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Strategies to ensure Deep Learning occurs in MBA Information Literacy workshops

**Abstract:**

This paper reviews various methodologies to ensure engagement by MBA students. Analyses several theoretical models and identifies the most appropriate one for this purpose. Evaluates and expands upon recent innovations developed at other business schools. Presents a case study of inventive teaching techniques employed in workshops by this author. Which focus on developing both a multifunctional and multidisciplinary approach to undertaking research. Assesses the integral role imagination and reflection play throughout the process. Explores gaming as a possible option for future instructive sessions with this group.

**Keywords:**

Strategies, Deep Learning, MBAs, Information Literacy, Creativity, Teaching, Critical Thinking.

**Introduction:**

The problem explored in this paper is selecting strategies to ensure that deep learning occurs in Information Literacy (IL) workshops. In my own experience a class which is not engaged from the beginning becomes distracted and disengages immediately. This situation can be avoided by recognising group learning behaviour and utilising an appropriate strategy which appeals to their multiple intelligences. Research conducted at the University of Michigan confirms that customised sessions for each individual group are more effective than a blanket approach(Dunaway & Orblych, 2011). One of my strategies is to conduct a pre -assessment exercise to ascertain the skills level and prior learning among a group. This allows me to tailor the session to their individual specific needs. At the beginning of each workshop I ask the class to state their aims and objectives. These are subsequently written down on a whiteboard and reviewed throughout the lesson as each task is completed. The group feel empowered as I address each one of their concerns and research priorities. Students approach learning in many ways and it is impossible to satisfy all their requirements. I try to fulfil the majority of them, but I am constrained by time and resources. In terms of available pedagogical frameworks the most relevant in this context are Blooms (1956) taxonomy of learning and Constructivism. Several studies (Cooperstein & Kocevar-Weidinger, 2004) (Nentl & Zietlow, 2008) recognise reflection as an integral component of both. The student engages in deep learning by processing their experience of undertaking a task and adopting a different approach to it. Using initiatives like creativity, and collaborative learning, ensures a session is practical rather than a passive instructional one (Detlor, Julien, Willson, Serenko, & Lavallee, 2011). The skills being taught are lifelong learning which students can develop and apply to both an academic and work environment. Emphasising the relevance of learning outcomes ensures the group become sufficiently motivated and engaged resulting in deep

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learning. I will now explore this concept and its origins in more detail. Discuss relevant aspects of the literature, encompassing learning frameworks, collaborative learning, MBA teaching methodologies and creativity. Assess recent IL initiatives and innovations conducted at other business schools. Finally I present a case study exploring creativity in my own workshops and the lessons I learned from this experience.

**Deep Learning:**

In 1976 two researchers Ferenc Marton and Roger Saljo at Gothenburg University, coined the term " Deep learning" to explain how students engaged with and interpreted meaning from texts. Today it is discussed in a broader educational context and synonymous with adopting a holistic approach to a topic to gain a better understanding. Its origins are rooted in Cognitive psychology and evolved from a deep and surface processing model developed by Craik and Lockhart (1972). This model focused on how information is encoded by the brain at various levels dependent on the strength of memory available. Constructivism involves the application of these processes to the external environment, by connecting new knowledge with previous held concepts to comprehend the learning experience.

Subsequent research conducted by Entwistle (1983) and Biggs (1987) revealed that outcomes are determined by the type of approach a student adopts towards learning.

Consequently individuals who engage with his/her subject on a deeper level, have a better understanding of it, resulting in the achievement of higher quality outcomes. It's a more enjoyable experience compared to surface learning which involves not engaging with the topic at any significant level, resulting in poorer outcomes.(Ramsden 2003)

The purpose of my IL workshops is to create an environment conducive to deep learning. I need to discuss group learning to some extent as it impacts on deep learning. Another strategy to ensure MBAs are engaged with the learning material is to have them work collaboratively as the adult learning theorists Knowles (1980) and Mezirow (1991) recognised (Jordan, Carlile, & Stack, 2008). This ensures more ideas are generated among the group as each individual brings their own perspective to an issue. However the students still need to be guided and this is facilitated by encouraging reflection and discussion. Practical based discovery tasks ensure the group takes responsibility for its own learning and engage deeply. It is important to recognise that students will normally both adopt a surface and deep approach to learning as Nicol (1997) did (Ramsden 2003). Structuring the session so the students can relate the learning material to their own individual context is one way of ensuring that the deep rather than surface will prevail. The group become more focused, by recognising the relevance of the material to their own individual needs. The objectives of my workshops are to develop a student's ability to think critically, reflect, and evaluate information by applying it to their own particular research context. A learning approach similar to mindful or mindfulness devised by Fornaciari and Loffredo Roca (1999) consisting of six stages which are completed cohesively and consecutively:

