

AN ANALYSIS OF THE BENEFITS OF EXPERIENTIAL LEARNING WITHIN BUSINESS
SCHOOLS

By

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Abstract

This paper explores two different frameworks for structuring experiential programs and their associated benefits within undergraduate and graduate programs at business schools and within their partnerships with companies. It includes an overview of Fry and Kolb's experiential learning model and Collin's cognitive apprenticeship model and how they pertain to business students' learning styles. Examples of implementations in major areas of business are included to support the relevance of experiential learning and highlight the benefits to students. There is also a discussion related to internships and cognitive apprenticeship and their benefits to students. Finally, the paper concludes with a summation of the relevance of both experiential learning models and their positive impacts on students. Some of the benefits noted in this paper are that students perform better in real world environments, have better grades on assessments, and have a strong level of cognitive investment.

TABLE OF CONTENTS

Introduction.....	3
Literature Review/Findings.....	4
What is Experiential Learning.....	4
Pros.....	8
Cons.....	8
What is Cognitive Apprenticeship.....	9
Cognitive Apprenticeship Methods & Technology	11
Pros	13
Cons.....	14
Similarities between Experiential Learning and Cognitive Apprenticeship.....	15
Examples of Applications in Business Schools.....	18-23
Finance.....	18
International Business.....	19
Accounting.....	20
Marketing.....	21
Business Management.....	22
Supply Chain Management.....	23
Simulations.....	23
Examples of Applications in Internships.....	24
Conclusion.....	26

Introduction

The motivation for this project comes from my own personal experiences with experiential learning in the Walker College of Business. Experiential education can be understood broadly as learning by doing. I have been actively involved with student-run organizations on campus where students are able to apply business concepts that they have learned in the classroom in a collaborative learning environment. I am interested in exploring other ways that students can learn through experience while in the classroom and in work environments.

This paper explores two different frameworks for structuring experiential programs and their benefits within undergraduate and graduate programs at business schools and within their partnerships with companies. It defines experiential learning and cognitive apprenticeships as well as provides an analysis of their similarities and differences. Finally, the paper provides examples that show multiple ways that business classes in different areas can be formatted followed by examples of internships that have cognitive apprenticeship aspects.

I call attention to the benefits of experiential learning programs within business schools by identifying specific programs and defining their structure to understand the reasoning behind why experiential learning programs are or are not successful. For clarification, this paper is not stating that there is an ideal class structure, but specifically focuses on the benefits that these particular learning models can provide business students. Another beneficial form of experiential learning outside of the classroom is through internship programs and cognitive apprenticeship at specific companies. Accordingly, for the purposes of this paper, I will focus specifically on programs implemented inside the classroom at the undergraduate and graduate levels as well as outside the classroom through external internships.

This paper includes overviews of Fry and Kolb's experiential learning model and Collin's cognitive apprenticeship model as well as an analysis of how they pertain to business students' learning styles. Following the introduction of each model there is a description of the positive and negative aspects of each. There is also a discussion that compares the frameworks and identifies the similarities and differences between them. Afterwards, there are examples that pertain to major areas of business and support the relevance of experiential learning in business schools and their benefits to the students. A section related to internships and cognitive apprenticeship follows. Finally, the paper concludes with a summation of the relevance of both experiential learning models and their positive impacts on business students.

