

# AspIT

## The hidden workforce

15 June 2011

Ole Bay Jensen, Education Principal



# Ole Bay Jensen

Computer in Science:	1985
System Development:	1985 – 1989
School's:	1989
Teacher	
Chief in Project	
Education Principal	

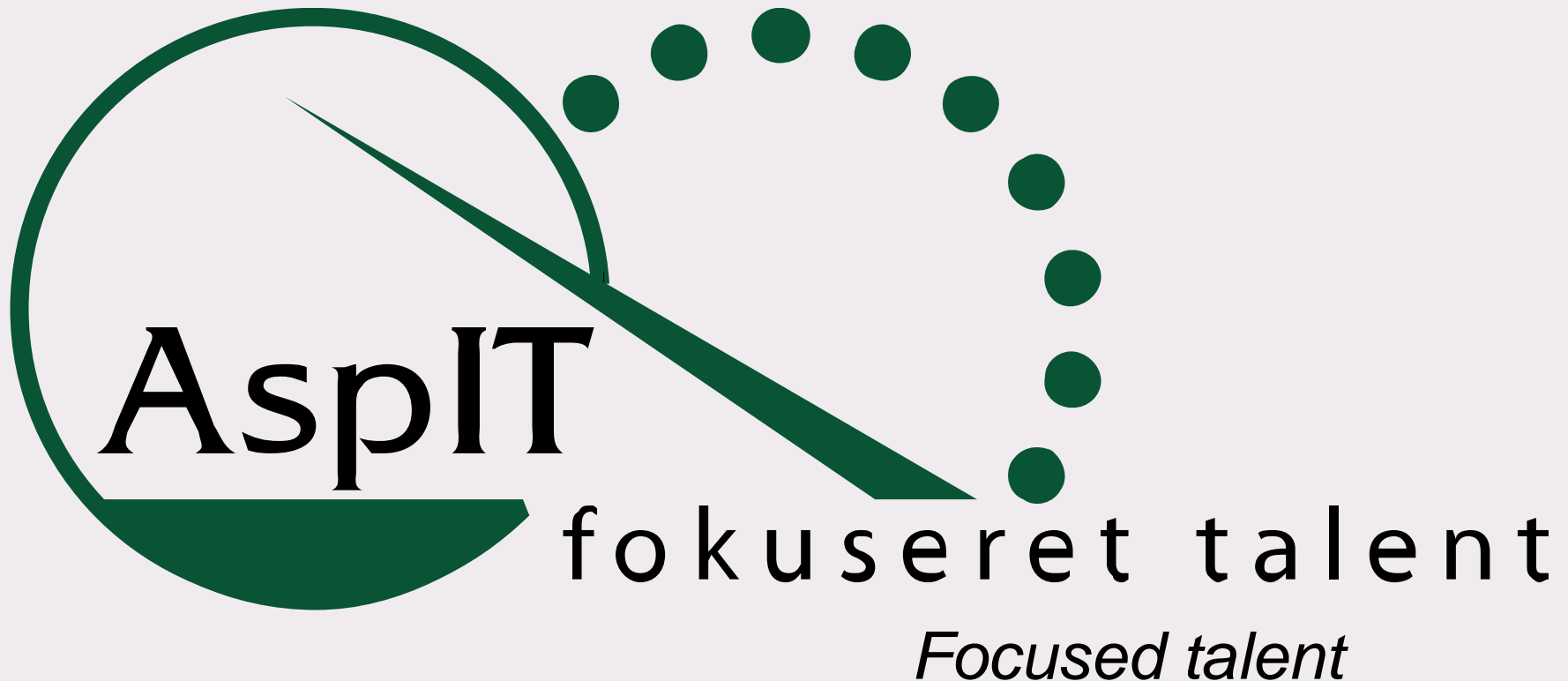
# AspIT - 2011

Cities:

1. Aabenraa (Vejle)
2. Aalborg (Vejle)
3. Aarhus (Vejle)
4. Esbjerg
5. København
6. Odense
7. Rønne (Odense)
8. Skive
9. Vejle



