

Learning to Learn

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Some quotes and observations

- Education is what, when, and why to do things. Training is how to do it
- The half-life of the technical knowledge you learned in school is ~ 15 yrs.
 - In 15 yrs half of it will be obsolete
- What to do?
 - Concentrate on fundamentals
 - Develop the ability to learn new fields
- How to recognize “fundamentals”?
 - They have lasted a long time
 - From the fundamentals all the rest of the field can be derived

Science vs. engineering

- In science, if you know what you are doing, you should not be doing it
- In engineering, if you do not know what you are doing, you should not be doing it
- In practice
 - All engineering involves some creativity to cover the parts not known
 - Science includes practical engineering to translate the abstractions into practice

Predicting the future

- The past was once the future and the future will become the past
- Short-term predictions are always optimistic and long-term predictions are always pessimistic
- No vision, not much of a future
- In forming your plan for your future:
 - What is possible?
 - What is likely to happen?
 - What is desirable to have happen?

Contributions

- Make significant contributions to humanity
- The true gain is in the struggle and not in the achievement
- The unexamined life is not worth living (Socrates)