Literature Review

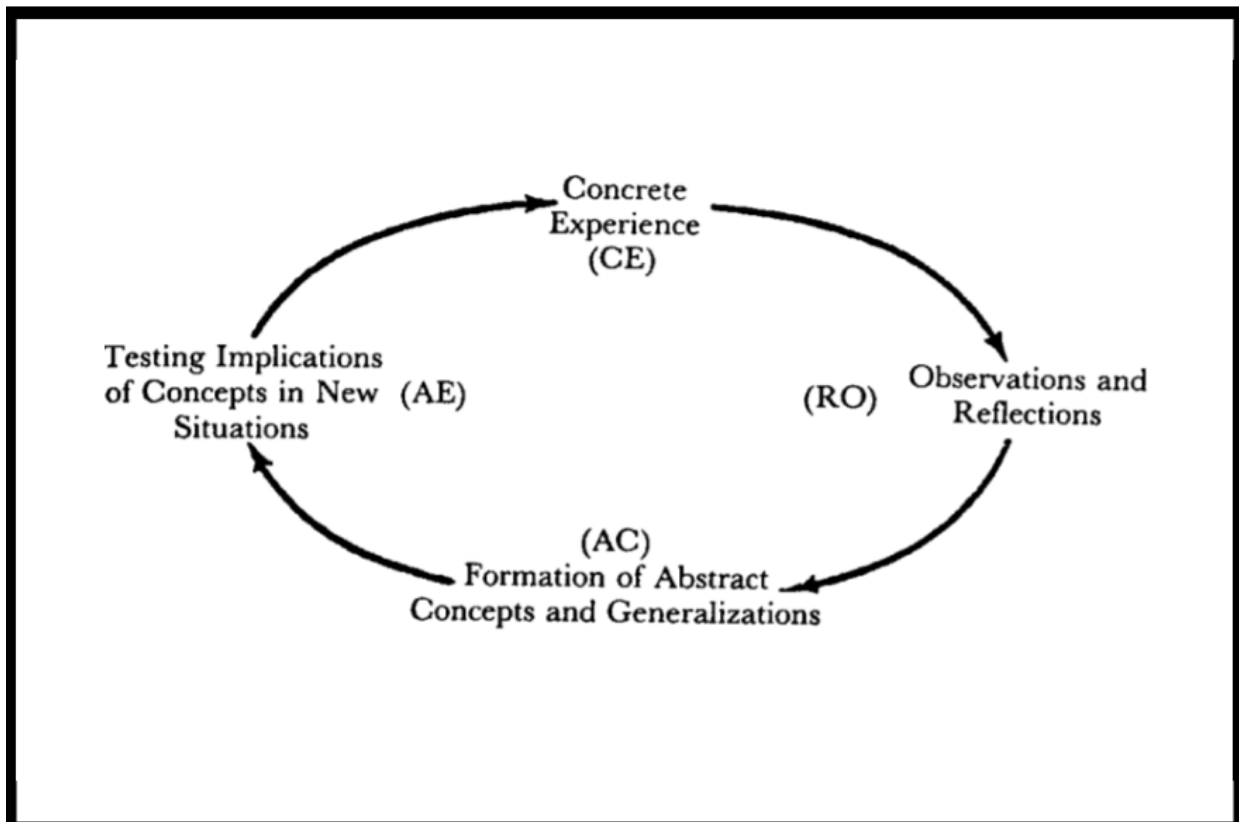
WHAT IS EXPERIENTIAL LEARNING

An important part of one's education is the opportunity to practice concepts that are taught in the classroom. Experiential learning provides students with professional experience in a classroom learning environment that fosters knowledge of skills that will be required in the workplace. There are many different ways for educators and employers to implement hands-on learning experiences for students depending on the subject, preferred learning environment, and student learning styles.

According to Ronald Fry and David Kolb, experiential learning is part of a four stage cycle: concrete experience, observation and reflection, formation of abstract concepts and generalizations, and testing implications of concepts in new situations (Fry 81). Concrete experience relies on a learner to be completely engaged in learning new material. Observation and reflection skills are a learner's ability to fully elaborate on an experience as well as from perspectives other than one's own. Formation of abstract concepts and generalizations are the

skills needed to take material and connect them to other theories. Testing implications of concepts in new situations introduces one's theories into their decision making process and new experiences. This cycle is important in the student's depth of understanding business concepts. A learner can start at any stage and move to another as they learn more about the topic. Figure 1 below is from page 81 of Fry and Kolbs' "Experiential Learning Theory and Learning Experiences in Liberal Arts Education" and visually displays the Experiential Learning Model and how it moves in a cycle. It also breaks down each of the four key components and where they are located relative to each other

Figure 1: Fry and Kolb's Experiential Learning Model



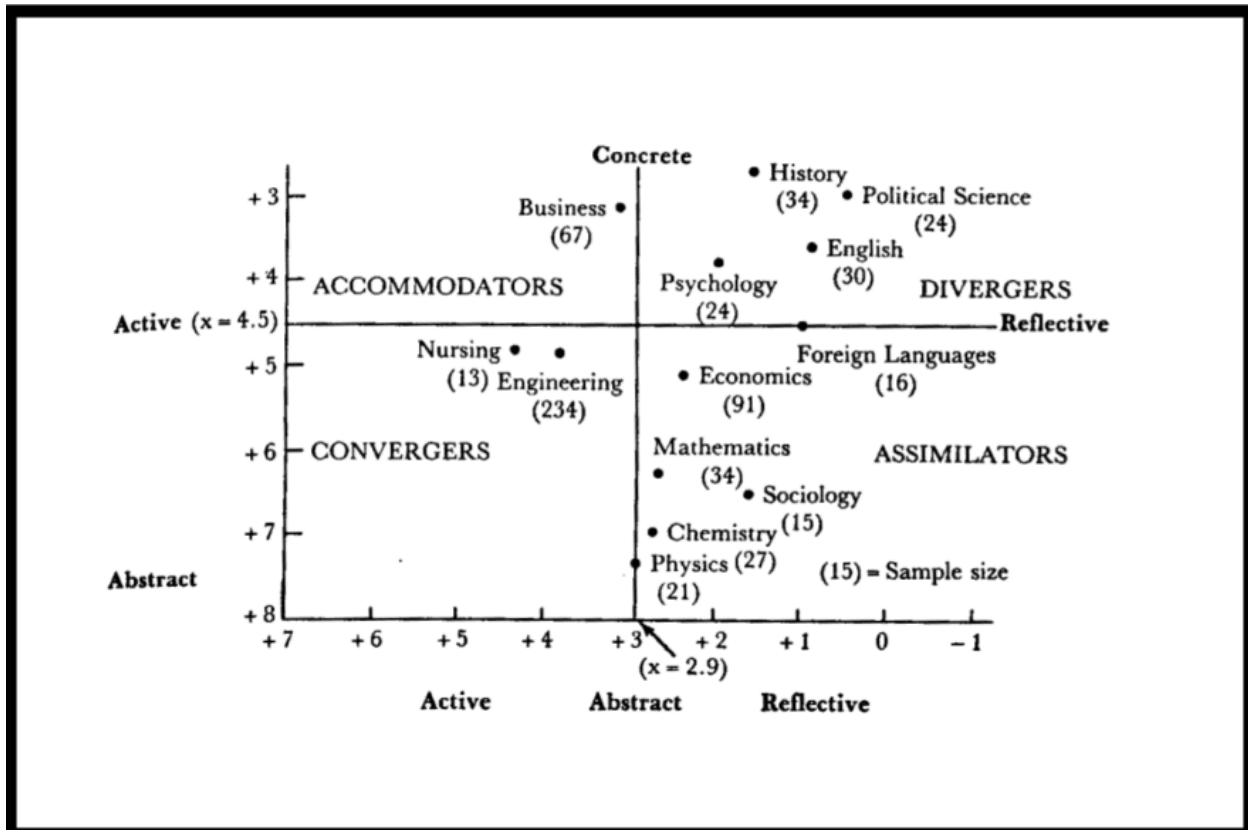
The Learning Environment that a student is in can also impact the benefits of experiential learning. Fry and Kolb describe four types of learning environments as Affectively Oriented,

