

HOPE 2014 BUCHAREST,  
9th Edition of Hope Congress,  
4th-8th NOVEMBER 2014

**Self-attribution of success/failure in young cancer patients: the effects of attributional style training**

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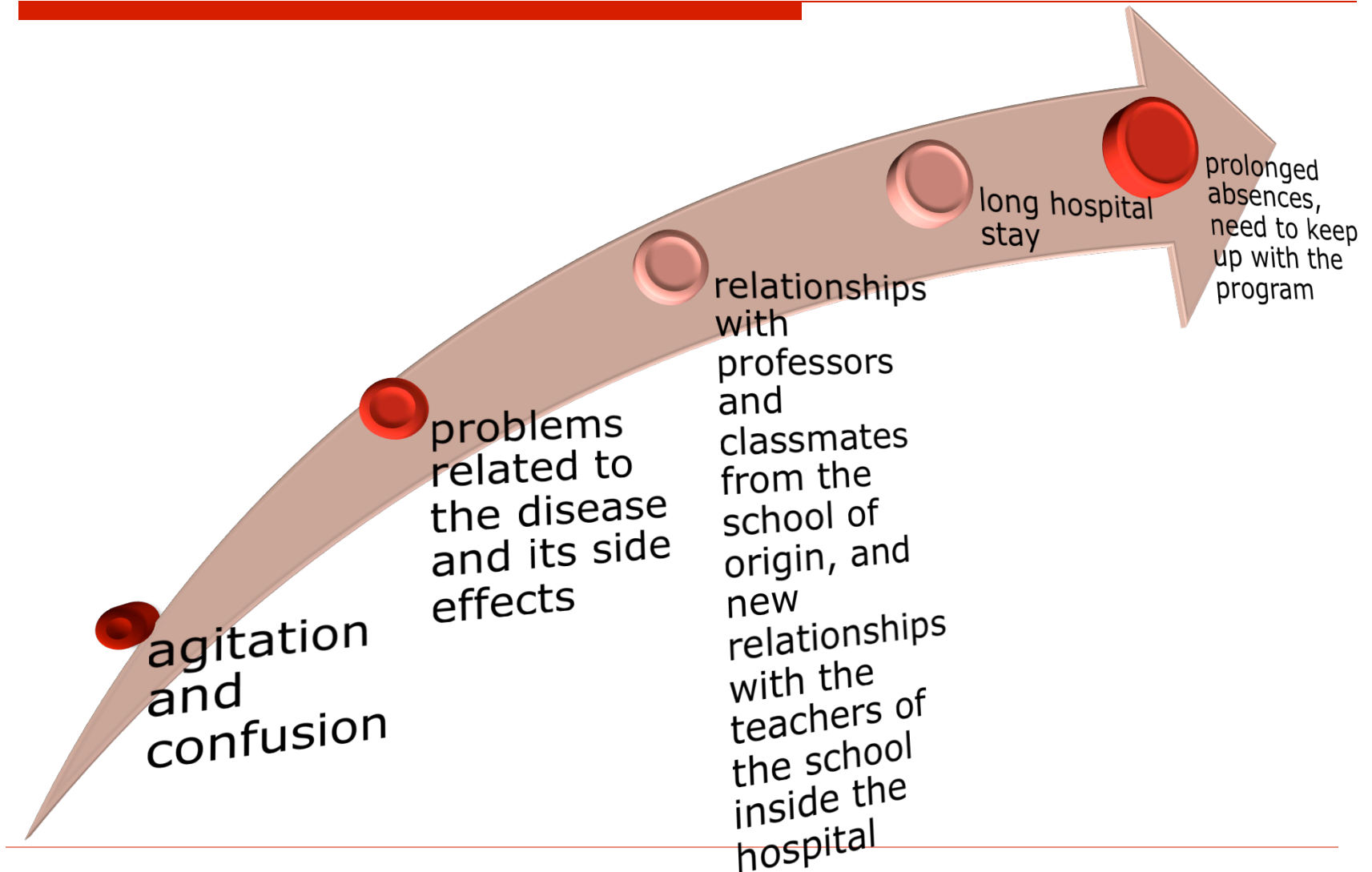
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*"When a child gets sick and goes to hospital, their whole world undergoes sudden and mysterious changes. The people, places, objects are transformed around them, the timing and pace of life are affected by the hospital's routine and by the limitations imposed by the disease. "*

*(Michele Capurso, coordinator of the school inside the hospital, "Silvestrini" of Perugia)*

# PROBLEMS CONNECTED TO THE ONCOLOGICAL DISEASE

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# THE CANCER DISEASE

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Threatens the self-efficacy beliefs and the self-esteem

Sick young patients tend to isolate themselves and to invest less energy in the learning process

