Goal:

have good

ideas *and* 

realize them

10.000 hours to

7h/day = 3,91 years

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

dea

14h/day = 1,96 years

No empirical

evidence but

some nice

quotes as

memory aid.

# CREATIVITY

One definition

but planned

Cre a tiv i ty here: the deliberate creation of something new and useful

must know what is already available and move past that

# ORGANIZATION

I remembered a time when my grandmother had asked me to

There are things which cannot be taught in ten easy lessons, nor

be treason in an age when ignorance has come into its own and

one man's opinion is as good as another's. But there it is. As Star

Philip Adams

says, the world is what it is — and doesn't forgive ignorance.

popularized for the masses; they take years of skull sweat. This

explain television to her — the guts, not the funny pictures.

consists for example of diverse ideas for plot, characters, settings, quotations, objects, etc. pp. While it is possible to remember one single idea, the usage of many ideas for a Idea for a book creative project requires organization.

"Glory Road" by Robert A. Heinlein

"He who has imagination

without learning has

wings but no feet."

Unknown

When people say to me: "How do you do so many

things?" I often answer them, without meaning to

be cruel: "How do you do so little?" It seems to me

that people have vast potential. Most people can do

take the risks. Yet most people don't. They sit in front

extraordinary things if they have the confidence or

of the telly and treat life as if it goes on forever.

### OCCUPATION WITH THE TOPIC

esp. acquire Knowledge and Skills

Even if the creative solution looks simple afterwards, the creative work requires an extensive occupation with the topic — knowledge must be acquired and skills must be trained. This may sound trivial, but many "creatives" do not give this step the attention it deserves. Einstein once said that imagination is more important than knowledge — if you have the knowledge of an Einstein you may allow yourself this remark. Michelangelo probably said the more relevant thing: "If people only knew how hard I work to gain my mastery, it wouldn't seem so wonderful at all." Real creative work requires extensive self-directed learning and a disciplined training of the necessary skills. The time and the hard work are the price to pay for the recognition of creative work. Persistence is more important

than intelligence here! Ideas are usually occur automatically when

How long does it take until you acquire expertise in a topic? According to Simon and Chase it takes about 10.000 hours to acquire expertise in an area. The diagram on the right shows what this means in hours per day. You need to have this time available. You will never "accidentally" have the time you need — you need to create and defend your time.

The example comes from expertise in chess but it is useful anyway.

• Help: work with smart

• Options: Limit work and

activities, set new goals,

change the methods, ...

• Changing yourself: use

your mood, dream, ...

experiment, ...

• "just do it": produce a lot,

relevant area, ...

back, ...

people, ask experts for the

• Distance: take a break, take a step

Possibilities to create time • avoid internal & external Place witout Internet access interruptions be unavailable

> ditch the competition • define criteria of success and use them to evaluate your success

"I have to do x, y, and z. Which of these shall I cancel if I also do k?" limits break down task in easyto-do subtasks

• say "No" and establish

 create a learning-list with topics start with a simply project

Give yourself

time for ideas

 choose teachers and settings consciously

Time for Incubation/Ideas

bath/shower

· listen to your thoughts when lying in bed

 Mediation/Yoga mid-day sleep

follow daydreams "use" presentations

and meetings classical concerts

 travel alone solo endurance sport

find ways to do

Capture

nothing" more often

When inspiration does not come, I go for a walk, go to the movie, talk to a friend, let go... The muse is bound to return again, especially if I turn my back! Judy Collins

Under normal conditions the research scientist is not an innovator but a solver of puzzles, and the puzzles upon which he concentrates are just those which he believes can be both stated and solved within the existing scientific tradition. Thomas Kuhn

Enough quotations, now for some real examples ...

Yup, that was this poster — the idea for

the structure came while taking a bath ;-)

Chance favors the prepared mind. Louis Pasteur

"I thought about it all the time."

Sir Isaac Newton, on how he

discovered the law of gravity

Impara l'arte, e mettila da parte.

[Learn art to forget about it.]

Unknown

"I don't care about what something was designed to do, I care about what it can do." Gene Kranz in "Apollo 13"

Whiteboard!

Backups: early, often, incrementa

Jot down ideas without

interrupting the shower

GENERATING

Creativity "techniques" are often overrated, but they can give you time (and a justification) to take the time to think about a topic. esp. having time for ideas

There are a lot of creativity techniques — but no silver bullets which you can apply everywhere and anytime. And even the best creativity technique is useless if you do not have the necessary knowledge. In many cases occupying yourself with the topic intensively and having the

- time to think about the experiences will already generate ideas. **Examples for Creativity "Techniques"** • Structure: Change the way you work, e.g., keep your independence, have
- time for ideas, ignore authority and traditions, ... • Perspective: Question assumptions (even those you like), keep the goals but change the methods, question the methods, look at the data, ...
- Inspiration: Analogies, use the idea collection, travel, ...

you occupy yourself with the topic.

**Advantages of Capturing** 

frees mental resources

can stimulate further ideas

makes flow of though visible

conscious quality control

enables larger projects

no idea is lost

**Ways to Capture Ideas** 

taking-App, ...)

• Stationary Methods (e.g. blackboard, whiteboard, MagicCharts, pinboard, ...)

dock, open with Spotlight/

6 6 8 8 W 8 2 A V 🗀 🖩 📆 🔟 🕡 🖎 🛎 🖺 🖺

# Pen and Paper

• Cellphone (SMS, Voice recorder, call your own mailbox, Note-

PC (put textfile on taskbar/

## CAPTURING Immediately!

If you first have to think about where you put it or have to search for pen and paper, you either loose the idea or the motivation to write it down.