## The Logo



# Competences

**Formel Competence**

**Real Competence**

**Focused Talent**

# Video's

*Look for videos at [www.aspit.dk](http://www.aspit.dk)*

# Special abilities and interests of people with autism and Asperger's syndrome



$$S_{t+\Delta t} = S_t \left( 1 - \frac{\Delta t \cdot R_0}{F} I_t \right)$$

$$E_{t+\Delta t} = E_t \left( 1 - \frac{\Delta t}{L} \right) + \frac{\Delta t \cdot R_0}{F} S_t \cdot I_t$$

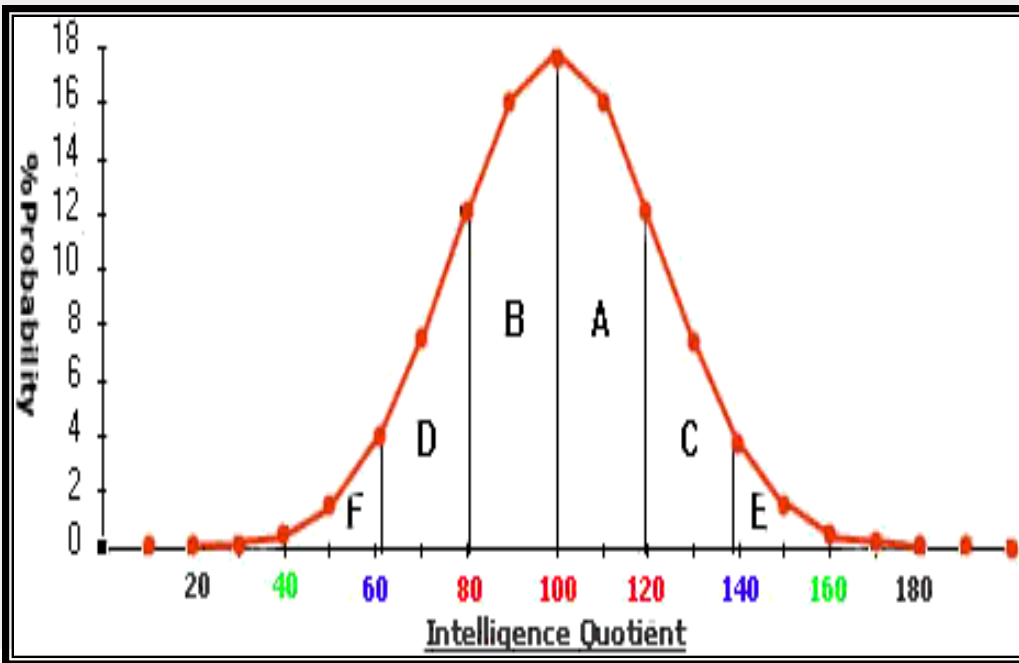
$$I_{t+\Delta t} = I_t \left( 1 - \frac{\Delta t}{F} \right) + \frac{\Delta t}{L} E_t$$

$$R_{t+\Delta t} = R_t + \frac{\Delta t}{F} I_t$$

# 'IDIOT'

Before 1887.

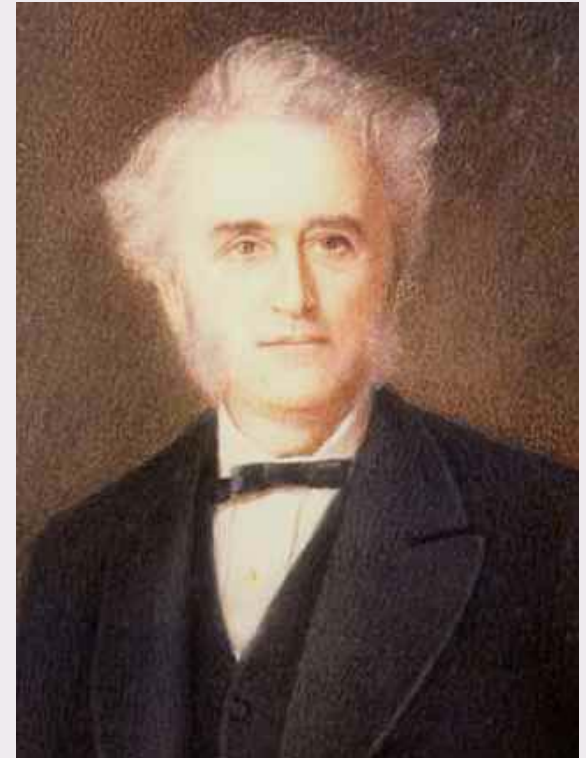
- The term 'Idiot' is used when referring to people with an IQ of 20 and below.





