# Using Experiential Learning Theory to Improve Teaching and Learning in Higher Education

**Leong Y. Jonathan**
Singapore University of Social Sciences (SUSS)
**Ma Nang Laik**
Singapore University of Social Sciences (SUSS)

**Abstract**

The importance of skills has been expounded repeatedly as a crucial factor to thrive in the workplace, as opposed to mere knowledge of content. It is important to be able to adapt to new situations; this is especially true in today's world, where volatility, uncertainty, complexity, and ambiguity (VUCA) are prevalent. To better prepare undergraduates for entry to the workforce in such a tumultuous time, Experiential Learning Theory (ELT) can be employed in their programmes – for example, by using a computer simulation game called MonsoonSIM in a course on fundamentals of business modeling, or through an overseas experiential learning trip with thematic objectives. These two cases are chosen specifically as they deal with contrasting experiences of learning – one highly theory-based and typical of academic institutions, and the other geared toward practical skills.This paper explores the processes of the ELT, distinguishing it from common classroom experiences, and how they are applied in the two cases mentioned above in order to improve the quality of teaching and learning, and to inculcate self-directed learners who are able to better deal with environments of VUCA. The abovementioned cases serve as examples by which ELT can be deployed to improve both the breadth and depth of students' learning. The content of this paper stems from the authors' experiences in crafting, facilitating, and executing the ELT processes within the context of a university programme.

**Keywords**: experiential learning theory, higher education, VUCA, pedagogy, teaching and learning

## Introduction

In a recent World Economic Forum report titled "The Future of Jobs" (WEF, 2018), a list of ten skills were presented, thought to be those crucial to thrive in the workplace in the year 2020. Among these skills included traits such as creativity, critical thinking, complex problem solving, negotiation, coordination, judgement and decision making, and cognitive flexibility. These skills are tied together with a single theme: to better enable the workforce to deal with an increasingly Volatile, Uncertain, Complex, and Ambiguous environment. This set of conditions is known as VUCA, and was first used in 1987, with reference to the leadership theories of Warren Bennis and Burt Nanus (2014), first introduced in 1985. Since the role of the university and/or higher education is to prepare graduates to be gainful contributors to society and in the workforce, it then follows that they must also inculcate resilience against a VUCA environment. This theme is also repeated in the report *The Future of Education and Skills* by OECD (2018), with a similar list of constructs to be included in the framework to achieve such a goal.

It has come to attention that common current models of teaching do little to cultivate such traits; most education systems strive to reduce the amount of VUCA presented to the students, instructing them under static, idealized, and theoretical conditions, instead of introducing them and leading them through the process of making sense out of the perceived chaos. At the early stages of education, this reductionist perspective may be necessary in order to properly show theoretical frameworks and provide clear understanding of correlations and theories; in higher education, however, simulating a VUCA environment would be far more beneficial, especially since students are expected to have a higher level of maturity, and will shortly need to deal with the realities of the working world.

This paper describes the application and framework of experiential learning, in order to simulate a VUCA environment, in two contexts within a higher education institute; firstly, as part of an academic course, and secondly as a crafted, credit-bearing overseas learning experience.

## The Experiential Learning Theory and Applied Framework

There are various models of the Experiential Learning Theory (ELT), echoing similar attributes. In our development of the ELT framework for use, we have used Kolb's ELT model (Kolb, 2015) and also modified it into a thematic version for practical purposes and clarity, both of which are briefly explained below.

