

## **Preliminary Exploration of Significance of Soft Skills in Groups with Specific Reference to Peer-Assessment**

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### **Abstract**

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With time when IT sector is witnessing a high growth, people with varied backgrounds, cultures, experiences, etc. are coming together to work in a team or a group to achieve a common target, because of which few of the issues on the “Need of Soft skills in Engineers” or “Peer Assessment of the Soft Skills” have arisen.. Lack of soft skills like communication skills, analytical skills, interpersonal skills, negotiation skills etc. are becoming the issues of greater concern in this rapidly growing industry. This paper aims to explore the importance of soft skills required to work in the diverse group of people. The whole scenario of teaching has evolved from “sage to stage”, especially this remarkable change is observed in the higher-education. Group projects are promoted to sharpen the communication, interpersonal, conflict-management, and team-working skills in the IT graduates. IT graduates from different geographies of the world are seen working in cross-cultural environments, often interacting using audio and visual aids, thus, eliminating the need of physical interactions. The free-rider problem which is most evident here is that the individual efforts are not rewarded over the cumulative results of the team. Many studies suggest peer-evaluation can help to minimize this problem. Through this study a preliminary exploration is done on the importance and effectiveness of peer-evaluation of soft skills.

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**Keywords:** Peer- Assessment, Team-management, Generic Skills, Skills development

### **1. Introduction**

The information technology (IT) industry has become of the most robust industry in the world.

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Information technology, and the hardware and software associated with the IT industry, are an integral part of nearly every major global industry. The Information Technology Association of America (ITAA) explains 'Information Technology' as encompassing all possible aspects of information systems based on computers (IT Industry, Information Technology Industry, 2010) Indian IT services is one of the fastest growing industries from last two decades and has around 5.5% share in GDP of the country. Indian IT Industry is considered as a pioneer in software development and IT-enabled services.

Indian IT Industry's development and contribution to the world's information technology sector is considered to be of the highest repute. Metro Cities like Bangalore, Mumbai, Delhi, Chennai and Hyderabad have become the favourite destinations for all the big banners like HSBC, Dell, Microsoft, GE, Hewlett Packard, and several Indian multinational firms like Infosys Technologies, Wipro, and Microland have set up their offices across these cities giving excellent employment opportunities to Indian students. They have not only brought the whole new generation of tech-savvy students but has also revolutionized the technical education in the country.

India has experienced a total shift in its education system. The age old SAGE model of education is replaced by STAGE or e- Learning Model. Higher education is bending more towards professional courses specially engineering or other related fields. The outstanding technical growth has changed the conventional methods of teaching. IT graduates are given live group projects to work in a team or a group due to two main reasons:

- the Information Technology (IT) industry and Accreditation Board for Engineering and Technology (ABET) require college graduates to attain skills in interpersonal communication, teamwork, and conflict management(Aasheim, 2009)
- Second, colleges and universities are shifting their pedagogical approaches from passive to active learning, from class lecture ("sage on the stage") to cooperative learning(Tagg, 2003).

However this is the epicentre of all the problems. According to a survey of 1000 IT professionals by a recruitment firm, CWJobs.co.uk, 84% of IT professional believes employers should provide more training in soft skills, such as business and people management skills. Out of all IT professionals surveyed, 93% believed they would be "more valuable" to businesses with some further training.

Due to the lack of active- communication, interpersonal skills, conflict resolution skills, honesty, lack of knowledge, expertise, the group projects are completed but often many a times issues like group-storming is evident which causes the failure of the whole project. For a successful group project, a validated peer-assessment tool is important.

This study aims to review the important Soft skills needed in a successful group for its smooth and concrete functioning. This report is entirely based on the peer assessment about their groups. What they feel is crucial in a group, what makes the group to conflict, and what can be the factors that can help to formalize and normalize the group. This report is made by interviewing engineers who are in the age group of 20-25 years, some of them are students in their final year of engineering and rest of them are those who have 1-2 years of industrial experience.

## 2. Literature Review

### 2.1 Hard Skills and Soft Skills

According to (Strang) managing projects successfully requires a mixture of skills including interpersonal ability, technical competencies and cognitive attitude, along with the capability to understand the situation and people and then dynamically to integrate appropriate leadership behaviours.

**Hard skills:** The technical skills we learn through training and schooling. These include processes, procedures, techniques, jargons, and other aspects that can be quantified and measured.

In essence, influencing others and getting them to look up to you are something you will find difficult to do if you do not know the technical aspects of your job.

