

INTEGRATION OF SOFT SKILLS NEEDS OF INDUSTRY 4.0 THROUGH ACTIVE LEARNING IN MANAGEMENT CLASSROOMS

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Abstract:

The industry scenario has changed at a rapid pace and is still changing. It's a whole transition from the first industrial revolution in England to the fourth taking its roots from Germany, popularly termed as the industry 4.0. To keep pace with these rapid changes, the workforce too needs to change their skills and competencies at the same pace, but this process is slow and lagging behind. There is an imperative need today to imbibe the changing scenario within the nascent mindset of our forthcoming generations of management graduates. There is an urgent need to integrate the skills needed by the workforce of industry 4.0 through active learning in the management classrooms. This would help the student managers to be corporate ready and take up the challenges thrust upon them by the changing industrial and corporate environment. The change in the industrial climate is forcing us to move towards green products which are safer for consumption by the human population and also for its disposal after use so that the environment is taken care of and to meet the concept of achieving sustainable development goals for the industries, globally.

It is critical for student manager to acquire new set of skills, not only in the areas of science and technology but also soft skills like creativity, leadership empathy towards the co-workers, team building and others, these capabilities termed as soft skills would contribute in a big way towards personal and professional growth from the perspective of industry 4.0. The student manager today has to lay emphasis on social skills as it is all about building and sustaining relationships with stakeholders.

This is all about overall development of student manager and making them employable as well as sustaining their place in organizations, by imbibing the principle of continuous improvement in skills and abilities, moreover to make continuous learning a habit.

Keywords: Industry 4.0, Sustainable Development, Management Education, Soft Skills, Environment, Green Products, Change Management, Industrial Revolution, etc.

Introduction

The only thing constant is change. We have to change ourselves continuously daily with our experiences and learning from each interaction we have with people in our work and personal environment. The ability to utilize interpersonal skills is essential in the workplace and personal lives. Interpersonal skills often referred to as soft skills, include communication, listening, team problem solving, cross-cultural relations and customer service (Dubrin, 2004). Several studies have been conducted to provide credence for the importance of interpersonal skills needed in business and industry (Murnane, 1996, Maes, Weldy & Icenogel, 1997; Argenti, & Forman, 1998; Cameron & Whetten, 2002, <http://www.mba.com>, <http://www.westga.edu/~bquest>). From these

studies, soft skills emerged as the top skill business and industry look for in job candidates, especially in the fast changing industrial world and moving towards the fourth and the fifth industrial revolution, moreover with the emergence of the trans-national organizations taking a leap forward in each continent of the world. China and India might approach saturation limit in the coming 10 years, so the next destination for the global spread of organizations is African continent, which is still more or less a virgin land with rich reserves of natural resources. The population there has begun to enhance their education and skills in anticipation of welcoming global organizations to set up their manufacturing and distribution base in the continent. Soft skills are hence emerging as the biggest challenge

globally for the student managers of today to get international placements and give a leap forward to the profits of the organizations they would work for. For example, data from a survey conducted by the National Association of Colleges and Employers, the Job Outlook 2000, ranked verbal communication [4.61], teamwork [4.61] and interpersonal [4.54] as the top three soft skills required.

These finding can also be used to support feedback from business and industry, which continue to suggest dissatisfaction with the lack of academic preparedness by some recent graduates and/or employees (<http://www.pathfinder-one.com>, Mackenzie, 2004, Alsop, 2004, <http://www.economist.com>). This assessment provides management instructors

with data that can be used to modify the curricula and teaching techniques considered necessary to prepare future business leader with skills necessary for the 21st century workplace. An important stakeholder to consider while incorporating this data into programs and/or courses of study is the population being served, students and/or future business leaders. Especially, if the stakeholder has prior experiences and/or currently employed in business and industry. The voice of the customer is a source of knowledge concerning performance of the production and service system (Foster, 2001).

Today it's all about the transformation of passive learning to active learning in the management classrooms. This concept has evolved over the ages and now making learning more practical and fun oriented so that the concepts of management become permanent in the minds of the student managers and they understand the need and importance of changing continuously in their skills and competencies. The principal of Kaizen in TQM is applicable to all of us in the continuous development of our skills and competencies.

What is Active Learning?

Learning is considered an active activity, rather than one that is passive. For those not familiar with the term 'passive', Cambridge Dictionary defines it as "not acting to influence or change a situation; allowing other people to be in control". Being 'active', on the other hand, is being busy with a particular activity, actively trying to engage with it. Throughout business school, students should aim to be active learners in order to process, retain and apply the information presented to them. It's easy to fall into the trap of passive learning, but with the right knowledge, you can ensure you become as active as possible during your studies and maximize the learning experience. Whether you're a new student or close to finishing your degree, consider the below to learn

how you can better become an active learner.