Kolb's ELT model can be summarized in the below cycle:

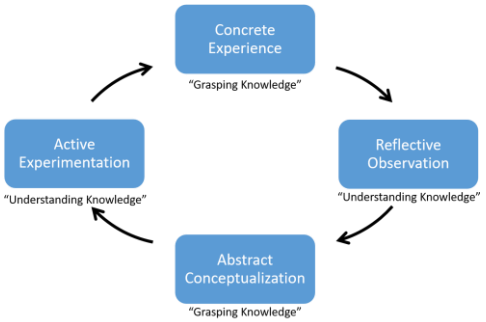


*Figure 1: Kolb's Experiential Learning Cycle. The stages can also be reframed as a repetition of "grasping" and "understanding" knowledge.*

Care must be taken not to confuse Kolb's cycle with repetitive drilling, especially that under direct instruction. The differentiation between these lie in two aspects:

Firstly, in repetitive drilling, the process reflects more of a trial-and-error situation, even if systematic. This is often reflective of a reductionist perspective in physical sciences, where there are direct correlations between two isolated variables or features. It often does not take into account the complexity of a situation, or the environmental and internal conditions.

Repetitive drilling also removes the "experimenting", "contemplating", and "exploratory" aspects of the experiential learning process, and has to do more with direct instruction and rectification of any present errors, as opposed to allowing the learner consider varying alternative factors reflectively. This often has the consequence (often unintended) of removing the learner from the actual context, and isolates them from all but the instructors' own perception. The active learning process of self-discovery, by contrast, has a stronger focus on the stages characterized by Reflective Observation and Abstract Conceptualization, both of which requiring deliberate, practiced mindfulness, forming the second distinction. It is this feature that holds the utmost importance, and is also the feature that requires the most care and guidance from instructors to students, as it is largely neglected in common educational systems.

One of the advantages of the ELT model is that it naturally accounts for what is commonly known as "learning styles" – rather than having to recreate a lesson for students who have different perceived learning styles, the ELT cycle is universally applicable; students with different "learning styles" would start their mental processes at different stages of the cycle, and linger at the processes between different stages, sometimes even repeating the connection between two stages repeatedly before moving to the next. The ELT cycle itself does not differ, only on occasion the starting point and the duration/repetition of the stages.

The modified thematic model replicates Kolb's elaboration of processes, but takes a different perspective, which stems from the idea that a "theme" can be common across different contexts, and one expression of the "theme" would focus on the learning of a specific "craft". In such a model, the "craft" is deemed to be an entire process or art, related to the theme, and often in attempts to navigate through the latter. Each unique context of application of the "craft" can be tied to an "object", from which an "objective" (or "desired outcome") is the aim. "Skills" are them employed to manipulate the "object" to reach the "objective". A schematic illustration of such a model is illustrated in Figure 2.

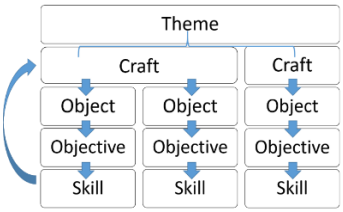


*Figure 2: Thematic model of the ELT, showing the hierarchy of the various components - in some cases, a single craft has more than one object. Similarly, a craft can also have more than one object (not shown here). Note also that the cycle repeats itself, and relates continuously with the theme*

In cases where the "skill" within the "theme" carrying a similar "objective" is translatable to another "object", it is often a matter of adjusting the necessary tools and perspectives (components of the "skill"), once the abstract concept is grasped (akin to Kolb's model); the desired outcome to each of the parameters may remain constant, but the parameters to be observed may be appropriately adjusted. To use a traditional example, if the craft were to take the form of "woodworking", the various objects may be the various kinds of wood – timber, teak, oak, and so on. Each of these require similar skills in principle – to grind, shape, saw, etc., but the expression of each changes between the different "objects".