# ‘IDIOT SAVANT’

- In 1887, Dr T. Langdon Down formulated the term ‘Idiot Savant’.
- The word ‘savant’ means ‘to know’.
- Down’s syndrome is named after this person.

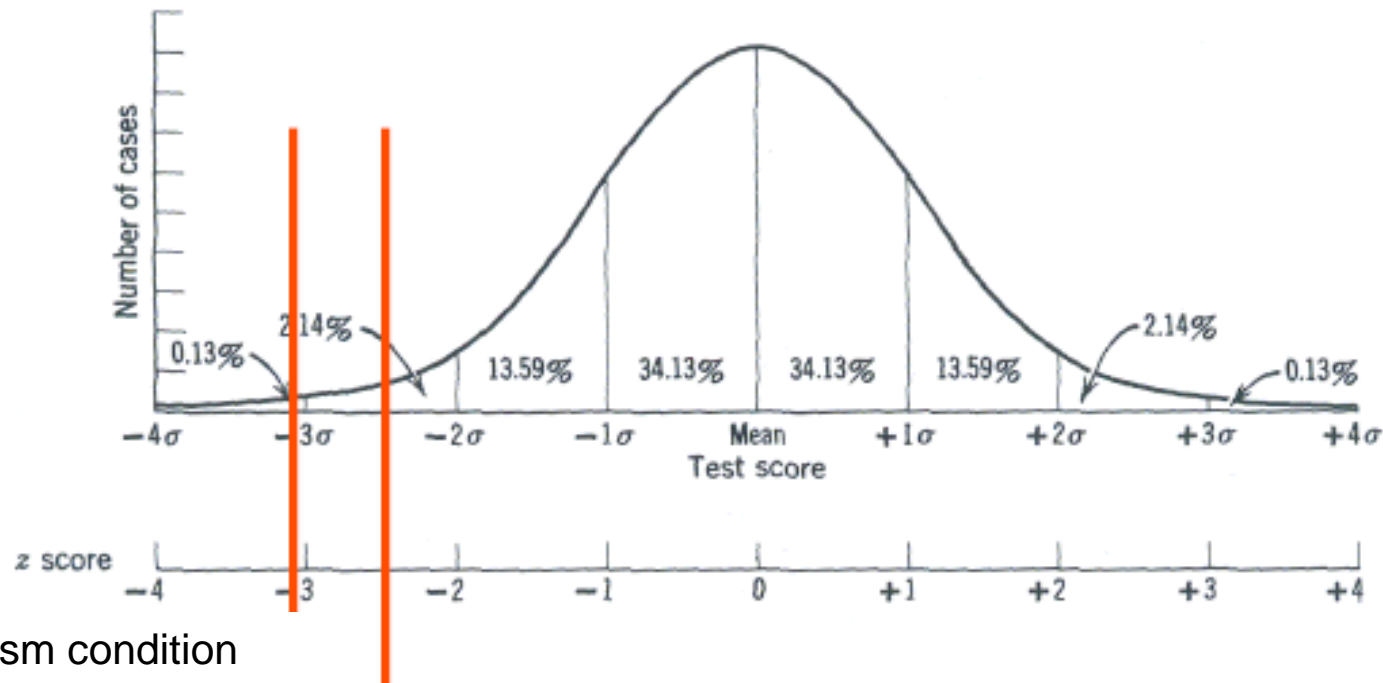


# ‘AUTISTIC SAVANT’

In 1987, Dr Bernard Rimland introduced the term ‘Autistic Savant’, which is now used instead of ‘Idiot Savant’.