Perceptually Oriented, Symbolically Oriented, and Behaviorally Oriented that coincide with each stage of the experiential learning cycle. An Affectively Oriented environment would have students realize and further develop their personal attitudes about a topic and teachers would act as a listener and provide feedback. A Perceptually Oriented environment would have students understand concepts and their relationships from a different perspective than their own and teachers would direct those discussions. A Symbolically Oriented environment would be designed so that students can master skills and use them to solve different problems or use specific terms to communicate in a subject and teachers would act as an interpreter in a field of knowledge. In a Behaviorally Oriented Environment, students ideally apply knowledge to solve real life problems as a professional in their chosen field would and would take responsibility while teachers act as coaches who provide advice and support but leave responsibility to the student. When combining these types of environments there are particular types of classes that emerge. An Investigative course would have perceptual and symbolic learning environments. A mastery course would involve laboratory based assignments. A simulative course would be a blend between an affective and behavioral oriented environment (83 Kolb).

Fry and Kolb also discuss students' learning styles as either concrete or abstract and reflective or active. Students with a concrete learning style tend to prefer affective learning environments while abstract learners opt for symbolic learning environments. Reflective styles tend towards perceptual environments while active styles seek behavioral environments. A simulative designed course that blends an affective and behavioral oriented environment aligns with most undergraduate Business Major's concrete and active learning styles. Below is the image that visually shows where Business undergraduates fall on the Active/Reflective and Abstract/Concrete chart (Kolb 85). It shows the different sides of the axis, x being active and

reflective and y being abstract and concrete. Business students scored a 67 which is located closest to the concrete side and slightly towards the active side.

Figure 2: Fry and Kolb's Average Learning Style Inventory Scores on Active/Reflective and Abstract/Concrete by Undergraduate Majors



Meena Chavan published a study about students in higher education's attitudes towards experiential learning practices. In the results, it can be seen that students had a positive experience with experiential learning in classrooms that were based on Kolb's model. It was also noted in the journal that it was easy to implement in the classroom and simple to modify existing courses to include reflective aspects (Chavan).

PROS

Some of the concepts taught in business classes are abstract and may be difficult to understand or transfer from theoretical to real world applications. Experiential learning provides an opportunity for students to have concrete applications for these theoretical concepts (Marriott). These experiences do not have to be in person to provide learning experiences. In an academic journal about Generation Z's perceptions following their involvement in a digital version of experiential learning, they reported higher levels of understanding, communication, teamwork, and positive feelings towards experiential learning overall (Adamiec). This would be beneficial especially during a time where a fair number of classes are offered remotely due to COVID-19.

CONS

As stated above, different forms of experiential learning work better than others based on a student's learning styles. If both are not aligned, this could result in a less than positive experience for both parties involved. In an article about integrating experiential learning through case studies, the authors point out some drawbacks to this particular experiential learning approach. They list a lack of time spent on specific projects, students with no prior experience with experiential learning, and different educational histories (Ramburuth). In introductory level courses, lecturers may have less time to spend going in depth on a subject compared to upper level courses. Typically a variety of topics are covered without much in depth exploration of the information. As a result, it may be more difficult for educators to implement experiential learning at that level due to time constraints. Students that are used to traditional classroom based learning such as lectures may have a harder time understanding what is expected of them and the learning environment is different. They may also have problems adjusting to new

classroom expectations that could lead to less participation. Past educational experiences could also impact a student's confidence in completing experiential learning projects or assignments.

WHAT IS COGNITIVE APPRENTICESHIP

Another well known guiding framework for education that can be applied inside or outside of the classroom is Cognitive Apprenticeship. Cognitive Apprenticeship is a form of apprenticeship with an added emphasis on education where teachers or mentors frame ideas and concepts in a way that relates to real world applications with a focus on the concepts behind the activities. In Chapter 4 of *Cognitive Apprenticeship* by Allan Collins, he briefly discusses the methodology behind Cognitive Apprenticeship. He states that there are four main sections that in combination form most learning environments: content, method, sequencing, and sociology (Collins 49).

Content consists of two types of knowledge: domain and strategic. Domain can be considered factual information and provide descriptions or processes. Strategic knowledge is information that is learned that helps to gain expertise and apply information in different contexts. Strategic knowledge breaks down into three types of strategies: heuristics, control, and learning. (Collins 49).