How the thematic model is used in ELT is based on the reflection of the intricacies of expression of the same skills – if one were to take the abstract theme of "material shaping", we could compare "woodworking" with "stonemasonry" as two different crafts under the same theme. To "shape" an oak tree trunk could yield the same outcome/objective as "shaping" a rock in stonemasonry, but the tools and the requisite observations of the process differ in nuance. Reflection aims to distil the principle of the "skill", and its relationship between the "object" and "objective'. Once the principle is made clear, the "skills" are transferrable across various "crafts", and applicable throughout the "theme". A modern-day example, which is also the topic of one of the overseas trips conducted, is the theme of "Entrepreneurship", where the object of study is the concept of the "Entrepreneurial Spirit". Under this theme, students visit countries such as Israel with a high rate of innovation and start-up success, with the selected objective and idea of creating a start-up. They are then tasked and led through investigation of the skills – soft and technical skills – as well as individual attributes required to achieve a successful start-up, while taking into account the nuances and contexts in which the peoples have managed to inculcate those skills into common everyday practice, and perhaps even parts of their culture. The overseas trip allows for the student to observe and analyze the various factors in the visiting country; if the principles are accurately identified, the relationship between them and the theme clearly distinguished, distilled, and deconstructed from their observations in the visit, they would also be able to replicate similar attributes in their own home country. If the selection of such countries also bears considerable similarities to the students' host countries, the attributes are more easily deconstructed, distilled, and replicated; but even if otherwise, the principle and process still holds. In essence, although the theme is applied in different contexts, it remains the same. The fundamental skills and factors are also transferrable.

Part of the conditions for this thematic model is the presence of intangible expertise and experience, and often nuances that are obtained through said experience, which are not easily elaborated, recorded, and transferred from instructor to student. However, it should also be noted that such is precisely the principle of the shift to the ELT framework – to avoid direct transfer of knowledge in a theoretical context, and instead lead the learner through the deciphering and nuanced process in order to bring an intrinsic and experiential understanding of the contextual application.

One advantage of the thematic model is that when the overarching theme is clearly identified and constructed, one is able to see how a set of skills functions and are translatable for use on another "object", as well as the complex connections in the model. In contrast to Kolb's model, however, the focus in the thematic model is not on the distinct components of the model, but the relationship between them. Despite that, a similar cycle reflecting on the relationships between the different components should be employed, as each "objective" becomes the "object" of reflection for the next stage. This can be illustrated as follows:

The objective (a.k.a. outcome or desired outcome) of the craft, starting from the object, as initial relationship for reflection.

The objective of the reflection becomes the object of conceptualization.

The objective of conceptualization becomes the object of experimentation.

The objective of the experimentation repeats itself as the object of the craft.

To reiterate, in each of these stages, the focus of reflection is the relationship between the two mentioned features; how the objective of each stage is to be achieved from the "object" and the environmental/structural influences that come into play in shaping these processes. The thematic model is found to be more appropriate when deconstructing a particular trait from a selected environment, in attempts to replicate them in another host environment.

In both the Kolb's ELT cycle and the thematic model, a few distinct differences are found between the ELT models and the more commonly used, direct instructional mode of teaching:

Students are poised as active experimenters in discovery of knowledge instead of listeners of instruction.

Students are made aware of prior conceptions as part of reflective observation, instead of confirming inherent biases.

Students are led to revisit prior conceptions and debunk their own assumptions, as opposed to a linear, one-directional correlation and path of learning.

Students are exposed to similar (preferably exact) and simulated environments of operation and employ observation, rather than absorb second-hand information.

The application of both these models are in attempts to provide a renewed, holistic learning experience, with an increased awareness of the discrete cognitive processes and the environmental/structural influences for each context and application, in contrast to absorption and repetition of information and repeated drilling of processes.

**Case Study 1 - ELT in Business Modeling Course**

There has been extensive research done in the area of experiential learning in university programmes across various disciplines ranging from computer science, engineering, and business. Experiential learning is an important pedagogical approach used in teaching-learning processes to facilitate "doing and learning". Bhajantri *et al.* (2016) adopted an experiential learning approach in a web technology course with explanation of concepts, followed by a series of hand-on demonstrations, allowing students to simultaneously practice the relevant skills. Most students find this kind of training valuable as it brings them through an entire system, starting from design, then through the stages of implementation, operations, and finally documentation. Experiential learning was found to motivate students not only in the acquisition of knowledge but also in experience and application of skills on the two projects; in some cases, this was also found to motivate them to pursue careers in similar or related areas.