You cannot motivate the members of your team to complete a project if you do not even know how to complete it yourself. You cannot lead others in an effort to increase your company's profits if you do not even understand finance, marketing or business intelligence.

**Soft skills:** They are the sets of personal and interpersonal attributes that a person has which are not necessarily quantifiable and measurable, but will determine a person's work performance, nonetheless. Soft skills are all those skills that have to do with "being human". Soft skills are those skills having specifically to do with being human and with being "in relationship" with other human beings. Specifically, communicating with them, working with them, influencing them, getting along with them, fighting with them, arguing with them, being angry with them, agreeing with them, laughing with them, and the list goes on. It's called "life".

Employers today put a high regard on soft skills because they understand that to get things done, to achieve the company goals, they have to have the right employees in their organization. People with good personal attributes and excellent interpersonal skills are necessary and invaluable to their business.

Thus training activities combine to sharpen both of hard skills and soft skills. People often think that training can change the person's competence. No, not absolutely. The competence is the measure of training transferability, i.e. how much training is transferred to the work. Again this transferability depends on the employee, his willingness, his motivation factor, his individual needs and his mind-set towards the organization, society, friends, and family and to himself.

## 2.2 Peer Assessment

Peer assessment allows team members to assess other members of the team as well as themselves. Peer assessment is an assessment method through which the peers of a candidate or student are requested to provide information about his performance. It is considered by many educators and teachers to be a key technique to get students to take more responsibility for their learning (Majdoddin, August 2010).

"Peer assessment as a process in which individuals judge the amount, level, value, quality, or success of the outcomes of their peers"(Topping, 1998). Peer assessment can foster in students a critical judging ability which they will take with them to their social adult life.

When feedback is provided by peers through peer assessment, a temporary social platform is developed to help students to foster collaboration skills and improve while working in a group.

#### ❖ Advantages of Peer Assessment

Some of the arguments given to support the Peer Assessment in the group project (Race, 1998), (Bostock, May 2000) & (Fry, 1990) are:

- Peer assessment gives individual a sense of belonging to the assessment process and fosters their zeal to work as they feel themselves as a part of evaluation process;
- Peer assessment encourage learning;
- Peer assessment makes assessment a part of the learning process;
- Peer assessment encourages students' sense of autonomy in learning;
- Peer assessment helps students identify their weak and strong points;
- Peer assessment encourages students to analyze each other's work;
- Peer assessment improves self-assessment capabilities;
- Peer assessment encourages deep, meaningful learning;
- Peer assessment helps students to become more involved in the learning process;
- Peer assessment helps students recognize assessment criteria;
- Peer assessment reduces the instructor's marking load;
- Peer assessment provides better quality feedback;
- Peer assessment gives students a wider variety of feedback.

Peer Evaluation gives an edge over the Supervisor's evaluation as through it individuals judge the amount, level, value, quality, or success of the outcomes of their peers working with them in a group and the free rider issue of getting equal marks/appraisals can be solved.

#### ❖ Controversies on Peer Assessment

But every coin is two-sided, If Head has advantages than reverse is Tail. Peer Assessments gives an edge over few of the issues but it opens doors for some of the real concerning issues (Friesen, 1973), (Fuqua, 1986) (Kwan, 1996) and (Zhang, 2012):

- Peers may not have the same level of understanding of the subject matter as instructors;
- Instructors are more likely to provide useful feedback;
- Peers may have to be told what points to look for when assessing others' work;
- Peers may be inclined to show bias toward their friends;
- Peers may be reluctant to award poor work low marks for fear of offending peers;
- Peers may not devote sufficient time and attention to this demanding task;
- Peers may be tempted to "borrow" ideas from other students for use in their own work.

Thus, in brief, peer assessment has lots of benefits for achievement while working in a group. The few potential problems that exist in peer assessment can be solved through some rules careful explanation of the goals of peer assessment.

### **3. Research Methodology**

#### Data Collection

This study was aimed to understand the need and importance of Soft skills and Hard skills for engineers who either are working in the live projects or at the entry level in various organizations. Keeping this in mind 60 Engineers in the age-group of 20-25 years both Males (120) and Females (80) were interviewed. More than 50% of them are students in their last year from different Engineering colleges of NCR Region and rest are the entry level engineers with 1-2 years of Industrial experience. These people were working in various different projects at different Levels.