## Social skills, empathy



PsykologCompagniet

# The environment-related handicap concept

- A person cannot be handicapped
- You can have a functional impairment
- The handicap arises when the requirements from the surroundings and people's possibility for meeting them do not match
- The handicap is the gulf between the person with a functional impairment and his or her surroundings

# The environment-related handicap concept

The handicap can be removed by:

Altering the person so they no longer have a functional impairment

Changing the requirements so the functional impairment no longer poses a problem

Compensating for the functional impairment

## Autism and the brain

Certain deviations have been found in the brains of people with autism:

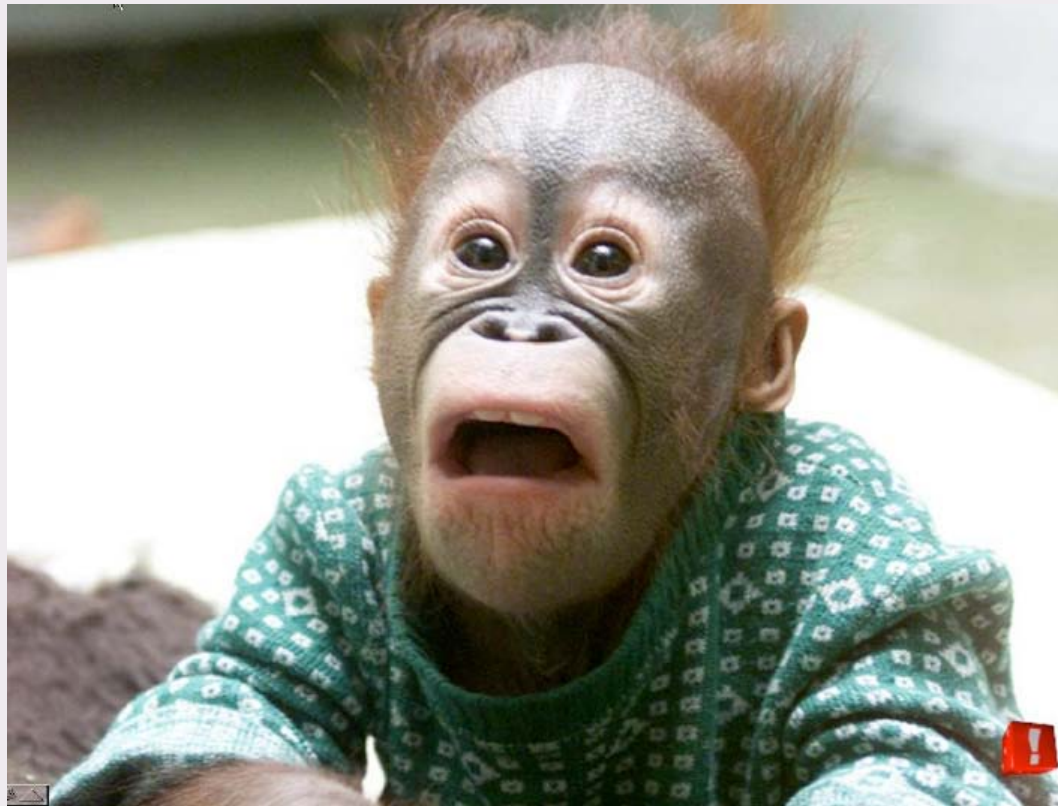
- Larger brains – 30% of people of average intelligence with autism have abnormally large brains as adults
- Greater cell density, observed from the fifth week of gestation
- Different 'cabling' between the brain cells

## Effect and empathy

There are a number of fundamental effects which function from birth, e.g.:

- Interest
- Joy
- Surprise
- Anger
- Sadness (distress, anguish)
- Fear
- Shame
- Dislike (disgust, dissmell)

# Effect and empathy



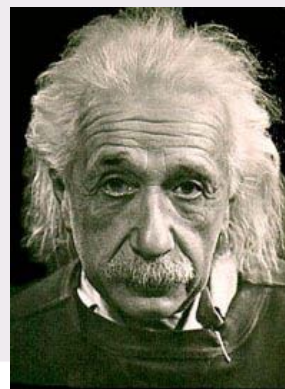


# Empathy deficit



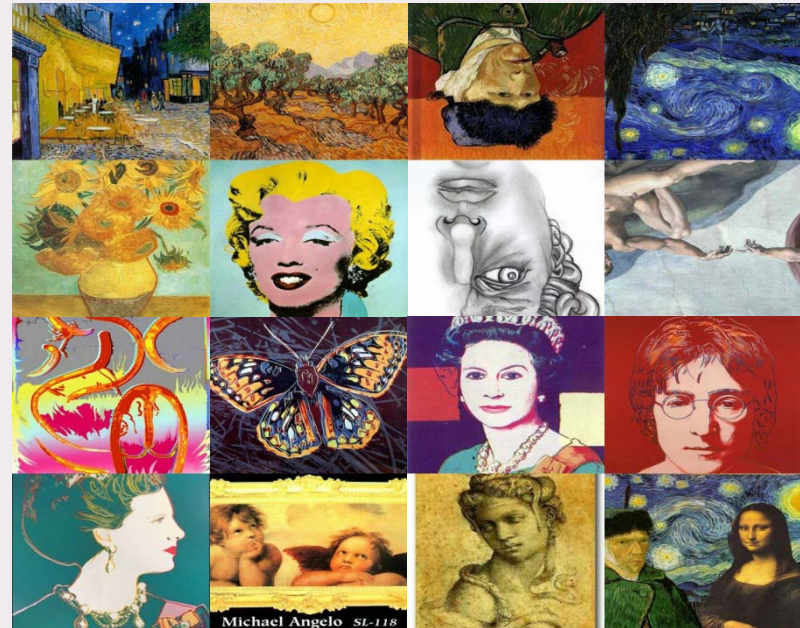
# Unusual abilities and Asperger's syndrome

- About 1% of the population is autistic, and it is estimated that between 1-2% of people with autism have special abilities.
- Some people with Asperger's syndrome, who are probably normally talented or highly gifted, can possess unusual abilities.
- Isaac Newton (1642-1727). English mathematician, physicist, alchemist and philosopher
- Albert Einstein (1879-1955). German physicist, mathematician



# Exceptional individuals within art

- Michael Angelo (1475-1564)
- Vincent Van Gogh (1853-1890)
- Andy Warhol (1928-1987)



16

# Other gifted individuals

• Philip of Spain	(1527 -1598)	Monarch
• Jonathan Swift	(1667 -1745)	Author
• Henry Cavendish	(1731 -1810)	Physicist
• Thomas Jefferson	(1743 -1826)	President
• Eric Satie	(1866 -1925)	Composer
• Bertrand Russell	(1872 -1970)	Philosopher
• Béla Bartók	(1881 -1945)	Composer
• Ramanujan	(1887 -1951)	Mathematician
• Ludvig Wittgenstein	(1889 -1951)	Philosopher
• Alfred Kinsay	(1894 -1956)	Biologist
• Simone Weil	(1909 -1943)	Author
• Alan Turing	(1912 -1954)	Mathematician
• Patricia Highsmith	(1921 -1995)	Author
• Glenn Gould	(1932 -1982)	Composer

# AspIT - project presentation

- Prepare an educational model which is
  - ✓ Business-oriented!
  - ✓ Information technological!
  - ✓ Personally stimulating!
- The programme must ensure that the student acquires:
  - General and formal competencies within IT applications
  - Specialist and real competencies
    - within the hardware or software area
    - for solving specific tasks in collaboration with companies
    - for achieving and maintain lasting employment

# Wings triad

Communication

In 1994,  
Asperger's syndrome  
was standardised as a  
diagnosis.