Active vs. Passive Learning

If a student reads, listens or observes in a passive manner, it can result in information transfer. However, a simple transfer without judgment will not lead to effective learning as all information will be given equal weight. An active learner will engage with the material, conceptualizing what it means at the time of acquisition. A passive learner may retain some of the information, but without engaging with it, will struggle to both retain and apply in a practical sense. As such, business school students should aim to be active learners – processing and questioning the information when discussed. The more that you actively engage with the content at the time of learning, the better you will be able to recall and apply in the future. Better you are ready to take on the fourth industrial revolution scenario with a bang and with full confidence and assuring yourself for a good placement.

Preparing for an Active Study Session

The thought of preparing before learning may seem redundant to some students, but it has great value for active learners. Before watching a lecture or presentation, undertaking research or reading new material, you should read the subject guide first and identify the core issues. Regardless of the mode of delivery, a student's first step should be to distil the information into 'background', 'core' and 'supplementary'. Background information provides a foundation for more detailed discussion and will often contextualize the core issues. The core issues are those that must be mastered in order to have a basic level of competency in the subject or in practical scenarios at your workplace and are identified in the student materials for each subject. Lastly, supplementary materials give substance and detail to

the core issues in the industry as of today's scenario.

Listening to a Presentation or Lecture

When listening to a lecture, presentation or audiobook, the first step should be to take legible notes that highlight the core issues discussed and linking them with today's industry scenario. It's important not to transcribe the presentation, but instead, write down the major points that you are dissecting. If you don't understand a particular word or concept, make a note of this too. Note taking reinforces active learning and helps learners stay focused and engaged during the presentation. The difference between active and passive learning, in this case, is listening versus hearing. According to 'Skills You Need', "That is fully concentrating on what is being said rather than just passively 'hearing' the message of the speaker." Make an extra effort to engage with what the presenter is discussing, and asking questions in case of any clarifications or doubts and later pursue the different thoughts that came to mind. Sharing the thoughts with your instructor and fellow students in class or your specific teams.

Actively Reading and Comprehending New Materials

Reading learning materials is slightly more complex, as different techniques will work for different students. That being said, there are some general tips that will promote active reading for the vast majority of students. This involves two parts – research and reading. As discussed above, active learners should identify the core issues before they begin their learning. This is very applicable for reading, and should be expanded on by skimming the chapter titles and headings, and scanning the article to identify references to the core issues. Then, active readers should read the material one paragraph or sub-topic at a time, allowing time to critically process the information. Readers

should underline any words that are not understood, check the meaning of these words, and re-read any sections that you feel were unclear or were perhaps read passively. Finally, you should note down what is stated about the core issues, which will ultimately help you in information retention.

Analyze and Critique the Information

In business school, a tertiary level of critical analysis is required, so it's important to consider this while you are learning. This involves two steps – analysis and critique. When analyzing the information, identify any omissions, questionable conclusions, assumptions made, or any preconceived ideas of the author/presenter. Then, form critical thought to identify or explore the strengths and weaknesses of the information, compare the material with other sources, and form an opinion. One means of testing your level of comprehension is to try and paraphrase the information using simple English and explain what you've learned to someone else. This step will test whether the required level of comprehension has been met, and what still needs to be worked on in an active manner. It's all about learning and application of knowledge at your workplace.

What do You Think?

Overall, effective studying involves identifying the core requirements, distilling information, understanding the information, making notes, and forming personal opinions on the topic. This is the essence of active learning, and those considered active learners are proficient in all steps.

Paradigm Shift towards the Fourth Industrial Revolution

The Fourth Industrial Revolution, toward which we are facing as a society, is still in its infancy but growing exponentially. Advances in technology are disrupting almost every industry and

in almost every country. No longer do natural or political borders significantly reduce the acceleration of change.

Today, we are taking our first steps into the Fourth Industrial Revolution, created by the fusion of technologies that overlap physical, biological, and digital ecosystems. Known to some as Industry 4.0, these possibilities have been defined as “the next phase in the digitization of the manufacturing sector, driven by four disruptions: the astonishing rise in data volumes, computational power, and connectivity; the emergence of analytics and business-intelligence capabilities; new forms of human-machine interaction such as touch interfaces and augmented-reality systems; and improvements in transferring digital instructions to the physical world, such as advanced robotics and 3-D printing” (Baur & Wee, 2015). Such systems of automation enable intelligence to monitor the physical world, replicate it virtually, and make decisions about the process moving forward. In essence, machines now have the ability to think, problem solve, and make critical decisions. In this era, the notion of big data and data analytics will drive decision-making.