1. Evaluate, information,

2. Source credibility ,

3. Question the quality of the source.

4. Interpret the information

5. Critique the information

6. Analyse and synthesise the data.

Again these reflect the attributes McMahon advocated which MBA students should possess on graduation. Writing in 1992 McMahon advocated that Business Schools design their courses in terms of developing a set of graduate attributes, which incorporated: content knowledge, self-knowledge, diagnostic skills, application skills, team work skills and self-control. (Barker, 2005)

**Selecting the right Learning Framework:**

Essentially Deep learning is concerned with trying to ensure that students thoroughly engage with their subject. This can be achieved by using creativity as a strategy to stimulate their interest. Metacognition according to Runco & Nemiro (1993) consists of the students becoming more motivated when they choose their own task. They feel empowered and the task becomes more meaningful. To ensure IL workshops are conducive to deep learning; it's imperative to select the appropriate model to develop critical thinking skills.

The first of these Blooms (1956) Taxonomy of Learning a hierarchical structure which operates on the principle the student acquires knowledge, understands it, applies, analyses, synthesises and finally evaluates it. This model was later revised by Krathwohl (2001) whereby the final two stages were reversed. Applying this in the context of critical thinking which occurs at the higher stages of the learning process becomes also iterative and dynamic. (Nentl & Zietlow, 2008). Consequently information can only become knowledge when it has been evaluated and synthesised by students applying their own analytical skills. This study was conducted among undergraduates and how they researched and used secondary sources (databases) for analysing and processing information. The approach they used was mindfulness originally devised by Fornaciari and Loffredo Roca (1999) as a strategy for evaluating online information in terms of decision making and online goals.

The second model Constructivism encompasses many forms, but the most appropriate framework in this context is Transformative learning.  Composed of two subcategories which are Structure of the Observed Learning Outcomes taxonomy (SOLO) developed by John Biggs (1982), and Ideas Connections and Extensions (ICE).  SOLO operates on the principle that learning outcomes are developed in tandem with the course objectives and aligned with assessment.  Biggs derived his model from the writings of Jean Piaget who claimed learning was both a cyclical and hierarchical process. (Young, 2008).  The purpose of developing the ICE model is to make cognitive transformative theories of learning more accessible, and these are non-linear and non -hierarchical.  This model is more appropriate to describe how MBA students learn.  They are introduced to a concept and applying their own knowledge and experience make a connection and reflecting upon it, create an extension by generating new knowledge.  The idea of it being a biological process as the information evolves into knowledge by the student processing it; is probably more applicable compared to Bigg's SOLO model which is aligned with learning outcomes and assessment.  According to Lev Vygotsky social interaction is a key component of the constructivist approach to learning, because it allows students discuss as a group their understanding and verification of the new knowledge. (Cooperstein & Kocevar-Weidinger, 2004).

Consequently the librarian's role in these workshops is to act as a facilitator and create a collaborative learning environment by introducing various team based tasks.

**Benefits of Collaborative Learning:**

In relation to group learning Nichol (1997) recognised the role of the teacher was to encourage dialogue and interaction among the group by being a facilitator providing support and mutual respect when required.(Ramsden, 2003).  Lev Vygotsky defined this as the Zone of Proximal Development (ZPD) whereby the supports provided by the librarian, or peers motivate the student sufficiently to complete his/her learning task.  Once they feel confident enough to undertake this task independently, the scaffolding structure is gradually removed, as no longer required.  Students find this guided instruction beneficial but apply their own experiential knowledge when undertaking their research.  Bruner (1960) defined learning as being goal directed and driven by curiosity.(Jordan et al, 2008).  Once a student becomes curious they immerse themselves in the topic which results in interacting at a deeper level.  They become self-motivated and seek to quench their thirst for further knowledge.

