below in Figure 11, there are two main areas of the implementation of the IIAF curriculum that are classroom creation focussed. These are the immersion and the threaded components. They serve as input for the learners and the CoP environment and are marked with input arrows. The final two areas serve two components of learning: (1) the internal cognitive and metacognitive areas of each learner combined with (2) their experiences within the social world. Essentially, curriculum areas three and four provide opportunities to have engagement with learning, content and self-appraisal. Engagement is the final aspect of the ICE principles that I purport are critical to any curriculum, especially, the IIAF curriculum. Engagement is particularly critical because it endeavours to create solid

habits of mind and to build lifelong learning biographies. Looking in the centre of Figure 11 is a circle that represents the CoP classroom.

Within that circle, the triangles represent a learning individual with Knowledge (K), Skills (S), and Attitudes (A) included and with the "I" orientation and values of the learners in the centre of each triangle.

Each learner is provided the opportunity, through classroom tasks, to integrate KSA into their biography while also either concomitantly or separately engaging in the social world with peers and instructors. Both area three and four are the true driving force behind the IIAF curriculum.

While the immersion and the threading serve to organize, map, and scaffold information, the integration and the social networking provide opportunities for learners to develop the 4 "I" areas of the curricular foundations through active practice. These foundations are: (1) "I" the learner; (2) "I" the subject; (3) "I" the communicator; and (4) "I" the teammate.

In order for this process to take place the instructor must be flexible in learning mindset but also must have clear outcomes that provide the ability for learners to cyclically work towards a comprehensive lifelong learning skillset.

The actual tasks that each learner, pair or group would perform will be done in a subsequent article about the operationalizing of the IIAF curriculum with data showing learner success based on learning level, pace of learning, and commitment to learning. In the final section of this article, I will discuss the first learning cycle and engagement.
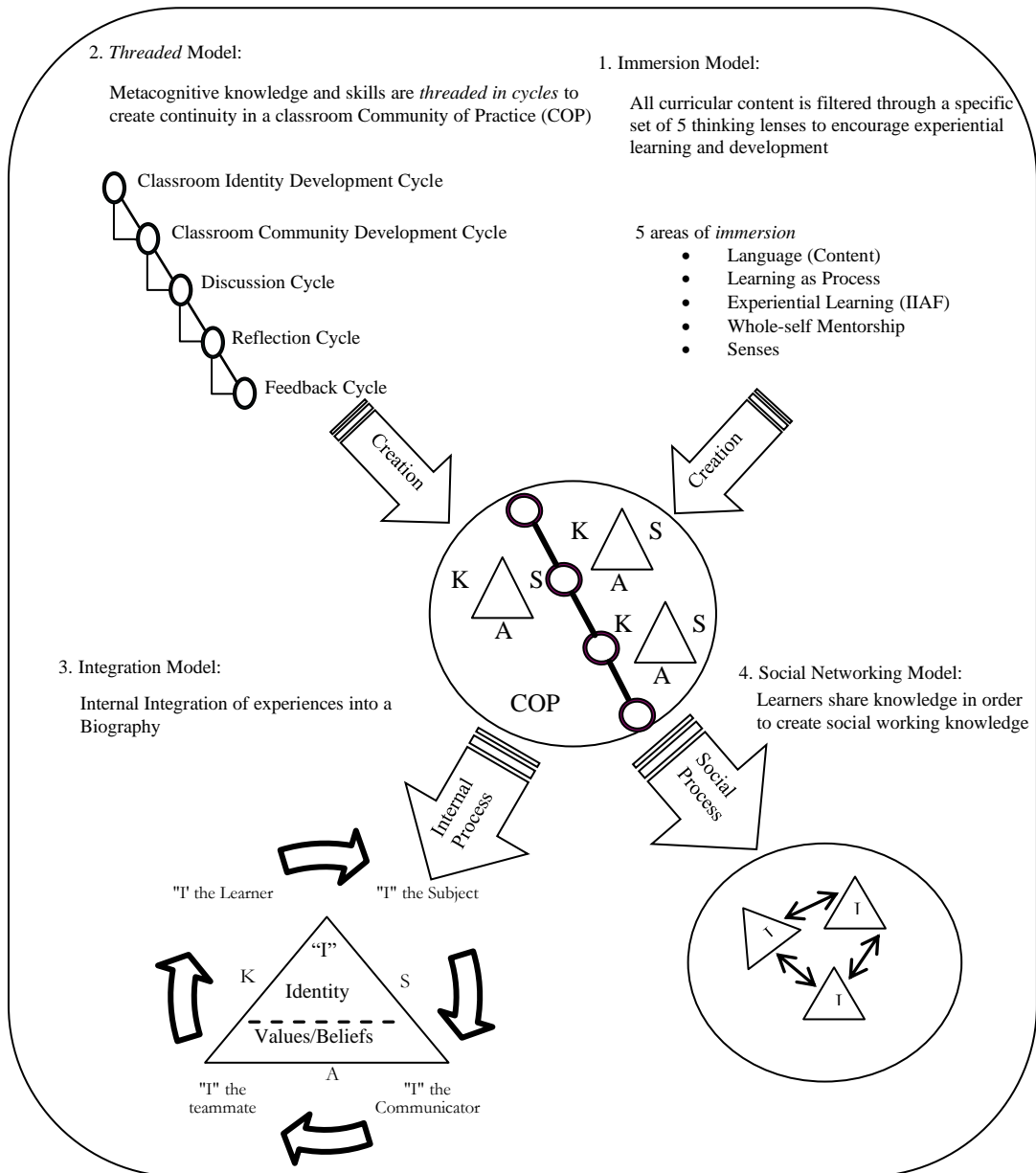
Figure 11. Multi-modal curriculum development of structured learning frameworks for integration, continuity engagement towards PLP and DID in an IIAF Classroom