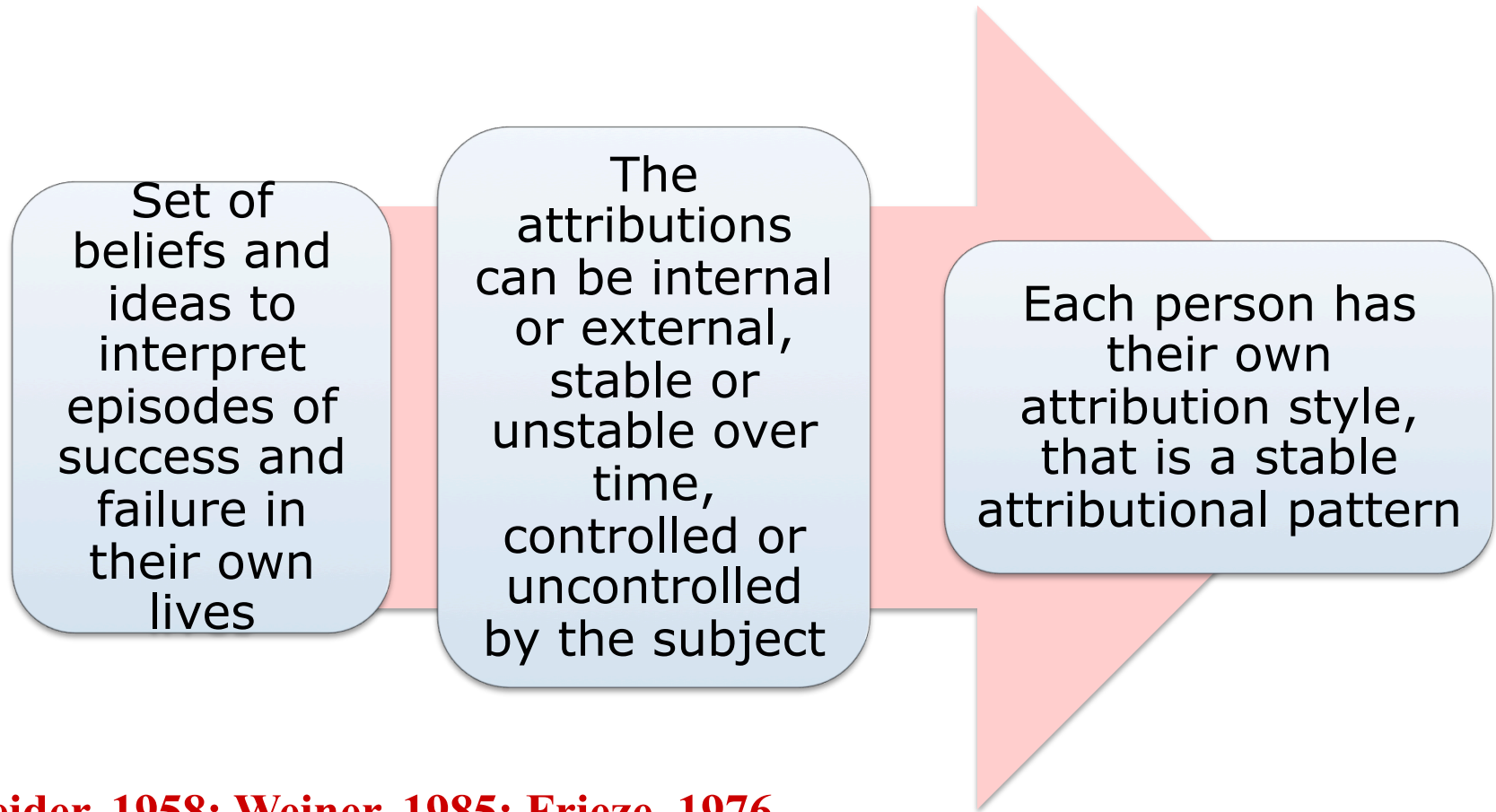
All of these can lead to the risk of failure in their studies, twice as much when compared to their healthy peers

**The attributional training is a therapeutic technique to modify in learners an ineffective attributional style**, increasing the level of persistence in the event of failure, and making in them understand that success comes from commitment

**Pavri e Monda-Amaya, 2001; Shiu, 2001; Forsterling, 1985**

# THE ATTRIBUTIVE SYSTEM

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**Heider, 1958; Weiner, 1985; Frieze, 1976.**

# AIMS OF THE STUDY

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**1. Asses the cancer patients' attributive system, to understand if the disease adversely affects the attribution they make of themselves with respect to success/failure.**

**2. assess how much attributional training, through the use of ICT (Information and communication technologies), can help young cancer patients to modify an ineffective attributional style, promoting and supporting commitment and motivation.**

# METHODS-SUBJECTS

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Prospective and longitudinal study, multi-centric:  
TRIESTE, PADOVA, CRO of Aviano