Yonghui *et al.* (2009) explored the use of experiential learning theory as a model for teaching and learning and applied it to both formal and non-formal education settings. They then concluded that experiential learning is more suited for a non-formal education and the role of facilitators is to encourage the learners to learn through an inquiry-based process, generalizing the concepts, and finally applying it to relevant situations.

Granlund (2008) analyzed the learning processes of a group of students engaged in the computer-based simulation training environment, C3Fire, for training and research within the domain of dynamic decision-making. The author explained how the four stages of the experiential learning cycle enhances the students learning experience as a group in the learning environment and emphasized that the experiential learning has had a positive impact on their learning in this experiment.

Bailey *et al.* (n.d.) described how the experiential learning model is incorporated within Rochester Institute of Technology's (RIT) undergraduate engineering programs. ELT is used for designing a course in thermodynamics, which is traditionally taught in lecture style, ensuring that the activities are planned to complement the same four ELT stages. Based on their end of course assessment and student feedback, they noted a high level of perceived learning by using the ELT model to frame the lessons.

Desai *et al*. (2018) developed a hypothesis to evaluate the effectiveness of the experiential learning approach to determine the academic performance and students' success from two different colleges. One group (from college A) has adopted an experiential learning approach through Project Based Learning (PBL), working on a project to apply the knowledge gained in the course in solving a real-world problem. Another group (from college B) adopted the traditional learning approach in class. Two sample T-tests were conducted on the data collected from two groups, and the result indicated a significant difference in the scores of students based on Semester End Exams (SEE) scores and placements, and therefore concluded that the use of Experiential Learning was found to improve students' performance – particularly in innovation, creativity for generation of new knowledge, and the motivation to learn and solve problems.

One of the compulsory courses for all undergraduates in business programmes in SUSS deals with Business Skills and Management. The course aims to provide students with key business skills and problem identification and solving skills, using various spreadsheet-driven, industry-derived case studies. It also helps students learn spreadsheet features and how to use a systematic approach to solve real-world problems. In addition, leadership and management concepts (such as planning, controlling, decision-making) as well as the Business Excellence Framework are discussed. The course objectives are to prepare students for task management within their undergraduate years, and equip them with necessary life skills to deal with the challenge of the VUCA workplace and world. Students are assessed through their application of spreadsheet modeling to arrive at justifiable conclusions for a given scenario.

In 2017, we incorporated experiential learning (EL) within this course, using a competitive business simulation game called MonsoonSIM. MonsoonSIM is a unique, experiential learning, pedagogical platform for business studies, to allow students to discover business concepts through experiential learning using a business simulation game. The students run a virtual business entity, comprising of twelve interdependent business departments:

B2B or Wholesales, Customer Service, Finance & Accounting, Human Resource, Logistics and Warehouse, Maintenance

Marketing, MRP, Forecasting and Planning, Procurement, Production, Retail


*Figure 3: An artistic representation of the interconnectivity of the departments within the simulation. Nodes indicated are only for illustrative purposes and do not represent the actual algorithm within the game. (Image courtesy of Monsoon Academy)*

The experiential learning setup in the course is developed for a period of six lessons, with the following plan:

In the first lesson, teams are formed, and the first run of the simulation game is conducted. Little or no instruction is given about the intricacies of the game or the relationship between the various departments, and how they affect the outcome – any instruction focuses primarily on the technical aspects of the game. This allows the students to form their own context of the eventual lessons, without being told about the theoretical constructs involved, and serves as a warm-up for the rest of the classes.