6. The First Cycle and Engagement

Considering Figure 12, learners come into new situations such as the IIAF curriculum with their biography. Initially learners often tend to show their values or what is important to them even without being conscious of it. They do this by representing their identity through

their attitudinal approach to the classroom. Once the class begins, the IIAF instructor will request learners to complete simple tasks that involve prior knowledge or skills. Whether consciously or unconsciously, learners tend to show their values to the group through their attitudes, skills, and then knowledge. Essentially, the learners are projecting their identity. In the IIAF, these first cycles are cycles of self and are often control-based cycles of learning. The learner's attitudes towards learning tend to reflect the dominant thinking and Set Social Mechanism (SSM) of the learners prior normative learning culture. In figure 11, the first cycle in the continuity model of curriculum implementation was the identity development cycle. If a person approaches a cycle of self from a "taken for granted manor" then the learning becomes predictable, boring, non-challenging, non-engaging, and ultimately unmotivating. However, if through this first cycle "disjuncture" can be simulated through well designed tasks that (1) start with new knowledge, and (2) require the learners to actively practice new skills, it will open the doorway to a changed classroom identity.

New knowledge combined with new actively practiced skills offer the opportunity to display a new attitude. This is the first choice for the learner to adopt a new attitude or to display a reinforced prior attitude. The key here is that this initial cycle allows the learner the opportunity to change or to remain unchanged. In the IIAF curriculum, this initial cycle process is not graded as it is meant to evaluate the learner's ability to enter the experiential learning cycle. As a result, there is opportunity for each learner to work at their own level without fear of external assessment and to focus in on the task itself. In addition, it allows the instructor to get to know the learner's attitudes and foreshadow their readiness point for the curriculum in subsequent classes. Overall, when introduced in the IIAF curriculum, there is opportunity for learners to become self- aware of what they know, what they can do, and what they feel about the new learning knowledge and skills. In addition, the IIAF creates opportunities for a self-appraisal based on a perceived internal locus of control and starts the learners down the road towards new value development. This means that learners are also beginning the process of identity building within the new class or community environment and moving towards metacognition.

Further to this point, the initial cycle validates the learner's biography and informs each learner to engage at their current level, pace, and with their own level of commitment. These cycles are dictated by student choices and is the beginning of the mentorship process for internal integrated action frameworks. Asking students to institute a self-appraisal begins with these cycles. This first cycle attempts to open up a flexible learning mindset by initiating situated cognition. This process includes (1) initial scaffolding, (2) mentorship cycles, (3) potential awareness through self-appraisal, (4) a removal of scaffolding, (5) active practice