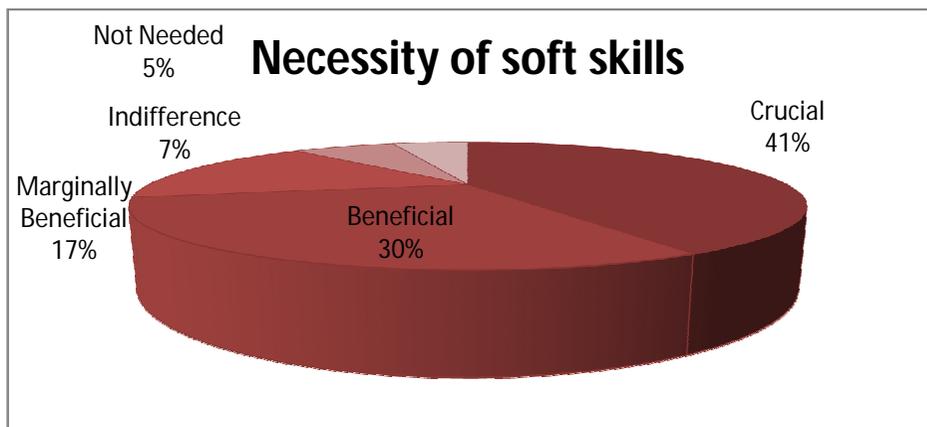
There were 13 Questions in the interview and time given to each of the respondent was the same. Before interviewing they were just briefed about what is peer assessment and the difference between soft skills and hard skills but the purpose of survey was not told to them before-hand. Briefing is done to avoid the confusions or to clear the doubts. Most of the data collected is non-parametric in nature or Rank based. The respondents were interviewed in isolation to get the uninfluenced & unbiased results.

## Demand for soft skills and Need of Peer Assessment of Soft Skills & Hard Skills

### ✓ **Survey 1: How beneficial is to study the soft skills for engineers?**

They were given 5 parameters to answer this question:

1. Crucial
2. Beneficial
3. Marginally Beneficial
4. Indifference
5. Not Needed



**Pie Chart1: Representing the Necessity of Soft Skills for Engineers While Working in a Group Project**

#### (i) Interpretation of Survey 1:

More than 70% of the respondents find Soft skills are crucial and important to work in a group. For a better communication, critical thinking and sustainable environment it's good to have greater group cohesion. 5% who believes that being technical expertise and competent in your area of functioning is only important to survive in the organization.

- ✓ Survey 2: Respondents are given a set of soft skills and were asked to arrange in decreasing order from crucial to marginally beneficial:

1. Critical thinking and problem solving
2. Communication (oral and written)
3. Teamwork and collaboration
4. Professionalism and work ethic



**Pie chart 2: Representing the Skill Sets Important to Function Effectively in a Team**

(ii) Interpretation of Survey 2:

Communication is the utmost requisite of any Industry. Even working in groups Engineers find communication both oral and written as one of the most important soft skill needed to work together; an effective communication not only helps to work better but also helps to achieve the target swiftly and effectively. After that Teamwork & Collaboration holds an important place.

Team work is about making collaborative relationships with colleagues and customers, ability to work with diverse teams, building unity in diversity negotiating and managing the conflicts and leading in various role plays. It's not just about compromising rather it's about comprising to work together for a common goal (Jill Casner-Lotto, 2006).

Professionalism & Ethics is to keep the personal bias away and to involve oneself in continuous learning. It is also about keeping organizational or group's goal above the individual's desire.

It also includes social responsibility and demonstrating personal accountability. Critical thinking and problem solving is rated at the end as it includes processing of data, information and knowledge to solve the problems of the work. As people think it's just about applying concepts learnt which can be sharpened with time.

- ✓ Survey 3: Respondents are further given a set of Top 17 skills (hard skills and soft skills) and now they were asked to rank them on a scale of 1-5

Skills & Traits	Scale of 1-5
Integrity & Dedication	4.77
Communication Skills	4.70
Analytical Skills	4.65
Ability to work in a Team	4.62
Interpersonal Skills	4.31
Organizational Skills	4.14
Flexibility/Adaptability	3.89
Motivation	3.70
Creative Thinking	3.56
Relevant Work Experience	3.05
Awareness of IT new Technologies & Trends	3.00
Operating Systems	2.98
Database	2.71
Hardware Knowledge	2.55
Telecommunication/ Networking	2.40
Security	2.12
Web Development Languages	1.75

(Table 1: Representing Soft skills are more important than hard skills. Original skills & traits taken from Research paper (Aasheim, 2009))