After a set duration, the game is paused. With that initial experience, they are asked to document and discuss about the perceived connections between the departments and iron out the various roles within each team. Different strategies may be formed across teams, and they are allowed to explore the options as they see fit. After the discussion, the game resumes, and continues till an additional set duration has passed. Due to the complexity of the game and the numerous inter-relationships, at this first attempt most teams will fail to make a profit and run into bankruptcy. This also provides additional context for forming abstract concepts and the relationships invoked in the event.

During this first game, students are led through at least one iteration of the four stages in the ELT - forming a **concrete experience**, a practice in **reflection** (guided by the instructor), **conceptualization** of the relationships and **planning and experimentation** with the desired objective in mind. Ideally, every member of the team should participate in the discussion, and the instructor can assign teams to explain some of their fatal errors during this first trial. If the instructor notices that the team members are inactive during the discussion, he is to intervene and try to give directions for a useful discussion.

The process is repeated throughout the course, with the students immersed in the game, a different condition each time to mimic various scenarios, each lesson with a different objective or relationship/correlation to explore, to be covered in presentation, defense, and discussion at the end of every class. These topics include the appropriate strategies for each

scenario, what are the performance indicators (at the early, middle and late stages of the simulation), areas for improvement and/or focus, and other causational/correlational factors to achieve the outcome. They will have to defend their hypotheses, and cross-defend themselves as other groups/teams present both supporting and conflicting theories.

This arrangement allows for students to crystallize their thoughts through the presentation, and put into practice discernment of choice of observed parameter, and craft the appropriate experimental conditions to test the hypothesis. The dynamism of the simulation, involving various teams, who are all changing factors within the same "market", is also a point of consideration; while this appears to be an ineffective method of testing a hypotheses, as variables are not held constant through the "experimental" phase, part of the objective is also to openly consider the other factors in holistic analysis and avoid reductionistic theorizing – for accurate testing, students are also given opportunities outside the class to run multiple games under controlled, static conditions.

Students are graded according to their competency in:

In-depth analysis (i.e. reflective observation and abstract conceptualisation)

Strategy formulation (i.e. application of conceptualisation objectives and forming paths of active experimentation)

Presentation skills (i.e. crystallisation of concepts formed)

Learning points (i.e. metacognition and reflection on the processes)

An end-of-term assessment incorporating spreadsheet modelling with the simulation is also assigned. This includes questions relating to the various operational issues of the simulated companies, which can be answered by applying business modelling concepts, integrating it with spreadsheet skills, and taking into account the context of the simulation. We see a significant improvement in the average score of the assessment by > 15% compared to the previous term where an ELT framework was not applied. This is related to the fact that students are more interested and engaged in their learning process, rather than solving any generic business problem - the experiential learning has urged them to explore ways to make their own "virtual company" a success by applying the relevant skills, which are all positive outcomes of the ELT.

According to student feedback, most prefer the experiential learning mode over traditional lectures as it allows them to understand the complexity in business operations using an interactive approach. The intensity of the game, and the digital nature of the game allows for them to consider and test the application of their hypotheses or other theories, instead of just absorbing them – this allows for better memory retention.

Through this interactive learning process, the students were also imparted a number of soft skills which are also considered important in the job market today, such as communication and teamwork, human/team management, and leadership roles with the respective decisions.

**Case Study 2 – Thematic ELT in Overseas Learning Programmes**

The second application of the ELT is in the exploration of a theme by immersion into the context of application, usually one that is best explored in another country – this could be because the country in question is exceptional in that theme, or is deemed to have positive traits along the theme that is worth learning from. Examples of such trips and their themes include the investigation of what entails an "Entrepreneurial Spirit" in the context of Israel, and the complexities behind the welfare policies in Hong Kong. For such credit-bearing overseas trips, students conduct independent research and form their own notions about the people, their culture and habits, and relate them to the object of the theme prior to the trip. Subsequently, the students are brought to the host country for an extended trip, with arranged meetings with industry partners, and site visits that expose them to cultural and historical aspects of the peoples of the country. This is done in order for the students to get a feel of local sentiment, and to use their observation to draw conclusions, analyses, and refute preconceptions in addition to reforming their notions of the relationships between the various contextual conditions and the object of the theme. Instructors accompany students and lead them through activities of reflection upon the social, cultural, economic, and political state of affairs, and how they have influenced the trait(s) of the people. This echoes the structuralism argument, in that structures determine agency, and therefore also the thoughts, perspectives, and behavior of the peoples.