tasks followed by (6) potential engagement by the learner. The basics of this process can be seen in Figure 12 which shows the first cycle as one that attempts to introduce IIAF and also to allow learners to explore new habits of mind through PLP and DID development.
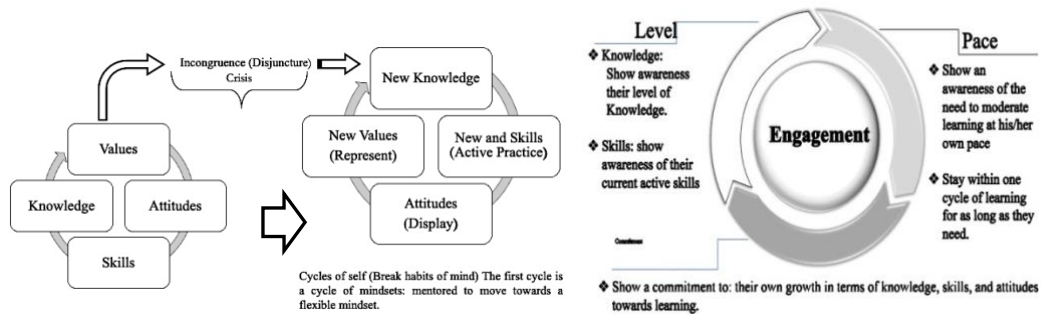

Figure 12. The IIAF First Learning Cycle towards Engagement

7. Conclusion

In the current 21st century, Higher Education (HE) classroom faculty are continuously challenged to meet the lifelong learning needs of current HE learners. This article offers a curriculum structure (IIAF) that operationalizes learning frameworks by applying integration, continuity and engagement with cycles of learning. These cycles and the IIAF structure focus on one holistic self-regulating learning cycle that leads to specialized micro-cycles of learning. This curriculum structure that begins with instructor cognition and ends in learner empowerment also strives to structure frames of mind and should serve as a launching pad to cognitive and metacognitive mobility. The IIAF curriculum firmly places each learner's, PLP, and DID at the forefront of learning. IIAF provide doorways for learners to work at their own level, make mistakes, experiment with different strategies and ultimately become autonomous through its 4 "I" orientation of learner development. This process is grounded in the synergy between experiential learning and identity development. For IIAF to function, the learner must also be willing and able to recognize that they are entitled to free themselves from the IIAF scaffolding and to grow organically. This is accomplished in this curriculum through mentorship and active practice cycles that should serve as a launching pad to cognitive and meta-cognitive mobility for learners.

This article has revealed only phase one of a three phase curriculum and there is certainly a need to continue to research and improve this curriculum structure. Both phases two and three will be revealed in a subsequent article with qualitative data that demonstrates the effectiveness of the IIAF curriculum implemented with a class of Japanese university students.

Acknowledgements

References

Bandura, A. (1977). *Social Learning Theory*. New York: General Learning Press.

Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs, NJ: Prentice-Hall.

Boud, D., Keogh, R., & Walker, D. (1985). (Eds.). *Reflection: Turning experience into learning.* New York, NY: Routledge.

Bowen, J. A., & Watson, C. E. (2017). *Teaching Naked Techniques: A practical guide to designing better classes*. San Francisco, CA: Jossey-Bass.

Corkhill, A. J. (1996). Individual Differences in Metacognition. *Learning and Individual Differences, 8*(4), 275-279. https://doi.org/10.1016/S1041-6080(96)90019-9

De Corte, E. (2000). High-Powered Learning Communities: A European Perspective. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.568.5082&rep=rep1&type=pdf

Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research.* New York, NY: University of Rochester Press

Deci, E. L., & Ryan, R. M. (1990). A motivational approach to Self: Integration in personality. *Perspectives on motivation: Nebraska Symposium on Motivation, 38*, 238-288.

Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process.* Boston, MA: D.C. Heath & Co Publishers.

Duckworth, A. (2016). *Grit: The Power and Passion of Perseverance*. New York, NY: Scribner.

Dweck, C. S. (1999). *Mindset: The New psychology of Success, how we can learn to fulfill our potential.* New York, NY: Penguin.

Egan, K. (2007). Imagination, Past and Present. In Egan, K, Stout, M. & Takaya, K. (Eds.), *Teaching and Learning Outside the Box* (pp. 3-20). New York, NY: Teacher's College Press.

Engestrom, Y. (2014). *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research.* Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139814744

Flavell, J. H. (1979). Metacognition and Cognitive Monitoring: A new area of Psychological inquiry. *American Psychology, 34*(10), 906-911. https://doi.org/10.1037/0003-066X.34.10.906

Freire, P. (1970). *Pedagogy of the oppressed*. New York, NY: Continuum.

