TOOLS FOR SUCCESS IN CONTEMPORARY INDUSTRIAL WORLD

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Abstract

This paper presents a summary of contemporary thoughts on which skills are necessary to succeed in the fiercely competitive workplace which go above and beyond the normal professional skills required in the field. In this author’s opinion among the most important ones are the ability to understand the culture of the workplace, ability to lucidly and cogently express and present ideas, ability to deal with the upturns and downturns of the economy, creativity in problem solving, willingness to take risks, understanding of the political realities in the institution, commitment to social responsibility and demonstrated willingness to advance one’s knowledge in the field thus avoiding becoming obsolescent.

INTRODUCTION

Over the years the demands for new and modern skills have gone up and up and up. More subject matter is packed in the curricula of just about every discipline, from business to engineering, from medicine to economics, from geography to meteorology and so on and on. The complexity of the workplace has increased, people of all ages, genders, orientations, national origins and backgrounds have to harmonize their efforts, the boundaries of international cooperation have embraced the entire world and hardly any product emanates from within one country. Most incorporate components made worldwide which are integrated into the final product. So what are the essential tools for success in the modern world? How do we go about indoctrinating the new professionals in dealing with the modern world?

Many papers have dealt with the theme that one must not look only backward to evaluate what was done that could be improved but look forward into the future and project the changes which are taking place during every day and beyond. The truism advanced by the ancient Greek philosopher Heraclitus and subsequently affirmed by Plato and others that the only thing that is permanent is change must become the mantra of the contemporary education, it must be inculcated in every professional irrespective of the field.
That professional courses must be taught at the state of the art level is given and also essential but, at the same time, students must be made aware of the ongoing developments in the fields and not at the expense of the fundamentals of the discipline. Does this mean that more must be packed into the already full array of courses and laboratories and ever enlarging the curriculum? Of course not! But it means that courses enhancing the techniques of careful examination of what are presented and, going beyond that, of critical assessment of subject matter and approaches of identifying problems and problem solving techniques with both classical methods as well as modern ones become essential tools of dealing with the modern world.

TOOLS FOR SUCCESS

Dealing with the workplace becomes a matter of survival and only the fittest do both survive and excel in it. That means understanding the culture of the institution and how to cope with it becomes as important as the professional prowess and expertise in the field. Dealing with management requires frequently mastering the language of the place with all nuances and figurative speaking. Leadership skills can be taught and must be taught as through these one can truly become a valuable team member and active contributor in workplace. Passivity is not the part of a contemporary set of tools. Active and participating leadership is.

One learns a lot from past practices, from history and looking and evaluating the past is a prudent way to proceed into the future but also one must look into the future as well. Changes can be anticipated from the proverbial “handwriting is on the wall” and from the trends in the marketplace. Over the years changes in fabrication techniques, in newly developed sophisticated materials, in updated management approaches, in our comprehension of environmental effects and other parameters lead into the future and must be understood as the world changes around us. The massive changes in the workplace with respect to the gender of workers and their ethnicity make the workplace a different one from the decade ago. Global competition affected the production of just about anything and collaborative endeavors abound everywhere. A recent review of components of this author’s favorite vehicle, the (formerly) Swedish Saab indicated that the engines were made in Japan, some electrical components made in Spain, parts of the transmission in Italy and so on. As this is written Saab is owned by a Dutch company Spyker, which bought it when General Motors, that purchased it before from the original Swedish owners, decided that the car, in spite of its many dedicated worldwide fans, was not a profitable one and decided to dispose of it. After a series of would-be buyers from China and other places it was ultimately purchased by the Spyker Corporation of Holland. But its future is far from certain in spite of the ruggedness and high quality of the automobile.
Understanding of the business cycles with its upturns and downturns, the ever changing labor costs and the development of new technologies displacing the older ones make prediction extremely uncertain and difficult. Yet it is mandatory for survival of a business outfit. Concerns about the environmental effects and workers’ health make the older technologies vulnerable to more regulations and compliance standards and increase the production costs.

So, how does one prepare for the future? What is to be taught in Universities and how are the essential skills to enable the budding professionals to succeed in their lives?

That the workplace has its own demands, its politics, its culture, its expectations and numerous challenges is given. Coping with these and successfully integrating oneself into it is a condition *sine qua non*. Providing skills to accomplish this should also be incumbent on the educational process. Establishing formal modules which facilitate this is a challenge for the educational establishment. The tools kit should include the following:

Ability to make convincing oral presentation: the skills of presenting one’s ideas in a cogent, understandable manner in which the message is crisply defined and effectively shared. This may include visual aids, i.e. Power Point, graphical representation and the like. Effective delivery does not come by itself. It must be taught and practiced if it is to flow smoothly. Most young professionals (and a good many older ones) do experience stage fright from audiences, some of which are not always friendly. Creating a clearly defined and cogent message is a test on true understanding of subject matter. Ability to deal with questions and defuse tension with a degree of humor can be taught. And what better way to achieve that than requiring presentations during classes taught in the form of reports on research done within the conduct of the class. The chances are good that the audiences within the University settings would be friendlier than in the workplace! The practice of giving the presentations should become an increasingly integral part of the educational process.