### (iii) Interpretation of Survey 3:

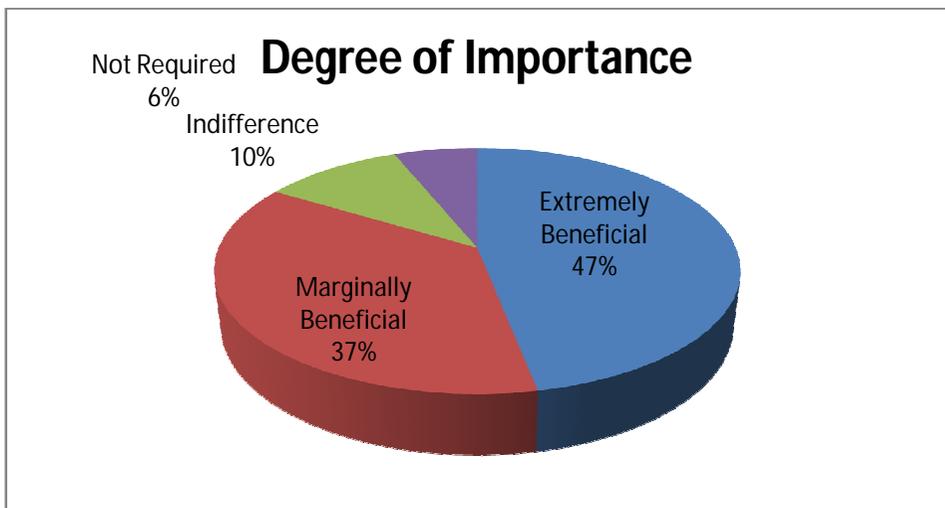
This survey clearly shows Soft skills are more important than the Hard skills while working in the group. As at the beginning level people either have little knowledge or no knowledge of various different technologies, Hardware, O.S. etc. Often they learn while they work.

But how to work in a group is a compulsory part of Active learning. Hard skills may change from one project to other but Soft skills almost are same over different projects.

- ✓ Survey 4: Respondents were asked How far Peer Assessment on Soft skills and Hard skills is important in a Group- Project.

They were given 4 choices to answer this question:

- Extremely Beneficial
- Marginally Beneficial
- Indifference
- Irrelevant/ Not Required



**Pie Chart 3: Representing the Importance of Peer Assessment on soft Skills and Hard Skills in a Group Project**

#### (iv) Interpretation of Survey 4

Clearly indicates the degree of Importance of peer assessment is extremely beneficial. Peers working together find it a way to evaluate the real performance of each other so that every person get what he/she deserves.

6% has shown as it is not important as they believe it's important to complete the project not to discuss who has done what.

Other than these some other Questions were also asked like:

- Is it important for everyone in a group to meet periodically or attend meetings regularly?
- How far it is important for everyone in a group to have knowledge of project?
- Completion of work in a given time.
- Commitment of Individual to the Group goal.
- Importance of having leader in a group
- Steps to handle conflict or storming in the group.
- Respecting others ideas and need of open mindedness and joyfulness
- Biasness of Peer Assessment
- At this Stage what grade would you give to your peer working in the project?
  1. Excellent
  2. Very Good
  3. Satisfactory
  4. Not Satisfactory
  5. Very Poor

#### **4. Result of the Study**

- From the survey done it is clear that "Engineers should learn how to communicate in a group" i.e. Soft skills are more important than the hard skills. While working in a group it is become quintessential to follow group norms and have good interpersonal skills along with analytical skills and creative skills.
- For a better group result if the knowledge of technology, new trends, software, hardware etc is important than at the same time respecting each other's ideas, open-mindedness, timely meetings and quality of leadership also plays important role.
- Commitment not only with dates of completion but also with each and every activity of group is the key of successful group formation and working.

- Peer Assessment gives an opportunity to evaluate the peers and own work. Working in a group we know each other's performance, commitment, professionalism much better than a supervisor, this can help in equitable evaluation of the performance.
- Rules and Scale for Peer Assessment are important. The evaluation should be free of any influence, biasness. Everyone should know what they are evaluating, what the rules of the game are, what the importance of this evaluation is and how far their evaluation can affect others.

## **5. Conclusions & Limitations**

Group projects provide teamwork environment for soft-skill training, but individual performance of group members is difficult to assess. As seen through various examples, and survey acquiring soft skills is more important than having only hard skills.

This study has also shown the importance of peer evaluations on soft and hard skills. When students and Fresher's were interviewed and given sets of hard skills and soft skills it is clearly seen that they have given more weight age to the Soft skills. A group project is not just about completing the task it also shows the cohesion, harmony, creativity, openness, learning, training etc both of an individual and of a group.

This paper is worked out by interviewing a small set of people and with little of experience. This study can be taken further to the people with relatively more experiences. This can show that as we grow further professionally what are more important Soft skills or Hard skills.

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