When discussing autism today,  
we talk about a group which,  
according to many researchers,  
accounts for 1-2% of the population.

Social  
interaction

Imaginative skills,  
special interest



# Denmark 2011

You are employed on the basis of your professional qualifications, but often dismissed due to inadequate social qualifications.

If you have met a person with  
Asperger's syndrome ...

... then you have met only one person with  
Asperger's syndrome.

***Individualism!***



# Personal qualifications

- An AspIT is a value-creating worker because the student exercises a strong IT technical background, and because his/her **handicap** often means the person is characterised by:
  - ✓ **Having a good memory**
  - ✓ **Being very conscientious**
  - ✓ **Being very stable**
  - ✓ **Being very loyal**
  - ✓ **Having a good sense of detail**
  - ✓ **Being good at concentrating**
  - ✓ **Being very diligent**
  - ✓ **Being honest**

# Personality

- **Young man aged about 20 with AS**
- **Normal or high intelligence**
- **Performed poorly at school**
- **Talent and interest in IT**
- **Thought that school was 'hard-going'**
- **Business aptitude**

<Video>

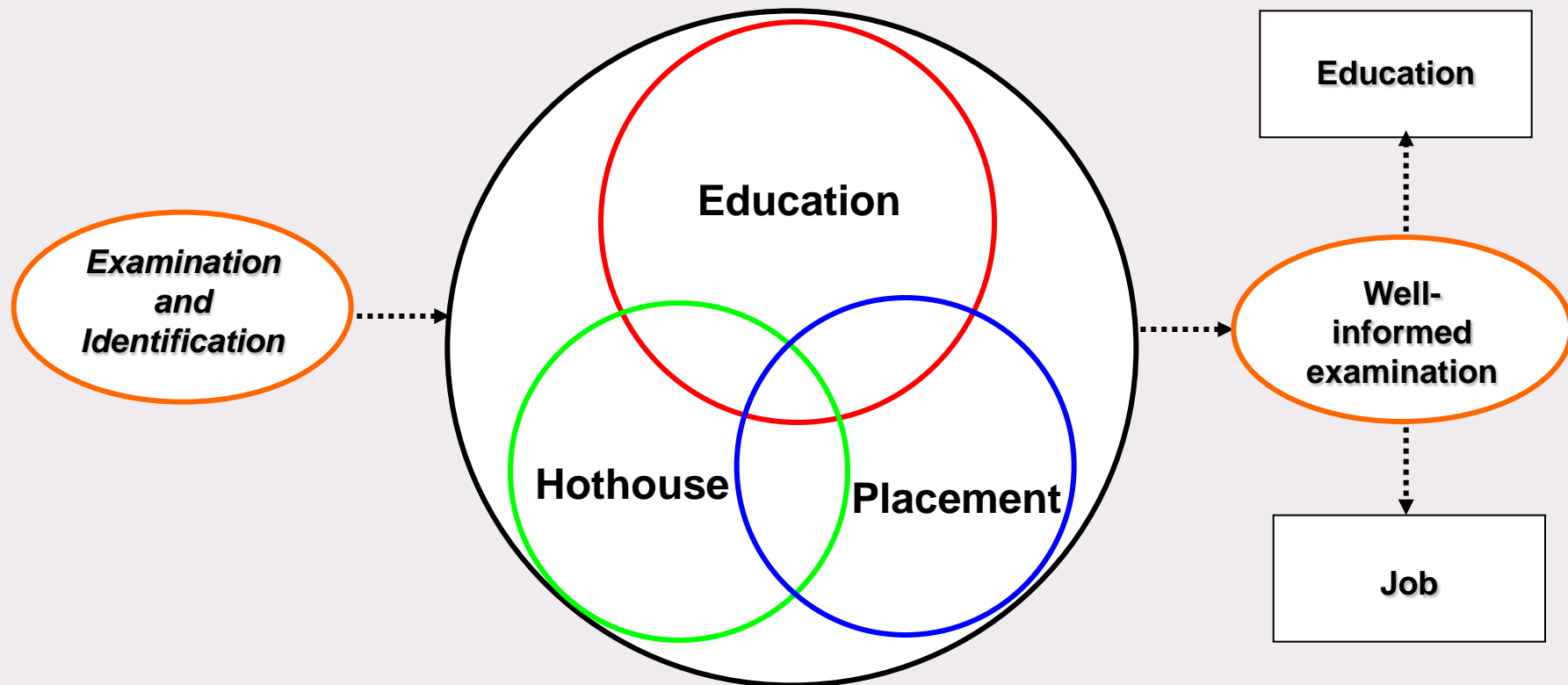
# Professional qualifications

- **Only partially completed his elementary schooling**
  - ✓ Danish (read, write, formulation)
  - ✓ Mathematics (logic)
  - ✓ Reasonable reading skills in English (passive vocabulary)
- **Identification**
  - ✓ Basic schooling and social competencies
  - ✓ Basic programming (LEGO Mindstorms)
  - ✓ Basic English skills
  - ✓ Basic IT skills – Quick Test PC test
  - ✓ Basic learning skills within IT – Pocket PC

# Subject areas

- ✓ Software design (S)
- ✓ Technology (T)
- ✓ Visualisation (V)
- ✓ Quality Assurance (QA)

# General educational model



## Educational model

Semester/ Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
6	HH/P/I						HH/P/I						HH/P/I					
5	HH/P/I						HH/P/I						HH/P/I					
4	HH/P/I						HH/P/I						HH/P/					
3	Quality Assurance (QA)						Hothouse (HH)						HH/P/I					
2	Technology 1 (T1)						Software design 1 (S1)						Visualisation 1 (V1)					
1	PC-Kørekort®						Technology (T0)			Software design (S0)			Visualisation (V0)			Quality Assurance (QA0)		