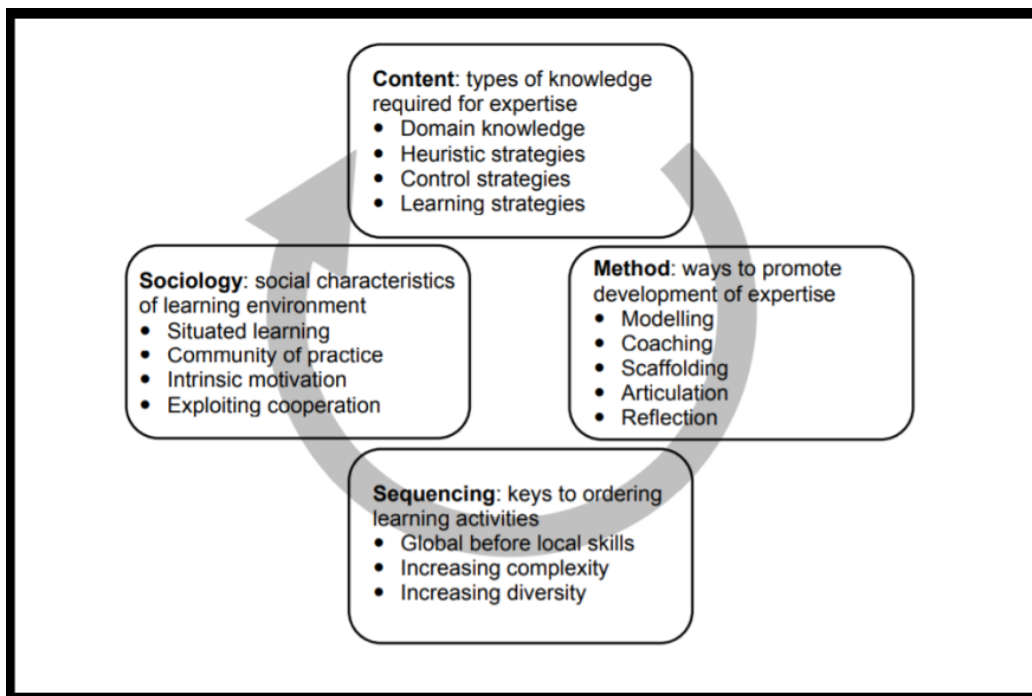
Method is the process behind the teaching strategies. There are six types: modeling, coaching, scaffolding, articulation, reflection, and exploration. A key distinction between traditional apprenticeships and cognitive apprenticeships is that traditional apprenticeships focus on the methods of modeling, scaffolding, and coaching whereas cognitive apprenticeship adds articulation, reflection, and exploration (37 Chan et al). Further explanation of how articulation, reflection, and exploration add a deeper level of thought is covered under cognitive apprenticeship and technology.

Sequencing refers to the order in which learning takes place. There are three main guidelines for the progression of sequencing in cognitive apprenticeship. These are increasing complexity, increasing diversity, and global before local skills (Collins 51-52). An example would be to take a simple equation with one variable and then add another variable. To increase diversity in the equation, another element of math would be introduced like fractions. Global before local skills is related to understanding the big picture of what the math equation is solving before performing the steps to solve it.

Sociology is the “social characteristics of a learning environment” (Collins 50). The key components of sociology are situated learning, community of practice, intrinsic motivation, and cooperation. An application of situated learning is giving examples of how the concepts have real world applications. Community of practice refers to sharing knowledge about the different ways to complete tasks. Intrinsic motivation is recognizing a student's internal goals towards accomplishing skills. Cooperation is having students collaborate towards completing their goals. (Collins 50).

Below is a diagram based on an academic paper that uses cognitive apprentice as a guiding model for research design that visually displays the four concepts of cognitive apprenticeship and their subcategories for developing a learning environment.

Figure 3: Varghese’s interpretation of The Cognitive Apprenticeship Model



COGNITIVE APPRENTICESHIP METHODS & TECHNOLOGY

In a chapter titled, “Cognitive Apprenticeship and Instructional Technology” written by Allan Collins, he describes six main forms of cognitive apprenticeship methods and how technology can be utilized in the classroom to achieve these forms of apprenticeship. The six forms of teaching methods are situated learning, modeling and explaining, coaching or scaffolding, reflection on performance, articulation, and exploration.

Situated learning can be described as framing concepts in situations where they would be applicable. Some benefits of this form are students learning how to apply classroom knowledge based on conditions, the real world application helps to foster innovative problem solving, students can see the implications of the learned material, and applying context to learning material helps to avoid learning only to take tests (Collins 122-123). An example of this would be learning how to solve math problems in a classroom and then using the skill to solve how

many materials are needed per project. It allows students to understand meaning beyond the classroom.

Modeling and explaining are grouped together because of their similarities in guiding the student during instruction. Modeling shows both the action and the thought process behind the action while explaining shows the procedures behind real world processes. Some benefits of modeling and explaining are that students rarely see these kinds of processes themselves through a textbook, it allows both audible and visual learning experiences simultaneously for a deeper understanding, and creates the ability to visualize aspects of a system that are not normally seen. (Collins 124-127). This teaching method is important to include in a curriculum because it walks students through the mentor's thought process when solving a problem.