  In the MBA context the preferred method of teaching has been through cases, as it allows students integrate their own experience and prior knowledge to the discussion.  The challenge for the librarian is to apply this form of teaching to the IL context as it ensures the group interact with each other and engage with the learning material on a deeper level.  I cannot use cases as such, but can encourage the group to discuss their experiences of participating in collaborative based discovery tasks.  Another aspect of group learning according to Nicol (1997) is that of shared goals which results in a supportive atmosphere for learning.  Working in groups individuals develop greater awareness about themselves and others which allows them work more efficiently either independently or collaboratively.(Jaques, 2000, p 83)

If the group feel they are empowered and the librarian acts as a facilitator by interacting with each team to assess their progress. The workshop becomes more productive as students motivate each other.

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Peers can be more critical of their colleagues and students learn from their mistakes. Reflection is a core component of the experiential learning process as developed by Kolb (1984) whereby students learn by making mistakes and should not be penalised for it. Instead they should be encouraged to analyse what went wrong before and discuss how they might have approached it differently. As the corporate landscape evolves the number one skill valued by employers today is the ability to identify rather than just solve problems. (Rose, 2013) An individual capable of recognising potential problems is already half way there to solving them. Consequently in a learning environment the importance of problem finding skills being as important as problem solving should be emphasised to students by the instructor.(Fasko, 2001)

**Information Literacy in a Group Learning Environment:**

It is beyond the remit of this paper to evaluate each of the main internationally recognised IL standards and frameworks ACRL, SCONUL, ANZIIL see (JOHNSTON, 2003) for an extensive discussion. Consideration must be given as to how these fit with Howard Gardner's (1991) Theory of Multiple intelligences. Traditionally there are two forms of intelligences dominating Higher Education teaching which are Logical mathematical and Linguistic. The problem is that not all students learn this way and for deep learning to happen within a group the other intelligences must be facilitated.

Spatial,

Bodily -Kinaesthetic

Musical

Interpersonal

Intrapersonal

Naturalistic

An awareness by the teacher of these other intelligences is important to avoid designing the session around their own one, as this will not provide clarity of learning to the group.(Jaques, 2000). It may not always be possible to facilitate all of them. One solution is to satisfy as many as possible, by developing appropriate tasks.

The purpose of IL outcomes is to ensure that students become independent self- directed learners. These have to be synchronised with the outcomes of the course or curricula, otherwise students perceive them as having no real value and consider them irrelevant to their studies. (Lindauer & Woodard, 2004). Several commentators (McInnis Bowers et al., 2009) (Strittmatter, 2012) acknowledge a change in student behaviour following a session as they become more confident in using print and online resources. Furthermore students upon reflection recognise the value of scheduling individual consultations with their librarian, who can probe their research topic and recommend appropriate sources. These newly acquired skills aid them in understanding the material better and become integral to their academic workflow making the process smoother.

**Teaching Methodologies:**

 MBA classes are composed of individuals from various backgrounds and disciplines. Consequently Business Schools have always considered their student's prior knowledge and experience when designing their programmes. These highly motivated students expect to work hard for the duration of their programme. The case study approach is a preferred

teaching methodology for facilitating Socratic seminars, which emphasises the importance of peer discussion. Participants review a text from various perspectives using their prior learning and by group consensus agree a solution. Applying this technique to the case study approach the group discusses a problem from various perspectives, and recommends solutions based on their own experiences. However for these sessions to be effective they should be structured, but still flexible enough to allow a logical flow of ideas. (Barker, 2005). Another opinion is that it's not a very effective teaching format, because students fail to recognise that cases are inter connected and treat them independently of each other. A core skill of being a leader is consistency in decision making during crucial situations by paying attention to the detail.(Podolny, 2009) A recent example is the 2007 Global Financial Crisis and one of the contributing factors was a failure by senior executives to critically analyse data for themselves, resulting in bad strategy. This message is not clearly communicated to students by them studying the case method approach.

**Review of Information Literary Initiatives:**

As discussed previously MBAs students have prior knowledge and experience which is integral to their learning process.

This section reviews and assesses the following ideas discussed by Hesseldenz (2012) for integrating IL into evolving MBA programmes.

1. Online foundational level programmes,

2. Experiential learning ,

3. Library as laboratory,

4. Research ethics

The first of these is to run an online foundational level programme for all business graduates due to their varying skills level and prior learning experiences.  These workshops conducted by librarians were developed in conjunction with Zarb Business School faculty at Hofstra University. Their objective was to reach all students even those unable to physically attend an orientation session.  As discussed previously students are not always aware of the library resources at their disposal. This programme delivered through Blackboard consists of a series of power point slide tutorials and a short assignment ensures greater equality and confidence. The advantage to students is they can learn asynchronously at a time which best suits them. These programmes were found to be highly effective and the librarian later builds on the student's knowledge with subsequent programmes.