To prepare learners for success during the fourth, or even fifth, industrial revolution the notion of education has to change at scale. If all of the change we are seeing has taught us one major lesson it is that schools must prepare kids to do anything, not something. Having current and future generations go through the motions and “do” school just won't cut it. Just because it worked for us as adults, does not mean it works or even serves, well for our learners. The transition to the Fourth Industrial Revolution does not spell doom and gloom for society as we know it. The idea here is to be proactive, not reactive, and to understand where opportunities lie for growth and improvement in education systems across the globe.

Top Ten Soft Skills That Employer Would Be Looking for the Fourth Industrial Revolution

1. **Complex Problem Solving:** The process of details of a problem to reach a solution. As the industrial scenario is fast changing its imperative to have this skill in case of understanding complex situations in business and solving them appropriately.
2. **Critical Thinking:** Making reasoned judgments that are logical and well-thought out, of the various business situations faced by organizations in this changing and turbulent environment. It is a way of thinking in which you don't simply accept all arguments and conclusions you are exposed to but rather have an attitude involving questioning such arguments and conclusions. It is thinking out of the box as no one else can. It is all about applying your mind and thinking capability about thinking solutions towards complex business issues and coming up with some brilliant outcomes in the interest of your organization. It's all about being more competitive and earning more profits.
3. **Creativity:** Mental characteristic that allows a person to think outside the framework of his mind, which results in innovative or different approaches to particular business issues. Creativity today is in all business areas such as human resource, marketing, finance, operations and sustaining competitive edge over competition as in the fourth industrial revolution the competition is evolving very fast, and we have to keep our organization always ahead by creating new opportunities out of nowhere and creating opportunities towards earning more profits and enhancing the brand equity.

4. **Management Skills:** Having the capacity to run a business. It's being able to make the right choices while managing the overall performance of the company. Management skills have evolved a great deal in the changing business scenario of today, as we have to create and sustain the market position of our organization, the managers need to sharpen and upgrade their skills every day, by learning from their mistakes and creating more opportunities from ideas which have clicked. It's a continuous process of enhancing skills as a manager.
5. **Coordination:** The unification, integration, synchronization of the efforts of group members from various departments and specializations so as to provide unity of action in the pursuit of common goals. It is a hidden force which binds all the other functions of management. Coordination is needed in all the important management functions such as planning, organizing, leading and controlling.
6. **Emotional Intelligence:** The ability to recognize your emotions, and emotions of the members of your teams to understand what they're telling you, and realize how your emotions affect people around you. It also involves your perception of others: when you understand how they feel, this allows you to manage relationships more effectively. This is all about stepping in the others shoes and thinking in a way they might think about a business or a personal situation.
7. **Judgement and Decision-Making:** The thought process of selecting a logical choice from the available options. For effective decision making, a person must

be able to forecast the outcome of each option as well and based on all these items, determine which option is the best for that particular situation. This skill is very crucial for the success of any business enterprise as a manager you might think on any complex business oriented tasks every minute as the changing business scenario in the fourth phase of industrialization would pose great challenges, as well as opportunities. We as a manager need to judge the recent trends and then take the final decision on the complex problems.

8. **Customer Focus:** Business today is customer centric. The customer dictates whether we would be in business for long or no. In this era of rapid change and customer having much more option and choice than ever before, we can label customer as the queen. As the queen needs pampering and attention at all times so the business of today needs to analyze the changing needs, wants, and demands of the customer and fulfil them at a profit. Having a customer focus usually includes maintaining a great customer service both pre and post sales. So the manager in this era should have lots of patience and customer centric approach if they need continuous flow of profits for their organization.
9. **Negotiation:** Method by which people settle differences. It is a process by which compromise or agreement is reached while avoiding argument and dispute, both within and outside the organization. Negotiation is an emerging skill attribute as organizations have to negotiate and save costs for the organization and sustain competitive edge.

10. **Cognitive Flexibility:** The brain's ability to transition from thinking about one concept to another. The quicker you are able to switch or "shift" you're thinking from one dimension to another, the greater your level of cognitive flexibility. It's all about coming out a situation fast once the task is complete and focus on the other tasks at hand. It needs quick response by keeping your wits around you. In this era of industrialization its all about keeping an open mind towards the various business options and choosing the best options.

Conclusion

Corporate recruiters want candidates with soft skills who add value with their soft skills, and also have the ability to make a difference in the workplace. Business employees need to communicate effectively, get along well with their co-workers, embrace teamwork, take initiative, have high work ethic, and portray professionalism in the 10 most critical skills needed in the era of the fourth industrial revolution, along with the other basis soft skills as working in teams, communication skills, effective presentation skills, work ethics and others. The management schools today imbibe these skills in student managers through active learning and participation. Keep regular checks on their learning's and reiterate the importance and benefits of these skills in today's industrial scenario, as this is the era of competition and the theory of Darwin- Survival of the fittest upholds its significance.

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