EXPLAINER

Reducing the Labor Gap through 360-Degree Assessment

Soft skills like creativity and innovation are not measured by traditional paper-based tests. Photo credit: ADB.

Data-driven evaluation can help students and professionals develop and focus on skills that meet the changing demands of the labor market.

Introduction

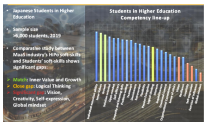
In 2019, more than 60% of the world population has access to the internet. It is now easy and possible to collect data on a large scale to detect and predict trends. On a macro level, big data analysis with technology, such as artificial intelligence (AI), provides a deep understanding of the skills needed by the industry and of the skills available on a given population. On an individual level, skills gap identification and development opportunities can be individualized. Everyone can now have access to optimized learning opportunities, based on their capacity, interest and on the trends of their surrounding environment.

During the 8th International Skills Forum: Future of Skills and Jobs in the Age of Digital Disruptions, the Institution for a Global Society Corporation (IGS) discussed the importance of skills gap assessment for Industry 4.0. This included the implementation of GROW360, which can measure competency and personality through an AI engine. The data can then be used in job recruitment and training.

The Changing Needs of the Labor Market

The challenge that societies are facing with the rise of AI and robotics is the massive automation of processes. As a result, hard skills and technical skills that used to be the workforce's value for organizations and industries are depreciating quickly and need constant updates and training. In this context, soft skills are particularly important to move away from rote learning and to develop self-directed learners that can continuously upskill and reskill to adapt to rapid changes our societies are experiencing.

Figure 1: Assessing Gaps



Source: IGS presentation during the 8th International Skills Forum

Soft skills like creativity and innovation are difficult to develop in a traditional teacher-to-student classroom environment. Providing students with a variety of fieldwork, experimentation and experiences is a proven effective approach to develop such soft skills. Educational institutions shall then provide students with opportunities to evaluate their soft skills by 360-degree assessment, and develop them accordingly. The innovative tool combines 360-degree evaluation and personality test by implicit association test for each student. It implies a deep transformation of educational institutions that ranges from training teachers to learning environment transformation or public-private cooperation.

In organizations and companies, feedback culture has been proven effective to tackle this challenge. The approach is in two phases:

1. Diagnosis phase: Identification of the key soft skills for current and future workforce through tri-dimensional analysis of industry workers, TVET and/ or Higher Education students and teachers with 360-degree analysis
2. Feedback and recommendation phase: Sharing the outcomes of the analysis to workers and teachers, and identifying areas of development for a better fit with the reality of their local economy.

Honest feedback from peers is critical. Teachers can take honest feedback from fellow teachers or from the school principal. As long as feedback and evaluation are objective rather than subjective, many people can take this feedback in a good way and use them to improve their skill set or further their soft skills. It is also true for students.

This is also true in the workforce where feedback can come from the boss or from peers. Right now, some companies have used our system for making mutual feedbacks through our system. We just have to just create a light framework if they want to just nurture creativity and visual setting. Using a framework that enables them to view work in a creative way is very useful.

Soft Skills Evaluation Through Artificial Intelligence

Given that many skills are decaying so fast, many companies have to focus on “Problem Setting,” “Vision” and “Creativity” competencies for issues raised in the 21st century. Historically, Japanese education has focused more on memorization and basic analytical skills. Now, it has to nurture creativity and innovation.

Soft skills are difficult to assess through traditional methods such as interviews or tests, because of the high level of subjectivity and natural over-rating trends in self-assessment. While a paper test cannot disclose creative and visual setting skills, the 360-degree analysis has been effective in evaluating these capabilities. The salient feature of the 360-degree feedback assessment is to visualize soft skills as seen from peers and to reduce the subjectivity from a unique rating by collecting feedback from different raters. Technology makes 360-degree feedback accessible to anyone and customizable to any specific population.

Figure 2: Future Classroom Project Japanese Ministry of Economy, Trade and Industry

GROW360 by IGS scientifically measures competency and disposition, and visualizes ability through an AI engine.

Source: IGS website.

By using the big data and visualization of soft skills, educators and educational institutions have now started to focus on nurturing creativity and visual setting. Also, the Ministry of Trade Economy and Industry of Japan (METI) has started a new program, the future classroom project. The project tries to nurture creativity and innovation capabilities in the country’s educational system. Historically, METI focused on the industry side, but it saw the need for more creative and innovative persons. For this innovative initiative, METI has selected us to gauge soft skills for the whole project. Now, we just try to evaluate the students’ soft skills and their progress vis-a-vis the past educational system.

Many universities and companies have started to use the IGS system called GROW360 for visualizing each person’s soft skills. By using this data, companies can hire creative, visual setting people so easily.

In the assessment process for companies’ recruitment, three types of datasets are collected. These are: psychometric data (Big 5 personality traits), behavioral data (360-degree feedback), and hard skills.

Figure 3: Data Collection for GROW360

GROW360 by IGS scientifically measures competency and disposition, and visualizes ability

through an AI engine.
Source: IGS website.

Figure 4: Scientific Cognitive and Behavioral Assessment

Source: IGS website.

Implementing the 360-Degree Assessment

No particular skill is required to be able to provide feedback to peers, but it is important that every participant acknowledges the importance of honest feedback. Technology, such as a bias-free algorithm, can be used too in order to monitor and rate the credibility of ones' feedback and automatically adjust scores if needed.

Basically, 360-degree evaluation is more effective in measuring soft skill sets than hard skills. Hard skills are defined differently in each company and in each country, and thus, it is more related to each market sector. For soft skill evaluation to be on a global basis, it is important to set international frameworks to gauge these competencies.

Right now, the 360-degree analysis is being implemented from elementary schools to companies in Japan. Of course, these soft skills rubrics for students are different from employees. However, we are able to make this work through collaborations with METI, the Japanese Government and the local government of Saitama City. The government's role is crucial in implementing the 360-degree assessment, especially for elementary schools and junior high schools. It is compulsory as implementation is being supervised by the government.

The successful implementation of the 360-feedback evaluation is a question of mindset. Introducing feedback culture in schools, institutions or companies is a very effective way to help people feel comfortable about sharing, asking for, and receiving an analysis of their performance on a regular basis. It also encourages a growth mindset. We usually recommend introducing the concept gradually, starting with a pilot population or a specific group to demonstrate the benefits of this approach before moving to an organization level implementation.

Historically, the 360-degree assessment was not scalable because primitive technology, like a web-based technology or just a paper-based, is used. Currently, these technologies can be used at a much lower cost. This is what we want to achieve—360-degree evaluation for everyone. It will reduce the gap between market requirements and the skills of students.

Resources

M. Fukuhara. 2019. Skills Gap Assessment and Development for Industry 4.0.

Institution for a Global Society Corporation: Grow360.

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