On this perspective, Emilé Durkheim (1956) states that firstly, "education is the socialization of the younger generation". His successor, Paul Fauconnet, explains Emilé's perspective:

"…in each of us, one may say, there are two beings, which although inseparable except by abstraction, are none the less distinct. One is made up of all the mental states which relate to ourselves and the events of our own personal life: this is

what may be called the individual being. The other is a system of ideas, feelings, and habits which express in us not our own personality, but the group or different groups of which we form a part; such are religious beliefs, moral beliefs and practices, **national and vocational traditions**, and collective opinions of all kinds. Their entirety forms the social being. **To form this being in each one of us is the end of education**." (Fauconnet, P.,1923, emphasis added)

Fauconnet also highlights the core of the structuralism argument in education, that each educational system, culture, or any other structure put into place, forms the subjects under that structure into whatever conditions they exist within at that time, and very often reinforcing the structure itself once more, citing examples of the Spartans in the Lacedemonian city, Athenian education, and French education at the time (1923). Durkheim (1956) had mentioned this as well in *Education and Society*, and was later echoed by Lear (1961).

If the attributes of the people are a product of their environmental structures, including the social, economic, and political spheres, then it stands to follow that the most holistic way of learning these attributes are to expose said students to as many of the conditions as possible; granted, historical conditions, along with many others that depends on time, race, and other individual attributes, cannot be replicated, but they can minimally be understood, to provide the intellectual basis and relational factors under which the attributes can be deconstructed and hopefully replicated.

In the overseas experiential learning programme, the thematic model is more obvious and useful, though Kolb's model is still used as the pedagogical framework. The attribute to be observed is first treated as the "object", related to the more abstract "craft", while the desired outcome is deemed the "objective". As students are brought through the environments foreign to them, they are required to reflect upon how the various conditions (i.e. cultural, social, economic, and political) have allowed the people of the community to make their mark in such a domain. Once a tentative relationship is formed, students are then required to reflect on the relationship, and crystallize it into a conceptual form; in essence, the "objective" of the first step now becomes the "object" of reflection, with a new objective of describing the complex relationship. This "object-objective" shift iterates twice more, as mentioned previously as part of the thematic model, shifting from the conceptualization of the relationship to experimentation of the potential relationship, and obtaining an outcome which should then be observed, then led to reinforcement or refutation. While it is not always the case that active experimentation can occur from student initiative, examples (or contradictions) of their conceptualizations are usually readily observable, and the reflective cycle is repeated, with the newly observed concrete experience instead of the prior conception or initial observation.

In such a programme, a great deal relies on the instructor, and the proficiency at which he or she guide the students through their own thoughts. While substantial technical knowledge and content is necessary, the more significant, dynamic aspect of their role is to "uncover the hidden obvious" and "point out that which is common" to the students, e.g. where some thoughts, events, or observations appear so common that they are glossed over, without realizing their significance. In order to achieve this, the instructor must have a sense of the students' mental processes, and be able to dig deeper into the underlying "structures" which have led to the students' observations and analysis as consequence; the instructor must then allow students to question the integrity of these perceived "structures" in the students' minds, in relation to the context under which their analysis is applied. For example, in considering a particular situation in Hong Kong, a Singaporean student is likely to assume that certain habits, opinions, or perceptions from the home country are also legitimate in the visiting country, thereby making erroneous conclusions and analysis about Hong Kong's policies or other features of the country. The same can be said when thinking about the relationship between a people's attitudes toward particular situations and their national history or the process of forming their identities. This concept applies Durkheim's principles of structuralism and consequence, as mentioned earlier – both in the inherent assumptions made when conducting analysis, and the actual considerations the student must ponder upon to obtain an accurate and holistic view of the foreign context.