Coaching is similar to traditional apprenticeship in that it focuses on individualized feedback. Some benefits include the opportunity to analyze students' problem solving in the moment to offer specialized help, allows assistance to be given in the moment of need, provides supervision to help students accomplish without providing too much or too little assistance, and introduces new perspectives (Collins 128-130). Coaching is an important technique to use in conjunction with other teaching styles because every learner will respond differently or learn at a different pace while fostering independence. Scaffolding is similar to coaching as it provides individual feedback but with more assistance, typically in the form of assistive technology.

Reflection on performance can be defined as having students look back on their performance or work with an analytical lens. Some of the benefits of using reflection are that it suggests students view their personal work as data to be analyzed, provides a comparison to peers, and allows students understanding of what is essential to success. Reflection on personal strategies can also help to categorize processes and spatial representations help students view

multiple examples and form comparisons between different levels of knowledge's approach. (Collins 130- 133). An example of reflection on performance would be asking students to compose a written response on their work after completing an activity.

Articulation has students verbalize understanding so that their knowledge is not only implied but stated. Some of the benefits are that it forces students to understand the material to a degree that the concept becomes understood in contexts outside of what was taught, identifying interdisciplinary relationships between concepts so that they can identify it in other scenarios, using learning strategies broadly so that they apply to in other contexts, and having an understanding that is deep enough to explain to another student so that both can see the idea from a new perspective.(Collins 133-135). Articulation could look like asking students to teach their peers about the topic they learned.

Exploration can be understood as a way for students to independently discover ideas outside of the classroom. It provides the ability to set realistic goals, the skill to create and test hypotheses, and the drive to make discoveries independently. (Collins 135). This could look like asking students to find and research an interesting article outside of class to share.

All of these methods of cognitive apprenticeship can be implemented through a variety of forms of technology. Recently, many universities have offered online learning due to the Coronavirus pandemic. Some examples of online learning in business schools include online simulations and zoom meetings.

PROS

Some of the positive elements of cognitive apprenticeship are the involvement between the student and mentor, the growing independence, and fostering confidence. The methods of Cognitive Apprenticeship can help to improve the learning experience especially between the

student and the mentor. Increasing independence is another positive aspect because students may learn concepts well enough to grow into the mentor role for other students. Fostering confidence is another beneficial part of this learning process because of the individualized feedback and tangible experience. Additionally, it provides the opportunity for students to learn key soft skills in addition to the intended skills. The online applications of cognitive apprenticeship are another benefit that allow learning to continue in a digital environment. Simulations are one way for cognitive apprenticeship to continue in a remote working environment while still developing key skills. Cognitive apprenticeship is a type of learning framework that would work well if applied in an internship.

CONS

A drawback to cognitive apprenticeship is that it is difficult to implement in a traditional classroom learning environment. A lot of business school topics are conceptual and class sizes are large, which would make some of the methods of cognitive apprenticeship difficult to execute on a large scale. Another potential negative aspect is the delivery of cognitive apprenticeship in a technology setting. Specifically through the use of simulations or games, students may not be able to correctly identify the necessary skills that are being targeted or the academic association when using the software as seen in the Finance example below.

In terms of applying cognitive apprenticeship in an internship setting, a drawback would be lack of time or resources. In a work environment mentors and managers have other responsibilities and may not be able to share as much knowledge with students due to their other responsibilities. This can be mitigated by assigning interns a designated point of contact or setting aside a regular meeting time to discuss any questions.

SIMILARITIES/DIFFERENCES BETWEEN EXPERIENTIAL LEARNING AND COGNITIVE APPRENTICESHIP

Experiential learning includes creating an educational environment that aligns with students' learning style while following a structured cycle. Cognitive apprenticeship is a form of experiential learning, as it creates a learning environment that is typically symbolically or behaviorally oriented and is designed for active and concrete learning styles. It follows the experiential learning model, but with more specific guidelines as to the type of experience (content) observations/reflections (methods), formation of abstract concepts and testing (sequencing). The sociology concept of cognitive apprenticeship describes the specific aspects of the learning environment such as symbolically or behaviorally oriented.

Experiential learning's four sections of Concrete Experience, Observation and Reflection, Formation of Abstract Concepts, and Testing Implications of Concepts in New Scenarios align with the concepts discussed in cognitive apprenticeship. Concrete Experience aligns with the type content and experience in methods. Observations and Reflection in experiential learning relates to some of the specific methods of cognitive apprenticeship like articulation and reflection. Both are focused on the assessment part of learning. Experiential learning's concept of testing implication of concepts in new settings is similar to sequencing in cognitive apprenticeship. Both are focused on transferring learned concepts to new situations. Although, sequencing goes into more specific ways to broaden understanding of concepts in new environments through increasing complexity and diversity. These parts of each framework are focused on taking concepts and applying them to new situations while increasing complexity.

Experiential learning is emphasized as a cycle where cognitive apprenticeship is more like a training and graduated process. Learning is a process where there will always be new

information available whereas cognitive apprenticeship has more of a clear outlined goal and task that must be accomplished. Experiential learning would have more benefits when applied in a classroom setting due to its broad possibilities whereas cognitive apprenticeship would be better used as a guiding process for specific classroom learning environments or internship development.