Ideas are fleeting and often they do not return. Thus, ideas should be captured always, immediately, fast, and without effort. The focus is on capturing, sorting comes later. This requires simple and flexible methods. The quality should be "sufficient" — the notes do not have a value on its own but you have to be able to understand the idea later. Capturing ideas has nothing to do with having a bad memory — you just have too many ideas to remember all of them and it would be a shame to loose them. It is also not unprofessional — even professionals like Helmut Newton or Robert A. Heinlein have written down their ideas to have them available later.

### calming feeling **Missed Ideas**

"Eureka!"

 retrace the steps to the idea reduce arousal

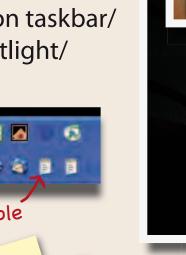
try it again later

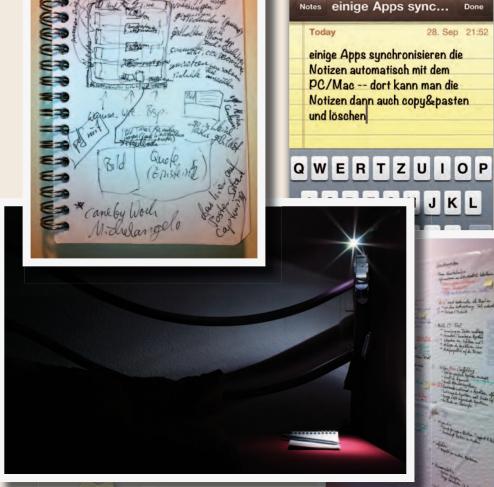
Idea

quickly available

and much more

# Quicksilver)





**DEVONthink** 

Autodesk Instant \_

there are also pens for iPhone

# COLLECTING

The structured collection makes the difference to an insane with a drawer

roangroante a lor loose

Letting ideas grow for projects.

The aim of an idea collection is to let creative projects grow over time. An idea collection requires work and needs to be, trimmed' regularly. But due to its structure it allows you to integrate ideas, thus making larger projects possible. You can work with your ideas and have them available whenever you need them. A good collection allows you to easily remember ideas (you stumble upon them while using the collection), stimulates the generation of new ideas, allows the quick finding of specific ideas, and the enlargement and **restructuring** of ideas. The collections grows over time — if a project is ready you can implement it, while the other projects do not get lost but continue to grow.

### Criteria for the Collection

- speed easy backups
- comfortable "look & feel"
- flexibility • supported media formats
- availability

security

**Recommended: Collection Inbox** One file/folder where you put new

time. They are neither inactive, nor

do they consume a lot of resources.

They grow and will be readily

available once the core project is

ideas first — sorting takes time and this way it is backed up like the collection.

do not get lost but

get enriched with

further ideas over

finished.

only one collection **Ways to Collect Ideas** -> "Ways to Capture Ideas" Index Cards

 Mind-Maps/Concept Maps Outliners Note-Management Software Digital Notebooks

dea

 Wikis Databases

**Periphery Projects** The rest of the collection conscious decision for

one project **Project that is currently** Interesting projects with extensive idea generation.

Circus Ponies Notebook ~

## REALIZATION

a a

Creativity must be realized.

Having an idea is easy, but only when the idea is realized it shows whether it was a creative work. Only while realizing you see without a doubt whether the idea works, whether it is new and useful, whether the knowledge and the skills were sufficient and whether you have enriched the domain with a new creative work. Again this takes a lot of time and hard work.

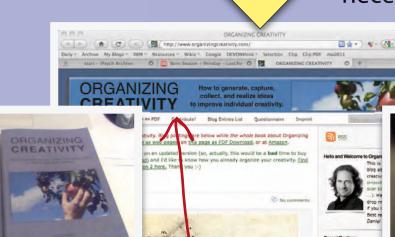
A common problem is having too many ideas, which a person wants to implement all (and at best, at the same time). Often people change the project if problems occur and in the end they realize none. The idea collection helps

mostly just-for-fun

to concentrate on one core project, while the other (not currently implemented) projects

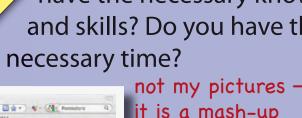
The Girl Who Played With The Wolves Once upon a time, a young girl wa at the border of a large forest. She

nere. Fate had struck was send to her gra way from her friends grandmother was a k



Aim achieved!

**Central Projects** 



have the necessary knowledge and skills? Do you have the not my pictures it is a mash-up Quote-Book

have all ideas (sort them/outliner!)?

Can you realize the project? Do you

**Choosing a project** 

collection: Do you

Check with the

## **Feedback**

Good feedback aims at improving the quality of the current and future work. A good critic takes time, tries to understand the work, wants the creative to be successful, understands the creative, the domain and the target audience. Even if feedback sometimes appears to be harsh, it is not an attack on the person but aims to improve the work.



Regarding organizing a PhD thesis there is a presentation. Sa, 13h, Europa



more information at: www.organizingcreativity.com I'm around here somewhere.:-)

Aleet the Author **DURING THE AKADEMIE** 



Organiz

to

How

(2011).

Daniel

Wessel,