Another option is to produce a series of short podcasts based on key components of the programme. These would provide students with the opportunity to reflect on what they have learned, by listening back to them.  Podcasting has proven to be an effective learning technique particularly in an online environment, as the student concentrates on the audio and is not distracted by visuals. (Salmon & Edirisingha, 2008)


Experiential learning the second of these initiatives involves the librarian being embedded within an MBA module and cooperates with the group throughout the entire process. This approach was adopted by the University of Michigan's Multi-disciplinary Action Programme (MAP) the focus here is for the group to gain practical industrial experience by collaborating on real projects or a business problem. The librarian is assigned to several groups and becomes familiar by gaining a detailed knowledge of the topic. This benefits the group in that it avoids repetition of explaining each stage to different librarians every time confronted by an obstacle.  The problem with this strategy is that it only works effectively in large institutions due to the number of librarians required for each different group.  It may not be

feasible at smaller institutions because the faculty librarian is unable to commit sufficient time required to service the group's needs.

  The ethos of experiential learning is that by working on real projects the group gains more practical experience and it is beneficial for both parties.  Since learning can occur at anytime and anywhere, students learn more outside the classroom environment by participating in networks and from each other by tackling real problems. The class acting as a consultant to an organization calls on the librarian for assistance whenever they encounter a problem, and are encouraged to adopt various approaches to solving it.

  In some instances the library itself becomes the project and is an ideal laboratory for undergraduate students to explore issues concerning finance, leadership, marketing and other aspects of business curriculum.(Hesseldenz, 2012)  Middle Tennessee State University and Illinois Wesleyan College are two libraries which collaborated with marketing undergraduates in relation to conducting and analysing surveys concerning student attitudes. The benefits to the library are twofold in that it harnesses the skills and knowledge of the students to improve services to benefit the whole campus community.  Consequently faculty and students gain a better understanding of how the library operates and familiarise themselves with other services unbeknownst to them.  Although these two projects have been successful for undergraduates, the scope exists for developing them further to apply to an MBA context.  This would require a lot more thought and planning in order to develop a sustainable long term project.  One possible initiative could involve analysing all aspects of organizational performance and devising recommendations which contribute to greater efficiencies.  This may not be popular with library staff as they could feel their current positions and work practises threatened.  However the MBA group would learn about the Human Resource Management (HRM) aspect of dealing with opposition to the implementation of change management practises.

In terms of addressing the renewed focus on research ethics, librarians could argue this has always been central to traditional IL sessions.  Students are taught the importance of avoiding plagiarism by referencing sources used for projects or dissertations.  As discussed previously they learn to critically evaluate their database search results, while being alert to any biased opinions promoted by certain authors.  The University of Colorado developed a database providing various links to corporate statements of social responsibility which was primarily intended for teaching ethics to undergraduates.  This resource requires further development to be relevant to graduates.  One possible addition could be the inclusion of ethical pledges made by MBA classes at the more prestigious business schools.

These oaths communicate a strong message to the corporate world that ethics is the keystone for the cultivation and development of a more sustainable management culture.

**Creating a Culture of Creativity:**

Creativity involves using available resources to gain an insight to a problem by approaching it from a completely different perspective, and reflecting upon it.  According to Martinsen (1997) an instructor needs to be aware of two types of cognitive learning styles among a group which are assimilators and explorers.  Assimilators perform well at problem solving once they become experienced at it and like to follow rules.  Explorers perform better when there is a high level of novelty involved with the task, and reach a conclusion by analysing the information already available to them rather than their experience.

He concluded that both cognitive styles are related to creativity which he defined as the ability to handle high task novelty. (Fasko, 2001)

In a subsequent study analysing their relationship to approaches to learning, it was argued that the explorer style is closer to deep learning, because of its active information seeking strategies which describes both of these constructs. *(DISETH & MARTINSEN, 2003 )*

Satisfying both these cognitive styles involves the librarian devising collaborative based learning tasks containing a strong element of creativity within them. Providing an environment conducive to deep learning can be achieved by adhering to the set of criteria for a creative classroom as developed by Feldhusen and Treffinger (1980).