In the figure below from Jonick's academic paper, one can see the relationship between the teaching aspect and cognitive apprenticeship as well as the learning aspect and experiential learning. This shows how each of the frameworks work together in developing an educational environment. The components of teaching, such as content, method, sequence, and sociology are controlled by the educator, whereas the parts of learning like reflective thinking, transfer, context/base language, and social environment are more focused on the collaboration between educator and student or between students and are general towards experiential learning. The individual ideas within the matrix relate to experiential learning but are specifically related to cognitive apprenticeship. This visually shows how both frameworks can be applied together in a behaviorally oriented learning environment for business students.

Figure 4: Jonick's visual of the Teaching/Learning Theory Matrix (63)

Teaching/Learning Theory Matrix				
Learning	Teaching			
	Content	Methods	Sequence	Sociology
Reflective thinking	Control strategies	Reflection		Intrinsic motivation
	Heuristic strategies	Articulation		
		Exploration		
Transfer	Learning strategies	Reflection		
Context/base knowledge	Domain knowledge	Scaffolding/fading	Global before local	Situated learning
			Increasing complexity	
			Increasing diversity	
Social environment		Modeling		Culture of practice
		Coaching		Exploiting cooperation
		Exploration		Exploiting competition

Situated learning is also a connecting point between experiential learning and cognitive apprenticeship. In a book written by Lave and Wenger, they describe the term situated learning further to include what they call legitimate peripheral participation. Learning is inherently a social practice and takes place within communities. Apprenticeship used to be synonymous with the term situated learning. Legitimate Peripheral Participation is a term used to further describe situated learning in better detail. It is something that happens whether implemented or not, and is simply used as a way to define a byproduct of a general learning environment between novices and experienced individuals and how knowledge is shared between them (Lave and Wenger 35). This is something that happens both in cognitive apprentice and experiential learning as

legitimate peripheral participation pertains to connection and collaboration between individuals and happens in most social environments and communities of knowledge.

The Experiential learning framework is the broad overview for classroom design while cognitive apprenticeship is more specific and geared towards a specific type of student. Both frameworks for teaching concepts have benefits to Business students and place an emphasis on collaboration. In the examples below, students see benefits from experiential learning in simulations focused on finance, international business, marketing business management, and supply chain management. Students also saw benefits from cognitive apprenticeship in internships at small start ups where students learned entrepreneurial and professional skills.

FINANCE EXAMPLES

In a study on simulations surrounding trading at a business school in the UK, the research supports the claim that simulations helped to reinforce the student's understanding of financial concepts and stock trading (Marriott). This study was designed based on the structure of experiential learning and focuses on the business concepts of finance and investments. This study was conducted at the graduate level and took place during the years 2010/2011 and 2013/2014. (Marriott 487). The study was structured to introduce the students to the simulation equipment and how it works, which applies to the concrete concepts of experiential learning. Following was a brief discussion of how the simulation went, which relates to the observation and reflection part of experiential learning. They discussed how to do better in the next round of simulations, make connections between what works and what doesn't, and compared results with classmates. During this reflection period, the students were able to create new concepts that they were able to apply in future rounds of the simulation. Students were also able to implement concepts that they have learned in the simulation outside of the digital environment. This online

simulation of the stock market followed Kolb's experiential learning model and showed positive results for the students. Some of the drawbacks that were highlighted in this study were that the simulation can be viewed as a game (Marriott 488). To combat this and have students view the simulation in a more academic sense, graded assessments were based on reflection not game performance. There is also the possibility of not choosing the correct software (Marriott 490). In addition to the wide variety of options available, there are resources that are available to run the simulation in case of system errors or internet malfunctions. Overall, students were able to learn a variety of topics "such as portfolio risk and return, short vs. long position, volume weighted average price and bid-ask spread, all in the context of a real-world setting during the simulation" (Marriott 490).

INTERNATIONAL BUSINESS

In a study that proposed a class structure on collaboration between international students and a focus on community work, researchers found that an online design may help to facilitate growth for both students and the non profit sectors during a time where travel is difficult due to monetary constraints and COVID-19 (46 Inchaouh). This study designed a framework for which educators would have students from the US and Morocco collaborate weekly using various technologies such as Zoom or Skype and simulations to work towards a social impact focus on social entrepreneurship or environmental sustainability using academic concepts like marketing, economics, and management (46 Inchaouh). If the project were to be implemented, it would provide the concrete experience, observation and reflection, formation of abstract concepts and generalizations, and testing implications of concepts in new situations as parts of experiential learning. The course was designed to provide work experience with an emphasis on providing exposure to different cultures.