- Semester 0:** Identification process forms the basis for evaluating the student's potential for completing the AspIT programme.
- Semester 1:** Introduction and PC-Kørekort® (computer driving licence) as well as the other modules in semester 1 **must** be assessed as 'passed' with a view to further studies. The semester concludes with two weeks of re-sitting examinations and/or hothousing. Students are able to re-take the first semester.
- Semester 2:** The student must, in close collaboration with AspIT, establish his/her 'focus talent' within T, S, V or QA.
- Semester 3:** The student completes an educational module at level 2 within his/her 'focus talent' – T, S, V or QA. The student then works in the 'hothouse' with the purpose of identifying his/her general business skills and his/her special business skills within his/her 'focus talent'. The semester concludes with the first placement with a company.
- Semesters 4-6:** The student works and is taught further within his/her 'focus talent': T, S, V or QA.

# Results

## The computer scientist programme

- ✓ ***At the internal test at the end of the first semester of the computer science study programme, one of the AspIT students was one of the very best performers!***
- ✓ ***She had not completed her elementary schooling, but programming and databases were her special interest!***

# Barriers and challenges

- **Group size – five students – individual instruction**
- **Concrete instruction – solving individual assignments**
- **Calm surroundings with own workplace**
- **Predictability – high degree of planning (CEBIT)**
- **The objective of the first semester is to identify skills and talent**
- **The objective of the second semester is to identify focus talent**
- **The objective of the third semester is work training**
- **The objective of other semesters is supporting the individual focus talent**



# Benefits for the companies?

## An AspIT is a value-creating worker!

1. Solid IT business background (special interest/focus talent) – **acquired**
2. Personal qualities – **innate!**
  - ✓ Good memory
  - ✓ Very conscientious
  - ✓ Very stable
  - ✓ Very loyal
  - ✓ Good sense of detail
  - ✓ Good at concentrating
  - ✓ Very diligent
  - ✓ Honest

**You learn something only when,  
and only when,  
you are working with something  
which you can almost do!**

**- If you can!**