1. Support and reinforce unusual ideas suggested by student, rather than dismiss them immediately.

2. Use failure as a positive so student can learn from their mistakes

3. Adapt to student interests and ideas in class.

4. Provide time for creativity to occur by giving students space to think.

5. Create an environment of mutual respect which encourages peer to peer learning by students supporting each other.

6. Encourage different types of learning activities.

7. Be aware of the various types of creativity.

8. Listen and Laugh with students which provides security and a supportive atmosphere for freedom and exploratory thinking.

9. Allow students have choices and be part of the decision making process.

10. Involve everyone by supporting students in their ideas for solving problems and projects.

Various strategies have been discussed so far to ensure deep learning occurs which included recognising how MBA students are taught. A case study outlining my own research methodology using creativity as an effective teaching strategy is presented in the next section.

**Applying Creativity to IL Workshops:**

Assessing my own workshop in terms of these criteria it tries to incorporate most of them. At the beginning of the session the group's prior learning is assessed as they outline their own objectives. They feel more empowered in the decision making process as the lesson plan is modified to reflect their choices. Using a visual thinking power point presentation engages them immediately because they are required while collaborating in groups to interpret a series of images. A peer to peer learning environment is created as each team discusses possible answers.

The first of these slides is a photo taken with my nokia phone of a dimly lit LCD television with a blank screen which has been rotated to the left so it appears lying on its side.

This generates a sense of curiosity among the students who enjoy the element of problem solving by guessing the answer. Some of these are quite illuminating, revealing their cognitive process. The following are some of the suggestions I have received such as, window, light out of darkness, mirror, portal, eye test chart, picture frame, illuminated paper and door. These interpretations are supported and reinforced by me rather than being dismissed immediately. Once the image is displayed in its conventional form it becomes instantly recognizable to them. The purpose of this task is to explain to the class the importance of approaching a topic holistically. The prior knowledge and learning experiences present among the group are clearly evident by the diverse interpretations provided by members. The next slide is a collage of interconnected images consisting of a selection of shoes, a horologist, jazz musician Charlie Parker, paper towel, a girl observing a car flying through the air, and the Irish independence leader Michael Collins,. Each one is described to the group and how it reflects my own visual interpretation of research conducted

on teaching and learning of how adults learn.  Their task is to identify the educational significance of each image.  One student commented

*" it appears chaotic without knowing  the context, which is a lot like learning itself which requires you to impose your own order upon it. "*

Another suggestion was the passing of time, because of the historical figure, the jazz musician and the man fixing the clock and the cyclical process.

These responses are all valid and probed further to provide a secure supportive environment, encouraging further exploratory thinking.  The group is shown the slide containing the original quotes upon which the collage is based, and everyone agrees the visual impact is far more engaging.  This concept is further developed by introducing the importance of using either brainstorming or mind mapping techniques to devise a search strategy for a research topic.  An imaginary essay title is written on the board "The importance of storytelling in modern society" and the teams are asked to identify the keywords of the sentence.  Each group is assigned the task of brainstorming the word storytelling into its related keywords. As MBA classes are composed of individuals from a diverse range of backgrounds spanning fisheries boards to aircraft leasing firms a common theme has to be found which everyone can identify with.  Storytelling is the chosen topic for the group to research during the brainstorming sessions because it is quite broad, multi-disciplinary and open to various interpretations by students.

This collaborative learning process where participants work in teams is used as a technique for emphasising the importance of developing a search strategy.  The Educational Psychologist E.P. Torrance (1981) recognised that creative teaching enhanced learning which involved the student engaging in play. This leads to a flow state and discovery in which they become more engaged with the topic and explore it holistically. This element of play is

developed by teams visually mind mapping their research topic which is both a challenging and novelty task. The group watch a Dave Gray" visual thinking basics" video, and apply these new techniques to refining their own topic by sketching ideas. Each team discusses their experiences and depending on their intelligence type, either enjoys the process or considers it futile.

Using play as an integral part of learning provides a safe environment in which individuals feel more liberated to experiment and explore an issue from different perspectives. These discovery based tasks reflect the Social constructivist view of learning which acknowledges the use of imagination to comprehend meaning and not just memorisation and reciting.(Beghetto, 2009)

**My Own Reflections on Teaching MBAs:**

How do I ensure that the ICE constructivist model is working in these sessions? Sometimes when I demonstrate something to the group working collaboratively they pick up the connection immediately. For example explaining how Mendeley bibliographic software can aid them work smarter because it serves two purposes reference management, and a database. Students automatically see the connection with its functionality and how it can help their own research. Then again are the upper levels of Blooms Taxonomy which analyses the knowledge prior to synthesising it applicable in this context. The constructivist model compliments my teaching because it recognises that instructors must provide a discovery based learning environment which launches students on a quest for new knowledge. (Weigel, 2001)

As discussed previously the objective of my workshops are to develop independent self-directed learners.