Becoming a fully functioning member of a working team takes time and effort. And time is a very precious commodity of which there is little to find in the workplace. Hence this integration facility must be given a start during the educational process as well. This can be accomplished through group projects where students (and sometime faculty and staff members) work together to accomplish a given task. They have to grow together into a smoothly functioning team, sharing fruits of their labor and frustrations of failure. Creation of harmonious teams represents a challenge both within the University setting and industrial ones. Harmonizing talents, submerging strong egos into an entity where individual preferences are cast aside for the success of the common goals are daunting effort. Team building is one of the keys for successful performance in the workplace. Defining who is to do what and parceling the responsibilities makes eminent sense in both previously settings. Growing a team does not take place instantenously but requires both time and efforts.

Problem solving becomes a task for the established teams and is to be accomplished through various problem solving processes. Creativity of individual members must be tapped without allowing the most vocal members to monopolize the process. Through brainstorming or similar ways quantity and variety of ideas allow for team members to provide their thoughts on how to approach and solve the existing problems.
Conflict resolutions skills techniques ameliorate clashes inherent in any situation where people are working together. Any situations where persons’ attitudes are involved are likely to result in conflicts and bruised feelings and emotions. Therefore it is incumbent to clearly define a priori the necessary steps and actions that must be engaged to overcome problems established before or ones that emerge during the process of creation of the product. These skills are likely to contribute to validate sense of belonging to a team where each member is considered a valuable and productive one.

Management of people and resources is a must if a productive working environment is to be established. Of crucial importance is control of time expended on meetings where issues are discussed. The time spent in these discussions must be spent constructively and a clear purpose established. Roles of each participant must be clearly defined and meetings kept on track. Agenda must precede the meeting so as to preclude waste of time and the effectiveness of the time spent assured. Planning of the meetings is crucial as is copious documentation of what took place in the meetings in form of exhaustive minutes and action plans what is to be done.

Willingness to get involved in the workplace plays an enormous role in the successful development of one’s career of the institution. Demonstrating passion for the work that is being done and clear commitment to the work advances one’s progress and the rise in the hierarchy. Being proactive assures that the person will be considered for more responsible roles and leadership positions in the future. In order to make a real contribution one must be carefully observant and astutely diagnose possibilities of improvements. Rather than offering critiques one should examine the opportunities for improvement and, once these are identified, offer them through the chain of commands. However, before jumping and offering any recommendations and/or suggestions for improvement one should listen carefully to the persons with extended career at the same institution. After all, they have a longer tenure there and may know more about what has been done previously and has been abandoned for one reason or another. Reflecting on one’s approaches is a prudent way to become a true colleague rather than someone who imposes one’s personality on the way “we do things here”. Advancing one’s people skills cannot be done via any formulas, one has to work on it. This is best achieved by interactions in the workplace, by cultivating relationships with others and by demonstrating that one has only the common good in mind and wants to provide constructive thoughts.

Updating one’s professional skills through continuing education and self-improvement by attending professional meetings and conventions, reading of published papers in the field, and other methods of growth has become increasingly critical to staying competitive in the marketplace. Development of new materials, new fabrication methods, new production tools, and the like lead to better products as do the multiplicity of newly developed computer aided techniques. Sophisticated market evaluation techniques help direct new product development. Unlike it was for quite some time that each profession worked in its own space the tremendous push for interdisciplinary work has produced magnificent results. Nowhere is it more evident than in the biomedical field leading to the (almost) bionic men and women. But in order to work in an interdisciplinary environment one must learn the language of each of the disciplines involved thus placing new pressures on the practicing professionals. As the old German proverb eloquently states “Staying in place means falling behind”! Continuing education during the practice of one’s profession alleviates the pressures on all involved.
CONCLUSION - LAST BUT NOT LEAST

Last but not least is the increased demand that social responsibility be a part of the tools package implanted in the new professional. The legitimacy of the educational process is severely tainted and tested by events currently taking place on our planet: the nuclear power’s place in the energy demands, the poisoning of the environment through careless disposition of toxic materials, the carbon emissions and global warming of our planet coupled with natural disasters which may or may not be linked to the role of the humans all lead to emphasis on the increased responsibilities in all human endeavors. And there is no better place to infuse this social responsibility than through the educational process at the Universities. Instead of focusing on individual that promotes only personal interests and personal advancement we must uphold the general societal welfare and each individual’s. Instead of demanding and/or expecting that governmental regulations take care of the existing and future problems each person must share the responsibility for what takes place not only locally but also worldwide. The power of professional organizations cannot be overemphasized and involvement in their activities for the common good becomes one of the cornerstones of the development of our civilization. Hence it becomes incumbent for Universities to work together with professional organization in a symbiotic manner leading to a concerned citizen, current professional and a better and more involved human being leading to a better world.
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Biography

Dr. Jesa H Kreiner is a Professor Emeritus of Mechanical Engineering at California State University in Fullerton, California. His research interests encompass design engineering, failure analysis, behavior of materials under adverse conditions and social aspects of the engineering profession. He has published over 100 papers and contributed to several books. He has lectured extensively both in the US and abroad. Dr. Kreiner is a recipient of numerous awards and has served as a consultant to US Government Agencies and private industry.