ACCOUNTING EXAMPLE

In a class structure on cognitive apprenticeship models in accounting simulations, the researcher notes how the majority of accounting classes at the university level are lecture based and how this acts as a barrier for implementing situated learning (Jonick). Jonick also makes a key distinction, “it is highly unlikely students will develop basic accounting principles on their own. This is neither the expectation nor the most desirable outcome. Instead, students discover the need for such knowledge and see it as a welcome solution to their problem” (Jonick 11). The class structure utilized a simulation on basic accounting principles and cycles, like recording transactions that aligns with the main concepts of cognitive apprenticeship. Content contained both domain and heuristic knowledge. This was accomplished through technical knowledge covered in traditional material such as textbooks and lectures in addition to information shared outside of the textbook like word of mouth and shortcuts. Methods contained all six major components. Modeling consisted of explanations and the opportunity to observe by instructors. Coaching was used through instructors offering reminders and help to direct work towards the target. Scaffolding was utilized through offering assistance when needed and eventually weaning help as time progressed. Articulation was achieved through students composing a reflection and comparing outcomes to the goal outcome. Exploration was included through having students research real comparative financial reports from other businesses. This simulation also addresses the sequencing aspect of cognitive apprenticeship. It increased complexity of transactions, variety of transactions, and presented big picture concepts before introducing local problems. Sociology was also addressed in this example. Situated learning was addressed by developing skills in multiple contexts within a business venture. Culture of practice involved use of video models and conversations about how to gain proficiency. Intrinsic

motivation was accomplished through incentivising winning the simulation. Exploiting cooperation was done through team formatting and accountability from peers. Overall this research has shown to be successful in student's gaining a better understanding of accounting principles using a different perspective to traditional teaching methods like lectures.

MARKETING EXAMPLE

In a study conducted within a marketing course focused on sales, the experiential learning course was designed with a focus on peer learning (Lastner). This form of experiential learning puts an inexperienced student in a mentee position and matches them with a more experienced student who is considered to have an advanced understanding of the subject. The experiential learning was focused around a sales role play and conducted most research on the participant's perception on the effectiveness of the role play as a learning tool. Mentees noted that they enjoyed gaining real experience, becoming more comfortable with their mentor, receiving instantaneous feedback, and participating in a challenging activity. Mentors liked thinking about the sales situation from a different perspective such as the buyer, reinforcing learned concepts, and the opportunity to be a coach. Mentees stated that they learned more about the entire sales process and steps, specific skills, and how to perform in a more realistic setting. Mentors learned from seeing the points of struggle and which topics were emphasized as a result, mentees became teachers at points, and allowed learning from an opposing viewpoint. If this study were to be conducted again, suggestions for improvement include having advanced students complete training, scheduling longer or frequent meeting times, and a smaller advanced student to mentee ratio.

BUSINESS MANAGEMENT EXAMPLE

In a study conducted by Emblen-Perry, management students participated in an experiential learning activity focused on conducting sustainability audits using case studies on fictional companies and measured cognitive investment, emotional commitment, and active participation. The in class exercises directly correlated to the typical audit process. These included independent research, posing questions to the group, film-making, environment impact assessments, audit workshops, Meet the Manager Sessions, and tutor and peer reviews (Emblen-Perry 1197). These exercises relate to the experiential learning framework of defining the concrete experience through mimicking the sustainable audit process, allowing for observations and reflection through after activity discussions and completing environmental impact assignments, creation of abstract concepts through tutor and peer reviews and Meet the Manager Sessions, and identifying how to apply those concepts to new situations at the completion of the course. Students completed a pre and post class survey where they indicated that they felt they had gained knowledge in areas of sustainability they were not familiar with (Emblen-Perry 1208). They also identified employment skills that they improved in as collaboration, negotiation, and influencing being the top skills (Emblen-Perry 1205). Researchers found that their findings suggest this framework supports medium to strong cognitive investment and active participation as well as an increase in student's attendance as a positive outcome from experiential activities with passionate educators (Emblen-Perry 1209). This example shows the benefits of experiential learning and how it can be implemented into a Business Management curriculum through using a variety of experiential learning activities.

SUPPLY CHAIN MANAGEMENT EXAMPLE

In this example, researchers used a simulation known as the Hunger Chain that focused on supply chain concepts that were particularly difficult to implement in a traditional lecture setting. These concepts were shortage gaming, supply chain rationing, and inventory rationing. (Song et al). In this study, one group of students participated in the simulation at the end of semester before completing an exam while the control group of students did not participate in the simulation and took the same exam. This simulation was not designed with the experiential learning model in mind, although it does mimic the experiential learning model through providing concrete experience, encouraging observations and reflections through post simulation questionnaires, helping form abstract concepts by introducing the simulation following lectures, and help to apply concepts in new scenarios through introducing real world application of the concepts. The results were that students who were exposed to the simulation performed better on the exam than those who did not (Song et al 207). Student's perceptions were also mostly positive, although suggestions were to be placed in small groups, play through a few test rounds, and provide some examples before completing the simulation to help avoid confusion (Song et al 208).

SIMULATIONS

In a course focusing on simulations, business students with little to no prior experience creating models or simulations were able to do so upon completion of the course. Experiential learning was not stated as part of the original guide for creation of course materials, however the general design aligns with the 4 steps in the experiential learning model. (Hwarng). The first and second parts of the project mirrors concrete experience. The instructor dedicated 10 hours of

material towards explaining the purpose of the assignment and what simulations can be used for in different contexts as they pertain to business. The second portion of the class was structured around creating meaningful inputs and analyzing data that is used to run simulations. The third section relates to observation and reflection by placing a focus on other examples of simulations in different contexts and utilizing case studies. The fourth part focused on testing their understanding of simulations and applications in new situations through team consultation with the instructor to receive feedback on each team's simulation project. This example shows how simulations and modeling technologies following the experiential learning model can be used to help develop skills and be received positively by students.

