Developing the Developer: How to be RTE (Ready-to-Employ) on Day One

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Organizational Assets

**Suitable**
- Is it the right asset for the job?

**Reliable**
- Can it perform consistently?

**Durable**
- Does it have staying power without breaking down?

**Cost-effective**
- Is it a good value for the $$$?
People assets have the capability of improving over time to become more **suitable**, more **reliable**, more **durable** and more **cost-effective**.
In order to bring out full potential, organizations spend much $$$ on their human assets.

- Training/Onboarding Time
- Delayed ROI
Implications

- The sooner employee starts contributing, the better the ROI
- Getting up to speed quickly is important will
  - Make you a better investment (↑ ROI)
  - Make good initial impressions, which can be lasting
  - Set you up for future success and advancement
- Key question: How to get up-to-speed quickly?
  → better preparation ahead of time

Be RTE (Ready-to-Employ)
Raw

Inexperienced
“Fresh out of college”

In-Process (IP)

Partly-there, but not quite

RTE

Finished product
Ready to contribute
So, how can I be as RTE as possible on Day One?

- College coursework
- Skills (hard and soft)
- R vs. D: does it matter?
College Coursework

- ...other than the technical
- Cost accounting
- Finance
- Marketing
- Communication (business communication recommended)
- This is not to make résumé look better, but to actually learn very valuable business skills
Hard Skills

• Behaviors that are generally tangible, quantifiable and easy to measure
• Technical and academic qualifications
• Typically acquired through formal and intensive training (i.e. college), training courses and self-learning activities
• In academia measured by diplomas and grade transcripts, which are used by employers precisely for this purpose
Hard Skills

• Most strongly correlated to analytical intelligence
• Essential for professional success
• Not, however, sole determinant of success nor always best predictors of excellent employee performance
Soft Skills

- Behaviors that are intangible and tend to be attributes of an individual’s personality
- Related to emotional intelligence but can be taught
- Refined and perfected through experience and practice
- Acquired mostly through out-of-the-classroom experiences
- Given individuals with similar set of hard skills; soft skills can often make the difference between an excellent performer and someone who is just good enough
- Important in employee’s hiring and onboarding process
Soft Skills

- Ability to execute
- Critical thinking and problem solving
- Time management
- Leadership
- Self-learning
- Communication
- Confidence
- Adaptability
- Teamwork
Soft Skills

• Ability to execute
  • Transformation of technical knowledge (i.e., hard skills) into executable plans that align with business goals and strategies; and execute them

• Critical thinking and problem-solving
  • Ability to analyze and assess a problem/situation and to find creative and unique ways to resolve them
Soft Skills

• Time management
  • How to prioritize activities in short-, mid-, and long-term
  • Ability to multitask effectively depends on ability to prioritize in “the moment”
    • e.g., should I be reading the literature, writing a report, running a pilot plant trial, or having lunch?
    • What’s most important to do right this moment?
Soft Skills

• Leadership
  • “a person who has commanding authority or influence” (Merriam-Webster’s Dictionary)
  • Commanding vs. influential leadership
  • Commanding leaders assigned formally by organization
  • Influential leaders are those able to earn trust and respect of those they work and interact with
    • Some commanding leaders do this and some don’t
  • Influential and commanding leadership do not have to go hand-in-hand
Soft Skills

• Leadership
  • Can be honed and developed
  • Key characteristics
    • Trustworthiness (e.g., meet deadlines, keep one’s word),
    • Empathy (e.g., identify with the feelings and needs of others)
    • Be a servant (e.g., roll up one’s sleeves and get dirty with the team; lend helping hand to team member who needs assistance)
    • Respect (e.g., treat others as valued team members)
    • Self-assurance (e.g., show confidence)
Soft Skills

• Self-learning
  • Ability to continue to learn in deliberate and meaningful way without formal teachers, teacher-imposed deadlines or the specter of a grade at the end of the academic term
  • Science and technology evolve → avoid becoming obsolete develop a lifelong habit of learning
Soft Skills

- Communication
  - Without it, effort in other areas can become detrimentally diluted.
  - Important to understand the rules and etiquette of communication, both within and outside one’s organization.
    - Written communication (e.g., reports, email)
    - Spoken communication (e.g., presentation skills, “elevator speech”)

Soft Skills

• Confidence
  • Relates to how sure an individual is of his/her thoughts or judgements
  • Not to be confused with self-esteem
  • Usually develops as a result of mastery of a subject matter and/or a track record of achievement
  • Solid level of confidence will require time to attain, but such attainment should be an employee’s goal from day one
  • Confidence “is the stuff that turns thoughts into action”*

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Soft Skills

• Adaptability
  • Situations, deadlines, and objectives oftentimes change, and sometimes without much notice or time to react
  • Remain flexible and be willing to change directions without a negative effect on performance
Soft Skills

• Teamwork
  • Highly desired in the industry
  • Effective teams leverage and multiply talents of team members, but only when all members bring their best effort, value and respect each other, keep each other accountable, and place the needs of the team ahead of their own
  • Product development work is almost always done by multidisciplinary teams, so seeking opportunities to work in diverse teams is highly recommended
Research

- Driven primarily by scientific inquiry; quest for knowledge and discovery
- Seeks to test a hypothesis or answer a research question by systematically investigating a specific topic
- Studies carefully designed and controlled, and data analyzed in the same way
- Publication must almost always pass critical peer review
- Generally costly, time-consuming and financially risky
- Many companies don’t engage in it at all
R and D: Does it Matter?

• Development
  • The application of “scientific or engineering knowledge, to expand it, to connect the knowledge in one field…”*
  • “seeks to move product or process concepts through a series of definite stages to prove, refine, and ready them for commercial application”*
  • Application of existing knowledge
  • Involves much less uncertainty, very specific project objectives and much shorter execution timelines
  • More prevalent in industry R&D than R
  • Not generally designed nor executed with same degree of scientific rigor as R

Parting thoughts

• Do internships!
• Before taking job
  • Understand company as much as possible
  • Clearly understand employer’s expectations
• Network inside and outside the company
  • I hope you did this this week; otherwise you missed out

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