Information Literacy is concerned with having ideas, making connections and finally expanding on them. Examining how students approach a research topic using the term storytelling as an example may provide greater clarity.

Firstly they define the scope of it using either brainstorming or mind mapping techniques. Develop an arsenal of keywords based on this technique, by making connections with related terms. These are subsequently used to develop a search strategy. Depending on their prior knowledge and experience each student will identify different words. Some may interpret storytelling in terms of genre, drama poems, fables, novels and fairy-tale…etc. Others may interpret it in terms of medium, radio, television newspapers social media etc... These extensions are made by students applying the same process to their own individual research topic.

 I use Stephen Brookfield's Critical Incident Questionnaire (CIQ) as a post assessment instrument to measure the session outcomes. The students are asked five questions which encourages them to reflect on where the learning happened for them. This task can be completed individually or collaboratively depending on the size of the group involved. The feedback provided highlights the stages where they engaged or became distracted. My strategy in using this evaluation tool is, to gain an indication from the student's perspective, aspects of the session requiring further clarity.

Measuring the workshop in terms of these findings reveals a collaborative learning process occurring among the group, facilitating peer to peer learning by members discussing their ideas among each other. Students are evaluating their own thoughts and developing their sense of curiosity. Consequently they feel more empowered as they are in control. Once

their mind map is developed and the database searching commences, they follow their curiosity and critically evaluate results using mindfulness. Apply their own experience and knowledge in obtaining relevant results following a process of reflection. I am merely providing a scaffolding approach by demonstrating the skills required to conduct a successful literature review.

**Conclusion:**

This paper has discussed various strategies I use in workshops encouraging students to both engage and comprehend the relevance of their course material at a deeper level. It is worth recognising as a study by Marton (1974) does that students cannot be guided towards adopting a deep approach to learning as they will naturally rebel by adopting a surface approach instead. (Ramsden, 2003) Alternatively good teaching can contribute to the adoption of a deep approach, through student engagement; by conveying passion for a subject, emphasising its relevancy, and explaining complex issues simply. I try and incorporate most of these qualities into my own teaching. As previously discussed MBA's engage in deep learning because they are a highly motivated group, eager to acquire new skills and knowledge complimenting their existing workflow. The main strategies I have found to be effective in workshops for ensuring deep learning are outlined briefly in the following paragraph.

**Recap of Strategies:**

Conduct a pre assessment exercise which empowers the class and ascertains their prior knowledge and skills level. Select the appropriate learning framework which in this case is

social constructivism specifically the ICE model.  Provide bespoke sessions addressing students' individual needs rather than adopting a blanket approach.  Emphasise the relevancy of outcomes to their own needs thus ensuring the group becomes sufficiently motivated to achieve them.  Encourage Collaborative learning which ensures peer to peer learning because students learn more outside the classroom than within it.  Focus on developing critical thinking skills rather than functionality of online resources which are becoming more advanced and homogenised.  Emphasise the importance of critical reflection in both problem identification and problem solving.  Recognise and appeal to multi intelligences residing within a group, by comprehending their learning styles.  Select appropriate tasks to satisfy these.  Creating a culture of creativity encourages play, which stimulates their curiosity and embarks them on a journey of discovery.  Brainstorm the concept of storytelling in terms of keywords as an introductory method for explaining the importance of developing a search strategy.  Finally adopt Brookfield's Critical Incident Questionnaire (CIQ) as a formative assessment tool to encourage student reflection and highlight areas requiring clarity.

In terms of creating a culture of creativity this is still in the experimental phase and requires further development. I expect this to evolve organically based on student feedback as more groups are exposed to it.  Serious gaming concepts particularly gamification are becoming more prevalent in both the corporate and education sector as a proven training technique.(Donovan 2012)  An option in the future would be to transform the workshop content into core components of a game which students design and build themselves.  This would empower the group, encourage collaborative learning, stimulate their creative abilities, and critical reflection while ensuring they engage with the material at a deeper level.  This is a long term objective but one of the most effective strategies for developing future IL workshops with MBA groups.

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