Gobet, F., Lane, P.C., Croker, S., Cheng, P. C., Jones, G. Oliver, I., & Pine, J. M. (2001). Chunking Mechanisms in Human Learning. *Trends in Cognitive Science, 5*(6), 236-243. https://doi.org/10.1016/S1364-6613(00)01662-4

Hook, C., & Farah, M. (2013). Neuroscience for educators: What are they seeking, and what are they finding, *Neuroethics, 6,* 331-341. https://doi.org/10.1007/s12152-012-9159-3

Irvin, J. L., Meltzer, J., & Dukes, M. (2007). *Taking action on Adolescent Literacy.* Alexandria, VA: ASCD.

Jarvis, P. (1995). *Adult & continuing education: Theory and practice*. London, UK. Routledge.

Jarvis, P. (1999). *The practitioner-researcher*. San Francisco, CA: Jossey Bass.

Jarvis, P. (Ed.). (2009). *The Routledge international handbook of lifelong learning*. Abingdon: Routledge. https://doi.org/10.4324/9780203870549

Jarvis, P. (2010). *Adult education and lifelong learning: Theory and practice* (4th ed.). Abingdon: Routledge.

Kolb, D. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Upper Saddle, NJ: Pearson.

Klaxton, G. (1997). *Hare Brain Tortoise Mind: How intelligence increases when you think less.* New York, NY: HarperCollins.

Longworth, N. (2006). *Learning Cities, Learning Regions, Learning Communities.* London, UK: Routledge. https://doi.org/10.4324/9780203967454

Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of Adolescent Psychology* (pp. 159-187). New York, NY: John Wiley and Sons.

Marcia, J. E. (1966). Development and validation of ego-identity status, *Journal of personal and social psychology, 3*(5) 551-558. https://doi.org/10.1037/h0023281

Mack, A., & Rock, I. (1999). *Inattentional Blindness: An Overview*. Cambridge, MA: MIT Pres. https://doi.org/10.7551/mitpress/3707.001.0001

Mackenzie, S. H., Son, J. S., & Hollenhorst, S. (2014). Unifying Psychology and Experiential Education: Toward an integrated understanding of why it works. *Journal of Experiential Education, 37*(1), 75-88. https://doi.org/10.1177/1053825913518894

Mentkowski, M. (2000). *Learning that lasts: Integrating learning, development and performance in college and beyond,* San Francisco, CA: Jossey-Bass.

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult & Continuing Education, 74*, 5-12. https://doi.org/10.1002/ace.7401

Molden, D. C., & Dweck, C. S. (2006). Finding "meaning" in psychology, *American Psychologist, 61*(3), 192-203. https://doi.org/10.1037/0003-066X.61.3.192

Moon, J. (1999). *A handbook of reflective and experimental learning*. London: Routledge.

Pintrich, P.R. (2002). The role of metacognitive knowledge in learning, teaching and assessing. *Theory into Practice, 41*(4), 219-225. https://doi.org/10.1207/s15430421tip4104_3

Rogers, J. (2007). *Adults Learning*. New York, NY: Open University Press.

Rogers, C. R. (1961). *On becoming a person: a therapist's view of psychotherapy*. Boston, MA: Houghton.

Schön, D. A. (1983). *The Reflective practitioner: How Professionals think in action*. London: Temple Smith.

Stornes, T., Bru, E., & Idsoe, T. (2008). Classroom Social Structure and Motivational Climates: On the influence of teachers' involvement, teachers' autonomy support and regulation in relation to motivational climates in school classrooms, *Scandinavian Journal of Educational Research, 52*(3), 315-329. https://doi.org/10.1080/00313830802025124

Tanner, K. D. (2012). Promoting Student Metacognition, *CBE-Life Sciences Education, 11,* 113-120. https://doi.org/10.1187/cbe.12-03-0033

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that Promote Resilience: When students believe that personal characteristics can be developed, *Educational Psychologist, 47*(4), 302-314. https://doi.org/10.1080/00461520.2012.722805

Yorke, M., & Knight, P. (2004). Self-theories: some implications for teaching and learning in higher education, *Studies in Higher Education, 29*(1), 25-37. https://doi.org/10.1080/1234567032000164859

Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511803932

Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice.* Boston, MA: Harvard Business School Press.

Winne, P. H. (1996). A metacognitive view of individual differences in self-regulated learning. *Learning and Individual Differences, 8*(4), 327-353. https://doi.org/10.1016/S1041-6080(96)90022-9

Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In D. J. Hacker & J. Dunlosky (Eds.), *Metacognition in educational theory and practice, The educational psychology series*. Mahwah, NJ: Erlbaum.What is Experiential Education (2018, October 25). Retrieved from https://www.aee.org/what-is-ee