COGNITIVE APPRENTICESHIP AND INTERNSHIPS

Internships are another example of cognitive apprenticeship that can positively impact a student's learning. They are also an integral part of a student's education with a majority of students completing an internship over the summer between their Junior and Senior years for academic credit and development of soft skills. Many summer internships present various opportunities to learn skills and concepts that cannot be taught in a classroom. For example, stress and time management, adaptability, and professional etiquette.

In an academic article, "Experiential Internships: Understanding the Process of Student Learning in Small Business Internships", the authors discuss the specific benefits of completing an internship at small businesses and start up companies as entrepreneurial experience, gaining independence in completing tasks, and creating close relationships with supervisors (Varghese et al). These benefits relate to the cognitive apprenticeship model of modeling, reflection, and coaching. They conducted an analysis of students' perceptions based on Collin's model of cognitive apprenticeship and their findings support his theory. Through analysis of each segment

of the model, the students showed that they were able to better understand concepts taught in the classroom while simultaneously learning new skills to help them in their careers.

In another study focused on cognitive apprenticeship and implementation at the corporate level, researchers found there to be benefits in students and positive outcomes during training. (Chan et al). The specific reasoning for implementing cognitive apprenticeship in this example was to solve the problem of a high turnover rate in the food and beverage industry as well as difficulty training. Some examples of the specific tools used to implement cognitive apprenticeship in this study are “problem-centered instruction, A/V demonstrations, chunking, virtual practice, online and on-site assessment, data tracking, and instruments aimed at helping learners transfer learning to the workplace.” (36 Chan et al). Some of these tools are used in the digital environment which further supports the use of technology as a key factor in cognitive apprenticeship. Problem-centered instruction would help to guide students to think through problems and their solutions as they pertain to the new information and how it relates to their responsibilities in their role. A/V demonstrations or audio/visual and virtual practice would help to see the skills while experiencing some of the aspects of the environment that they are applicable to through the method of modeling or explaining. Assessments also help with the transfer of knowledge, such as the cognitive apprenticeship method of articulation. These tools were able to help solve some of the training issues with new hires.

Internships are also a way for students to apply concepts that are taught in the classroom. There will be differences in internships due to each program having a unique structure but many will have aspects that mirror the methods of cognitive apprenticeship. For example, a program may have a mentorship aspect where each intern is paired with a higher level employee to provide the cognitive apprenticeship method of coaching. There may also be a group of interns

that share the same mentor that offers the cognitive apprenticeship method of modeling.

Typically, at the beginning of an internship, most will have to complete some research that is related to their industry and specific to the company they are working for and how they fit into that market. This would be part of exploration. They may also complete some form of generalized training at the start of their internship which would be a form of modeling. At the end of the internship, most interns will complete a self evaluation with their manager to see how their performance compares to their manager's expectations. This would be a form of reflection. There might also be a presentation that the intern will need to compose at the conclusion of their internship that would show what they have learned over the course of their internship. This would be part of articulation as they are relaying information to others. Based on Collin's framework for cognitive apprenticeship, internships would be an excellent way to reinforce classroom concepts that utilize all forms of cognitive apprenticeship methods.

CONCLUSION

The majority of business students have a concrete and active learning style that aligns with affective and behavioral learning environments. These courses typically involve some simulation aspects. Experiential learning and cognitive apprenticeship can offer a simulation aspect to provide the optimal learning experience for Business students. There are a multitude of ways for simulative activities to be implemented during a student's higher education career, whether they be physically in the classroom, in a virtual setting, or during an internship. As covered in the examples in this paper, many schools and companies are implementing cognitive apprenticeship and experiential learning activities with an emphasis on collaboration at both the undergraduate and graduate levels. Similar business concepts are taught using simulations in subjects such as Finance, Supply Chain, and Accounting. It should be noted that schools are

commonly implementing courses with experiential learning and cognitive apprenticeship methods without explicitly defining them. With more knowledge of the methodologies behind the theories of experiential learning and cognitive apprenticeship, they may become easier to implement into a range of business courses and therefore the benefits will be more available to students. These methods have positive educational benefits when implemented at the introductory level for fields like Accounting and Marketing as well as more advanced courses like International Business and Business Management.

These courses have a positive impact on student's understanding of business concepts and are well received. Experiential learning models help students to perform better in real world environments. In the Accounting example, the research showed that it was successful in students gaining a better understanding of material using a different method other than traditional lectures. In the Marketing example, mentees noted that they gained real experience, became more comfortable with their mentor, received instantaneous feedback, and participated in a challenging activity. In the Business Management example, students gained employment skills such as collaboration, negotiation, and influencing. The researchers' findings also suggest that the experiential learning framework supports medium to strong cognitive investment and active participation. In addition to an increase in students' attendance when conducting experiential activity with passionate educators, in the Supply Chain example, students who participated in the Hunger Chain simulation performed better on the exam than students who did not. In internships, students gained entrepreneurial experience, developed independence, and created close relationships with supervisors. These are just the main benefits identified in these studies. Due to the overlap between the experiential educational models, there are only a few steps to take to transform other courses so they become a form of experiential learning.

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