In this way, the student is led through multiple iterations of formation and re-formation of their ideas on the various contextual factors and their relationships with the "theme" and "object" of the trip, reflecting critically on the iterative conceptualization and testing of hypotheses, with an entirely dynamic learning experience throughout the duration of the trip. An awareness of the overarching theme also allows for comparison of the host country aside their own base country, with an understanding and transferability of the desired skills and attributes - it is also possible that the students can also manufacture similar environments to cultivate such traits, and a number of graduates have been observed to do so. Students who had completed such programmes were subsequently observed to demonstrate the following during their continued course of study:

An increased awareness of inherent assumptions or biases and preconceived notions (e.g. biases)

An increased awareness of the possible origins of these initial notions

Heightened ability to observe holistically and qualitatively (e.g. students noted the absence of features rather than the presence of unusual features in the environment)

Ability to draw connections between environmental/social conditions and individual development

Students have also commented through feedback that they feel better equipped to appreciate the complex social issues present in our world today, such as international politics and trade, innovation, local policies, and the relationships between current day conditions and the history of the people involved. Some of these traits have manifested in their other extra-curricular activities, such as international symposiums. While such analysis is by no means perfect, it does reflect the practice of dealing with VUCA, crafting order out of the chaos, and re-formation of ideas through iterative, repeated, various modes of observation. It is perhaps the very reflection upon their own inherent limitations that allow them to address them adequately. The recognition of the complexity has also highlighted their awareness of the inherent influence of "structuralism" evident in all environments, and has thus enhanced observation.

Since students have been found to be more aware of their inherent assumptions and preconceived notions, including the influence of their individual experience and past environments, they are also observed to redirect any conflicts with observation and hypothesis not only with statistical doubt, but also whether their own prior beliefs and experiences have influenced their observation. In essence, they have also gained the habit of questioning any inherent biases and/or assumptions behind their observations and conclusions and those of peers, instructors, or other sources of information, instead of only the reductionist relationships between them. With the shift in the objective, they are then more motivated to uncover more aspects of the foreign peoples (e.g. history, cultural and social practices, traditions) and subsequently to consider the relationship between these and the perceived/observed traits of the collective people, again under the principle of structuralism. This has the effect of making them aware that any conclusion they have made is based on the limited observation and analysis humanly possible, and is also subject to further scrutiny, refutation, and reformation.

**Discussion on effectiveness of ELT**

In the common instructional mode of teaching, students take the role of listeners, and not active experimenters. By involving the students in the process of discovery, (i.e. the ELT stages in Kolb's model), the variations between students' prior knowledge are taken into account, allowing for any requisite guidance to assist their shortcomings clearly identified. They are also implicitly given far more responsibility in their learning, and cultivate patterns of educated questioning – the formation of clear and precise questions is crucial to proper inquisitive methods.

Careful crafting of the experience is crucial in curating an environment in which students are best able to reflect and question themselves. This depends not only on the proficiency and familiarity of the instructor in the relevant content matter, but also his or her ability to draw inter-/multi-disciplinary relationships between the observations and the subject, then lead the student to form their own conclusions through similar paths; admittedly a much harder task than simply dispensing "expert knowledge" to a listener. Such instructors must then be sensitive enough to the student's cognitive processes, in order to tackle their assumptions and help them reconstruct perceptions from ground up. Instructors deploying the ELT as a learning tool should be careful to protect the students from their own influence, and allow them to craft their own concrete experiences, only guiding in proper reflection. Again, there is little worry if the initially crafted relationship or connection is inaccurate or erroneous, as active experimentation would reveal that clearly to the student, and the ELT process repeats itself *ad infinitum* to achieve increasingly refined conclusions. A great deal of restraint is required from the instructor to avoid employing the common "expert opinion" stance in imparting the skills to the students; the students should be allowed to fail, albeit constructively.

