

# CSC290: Critical Review Sample 1

In order to survive the constant change in the software industry, IT workers must make themselves versatile and well-rounded. The research presented in “The Requisite Variety of Skills for IT Professionals” [1] demonstrates the new set of skills that are highly sought after today, and therefore, it will be appropriate for IT professionals to develop these skills in order to secure their job position, and move up the ranks. While the article goes to a far extent to demonstrate the importance of the new set of skills for an IT professional based on the research, the research itself could be enriched by additional methods of research.

The researchers interviewed 104 senior IT managers in 94 non-IT firms, and their findings illustrate the focus shift to non-technical skills in the new hires. As a matter of fact, foundational (technical) skills, such as programming, are only sought in entry level new hires. The article states that the main purpose of foundational skills for an IT worker is to gain foothold in the firm – companies seek new hires with strong foundational skills in order to mold them into essential employees. Once hired, it is crucial for an IT worker to start developing “critical in-house” skills, key skills that are specific to the firm practices, in order to become an invaluable employee, and thus establishing job security.

The choice and size of sample space is appropriate. Its large size eliminates selection bias, or any other unintentional bias. Since it is the senior IT managers that are responsible for hiring new staff, interviewing them gives an insight into how new hires are selected; from senior IT managers, researchers are able to gather vital research information, such as skills that are highly sought after, or skills that can be easily outsourced, and therefore are not considered. The article goes in depth explaining all six skill categories (Foundational, Operational, Essential, Project Management, Problem/Opportunity, Relationship), and their importance to IT workers. It demonstrates that some skills, such as Project Management skills, are highly sought after, while others, such as Operational skills, are usually outsourced. Such insight is crucial for young and aspiring IT professionals, for it enables them to assess themselves, and it tells them exactly what areas they must focus on and improve in order to gain employment. This change is beneficial for ambitious employees – the skills that will secure them employment will also enable them to move up the ranks faster. According to McCurry [2], many of the skills mentioned (such as Relationship) in the research are also essential in multiple fields, in multiple countries, thus giving the IT professional that possesses such skills the freedom of choice.

Yet, the research could be enriched by considering other data. For example, the article does not look at terminated employees. After all, by analyzing these past workers, perhaps some pattern could be established. If this pattern is to be found, and it supports the conclusion of the research, then the conclusion will be reinforced further. On the other hand, if it was to contradict the conclusion, then further research would be required in order to come to a decisive conclusion. While Gallagher et al. [1] state that “IT professionals who possess skills in all six categories (Foundational, Operational, Essential, Project Management, Problem/Opportunity, Relationship) will be best prepared not only to survive but to prosper in a turbulent IT environment”, the article does not tackle the problem head first.

The data presented in “The Requisite Variety of Skills for IT Professionals” is critical for aspiring IT professionals, and it is adequately researched and substantiated. Nevertheless, improvements could be made to the research methods, such as analyzing information on terminated IT employees.

## References

- [1] Kevin P. Gallagher, Kate M. Kaiser, Judith C. Simon, Cynthia M. Beath, and Tim Goles. 2010. The requisite variety of skills for IT professionals. *Communications of the ACM* 53, 6 (January 2010), 144.
- [2] Doug Mccurry. 2003. Notions of generic and work-related skills: essential, core, necessary and key skills and competencies. *International Journal of Training Research* 1, 1 (2003), 83–98.

## CSC290: Critical Review Sample 2

The article, *Soft Skills in Software Development Teams* by Gerardo Maturro, Florencia Raschetti, and Carina Fotán is informative as the author highlights the expected soft skills of employers in Uruguay. However, it would be of better interest to the reader to broaden the article's view to perspectives of different employers worldwide because not everyone would be hired by employers locally in Uruguay. In addition to the previous point, the author could give more insight to the reader by discussing what companies across the globe value most in soft skills.

The article is based off an interview of 35 software engineering practitioners from software engineering companies in Uruguay. The interview mainly focused on the soft skills that a team member or team leader must have so that they are most valuable to an employer. The author argues that these set of skills are the most important to the employers and what meets the demands of software development teams based on the results that were achieved by the survey. However, this could only be true to the companies and employers that are local to Uruguay. The article should account to the different perspectives of companies worldwide. The article [1] only focuses on certain group especially when the groups that were asked are all team member and team leaders rather than asking company's CEO because they are the personals that set the expectation for the hiring team.

As the article moves into more details of the interview the author displays the results that were deduced based on the survey they carried out across the 35 companies that attended. The results clearly state that the most valued skills for team leaders and team members [1]. This is a very crucial point as it highlights and brought to my attention that soft skills are almost as valuable as the technical skills local to companies in Uruguay. According to Capretz and Ahmed, soft skills are not looked upon by other universities and it is almost hard to find a university designing an entire course that addresses the soft skills of their graduates [2]. The two authors [2] have suggested that universities must have well-designed courses to address this issue which provides an effective solution to software development teams.

Moreover, the evidence cited in the article about the soft skills that are most valued by the employers is not as concise as they should. The author uses questions like "What are the most valued soft skills a team member must have?" and "What are the most valued soft skills a team member must have?" [1]. The response concluded the top 15 soft skills that are most valued. The results might have been different if the average size of the companies interviewed were more than 40 people [1]. Some of these companies are as young as 4 years old and only had 5 people. Companies like these should not have taken part in the survey since it is much easier to communicate in a small company that is rather smaller in size and recent in its business [1].

Furthermore, the companies were given a set of soft skills that they were asked to rate them on a scale from 1 to 5[1]. This could have caused bias to the companies because they were not given the freedom to choose the soft skills they think are most valuable to them without interference from the interviewee. They are restricted to choose and rank them based on a set of instructions that they have to abide by. If they would have given the freedom to name the top skills they think are most valuable to them as employers I certainly think the results could have been somewhat different than the current results that are presented by the article.

Finally, the article is left open-ended because the further work that has to be done [1] rather than discussing a way to sharpen the soft skills needed by the software development industry in Uruguay. The idea has not yet been completed and is leaving the audience of the article to do more research on their own because a solution to the proposed argument of soft skills has not yet been concluded.

In conclusion, the author had to present a broader insight into what employers are looking for in terms of the different soft skills and not just employers that are present in one geographical region. The work that is left to be done as stated by the article [1] could have been a result of poor education offered to graduates of Uruguayan universities, or due to the poor working environment presented by the companies' tighter deadlines might very well result to fewer soft skills and focus on the technical skills to meet the deadline with very constricted communication. All of these reasons could be a reason for poor soft skills that could affect more than just the communication skills of the employees.

### References

- [1] G. MATTURRO, F. RASCHETTI AND C. FONTÁN. 2015. *Soft Skills in Software Development Teams: A Survey of the Points of View of Team Leaders and Team Members*. In 2015 IEEE/ACM 8th International Workshop on Cooperative and Human Aspects of Software Engineering, Anonymous, 101-104.
- [2] L. CAPRETZ, F. AHMED. 2017. *A Call to Promote Soft Skills in Software Engineering*. DOI: <https://openventio.org/wp-content/uploads/A-Call-to-Promote-Soft-Skills-in-Software-Engineering-PCSOJ-4-e011.pdf>