

# About independence in problem solving

*beginning in  
follow-up 3 2017*

About “the right track”



Investigate and search broadly!



Find a self-correcting way to work!

*“non-linear”*

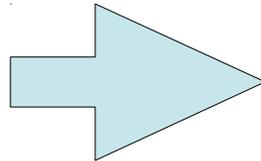
*(monitoring/reflecting/  
metacognition is key!)*

*“The breakthrough was to go from waiting for somebody to tell you something, to a discussion on possible approaches”*

## Taking control of your own thinking

Don't do anything because  
the teacher says so!

Do something if it  
makes sense to you!



The teacher will  
probably think so too!

To here in dynamic follow-up 2018

It is easier to start doing something meaningful from the beginning if you begin with how some particular knowledge is found.

That is you from the beginning exploit the significant thinking abilities of the students, rather than their prior knowledge (where they may be lacking, and only have enough after some time)

It can be done by basic investigative exercises, but also simply by starting to talk about how some knowledge was found, before you provide the result. Or at least afterwards.

It is simply not a natural situation to have all the information from the beginning, or to be told everything.

You cannot begin to think critically.

But you can begin to ask questions (not to question!), in order to constructively learn and investigate. (a question determines a point of view that can be investigated).

## Taking control of your own thinking

However, as always you should try to understand the points of other ways of doing it before doing it your own way.

The difference between  
questioning/critical thinking,  
and asking questions to  
understand better.

These are often confused.

There is no way to be fully  
instructed to be independent.

It is also impossible to learn a  
complex task without being given  
so open questions that your  
weaknesses become visible, to  
yourself and to your teacher.

*lots of this in signal  
processing, telecom etc.*

**Think and struggle!**