On the point of failures, we should also note that in both cases, the experience is either contained (in the case of the simulation) or curated in a protected form (in the case of the overseas trip). The scripted nature of the experience inevitably reduces actual risk levels, limits the extent of the experience, and is largely a consequence of the timeframe of undergraduate programmes; as such, the full, "real-life" experience is rarely, if ever, fully achieved. The framework recognizes this, and attempts to cushion the negative effects by incorporating deliberate reflection both between the stages of Kolb's model, as well as on the relationships in the thematic model, to accelerate the process of deconstruction and maximize the amount learned. The effectiveness of the programmes are also largely limited by the proficiency of the instructors and their ability to react dynamically with the students' responses and behaviours without being overbearing and imposing their views on the students.

## Conclusion

The ELT method has proven useful in cultivating both appropriate learning perspectives and inculcating habits that will benefit the students in the emerging VUCA environment. It has also been shown to be equally applicable in academic and non-academic activities, for the development of undergraduate students. While there are limitations to the method, we believe that the observations made in this study show that the ELT framework, when applied in appropriate fashion, is far more versatile than that of conventional teaching methods today.

## Acknowledgements

The authors would like to thank Ms Huijun Yao for her invaluable input and advice on the elaboration of the framework given her experience in Cultural Studies, as well as Dr. Chee-Han Lim, Singapore University of Social Sciences, for his imparting of both the ELT and thematic models presented in this paper.

## References

1. Bailey, M., & Chambers, J. Using the experiential learning model to transform an engineering thermodynamics course. 34th Annual Frontiers In Education, 2004. FIE 2004. doi: 10.1109/fie.2004.1408502
2. Bennis, W., & Nanus, B. (2014). *Leaders*. HarperBusiness.
3. Bhajantri, V., Sujatha, C., Yaligar, S., & Pawar, M. (2016). *An Experiential Learning in Web Technology Course*. Journal Of Engineering Education Transformations, (Special Issue). doi: 10.16920/jeet/2016/v0i0/85675
4. C. Y. C. Yonghui and L. H. L. Hui, (2009) *Study of Experiential Learning as a Model for Teaching and Learning*," 2009 Second International Symposium on Knowledge Acquisition and Modeling, 2009, vol. 2, pp. 391–394.
5. Desai, P., Bhandiwad, A., & Shettar, A. (2018). Impact of Experiential Learning on Students' Success in Undergraduate Engineering. 2018 IEEE 18Th International Conference On Advanced Learning Technologies (ICALT). doi: 10.1109/icalt.2018.00018
6. Durkheim, E. (1956). *Education and Sociology*. The Free Press.
7. Fauconnet, P. (1923). The Pedagogical Work of Emile Durkheim. *American Journal Of Sociology*, *28*(5), 529-553. doi: 10.1086/213528
8. Granlund, H. M. (2008) *Experiential Learning in Computer Based Simulation Training - Experiences from Research on Team Decision Making,* 2008 International Conference on Computer Science and Software Engineering, Hubei, 2008, pp. 52-55.
9. doi: 10.1109/CSSE.2008.407
10. Kolb, D. (2015). *Experiential learning*. Upper Saddle River, New Jersey: Pearson Education.
11. Lear, E. (1961). Emile Durkheim as Educator. *Journal Of Educational Sociology*, *34*(5), 193. doi: 10.2307/2264662
12. The Organisation for Economic Co-operation and Development (OECD). (2018). *The Future of Education and Skills 2030*. Retrieved from http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf
13. World Economic Forum. (2018). *The Future of Jobs*. Retrieved from https://www.weforum.org/reports/the-future-of-jobs-report-2018