Positive opinion from the ethics committees of  
the three centers involved

31 cancer patients aged 11 to 19, in treatment or in  
the first year after stopping the treatment

Exclusion  
criteria:

- people  
who are  
unable to  
use ICT

lack of  
knowledge of  
the Italian  
language

# METHODOLOGY

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Informed consent. Eligible subjects were divided into 2 age groups (11 to 13 and 14 to 19 year olds)

Both groups were administered two questionnaires: "I and the ICT" on cancer patients' technology preferences and "Attributive questionnaire" (De Beni-Moe, 1995)  
In November 2013

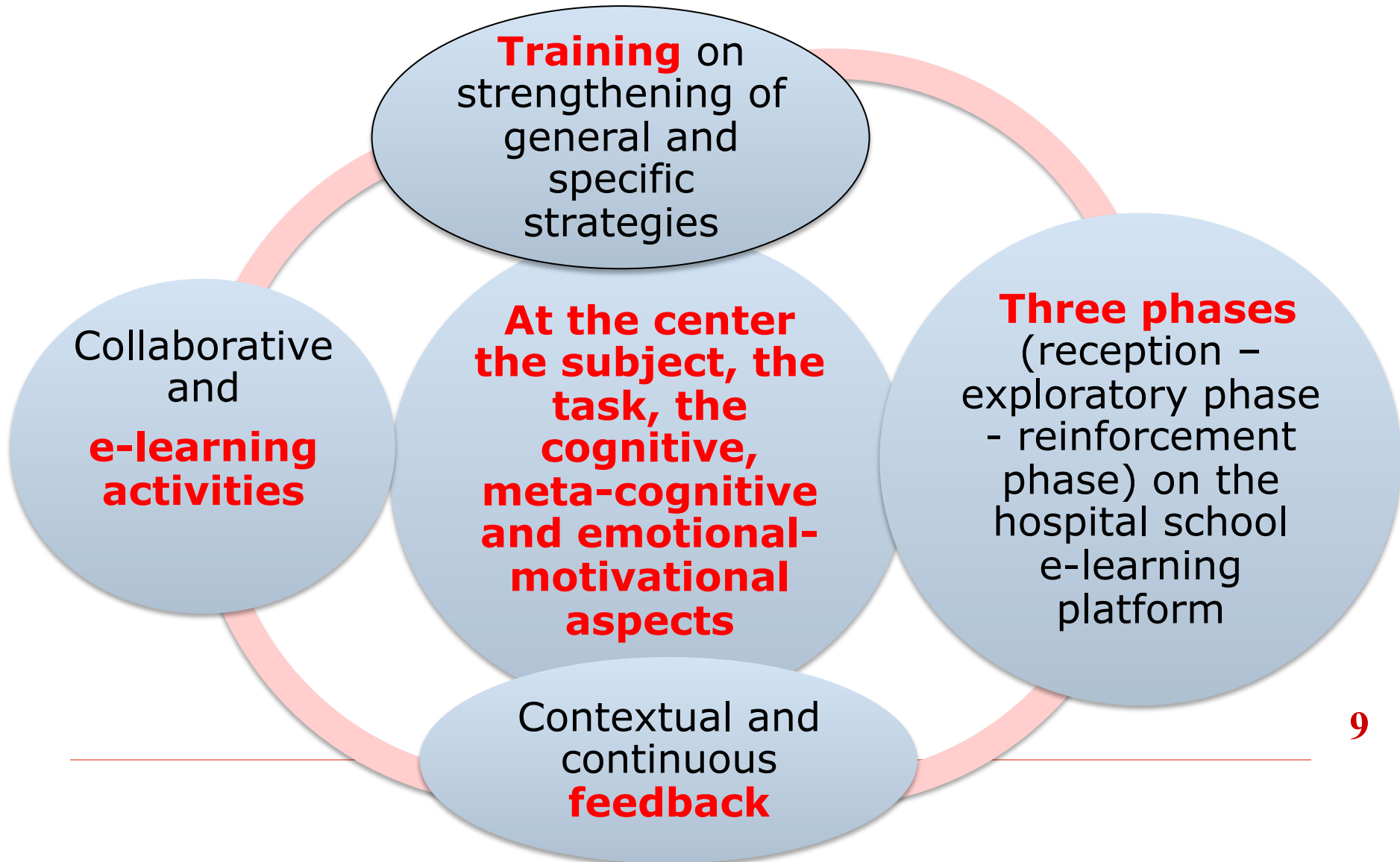
Attributional training, specific to each group, on-line, in Moodle and on Skype.

Re-administered test the Attributional Questionnaire (June 2014)



# METACOGNITIVE AND ATTRIBUTIONAL TRAINING & ICT

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# RESOURCES AND ACTIVITIES ENABLED ON THE PLATFORM

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- ❑ **Slides:** to present the topics of the modules activated
  - ❑ **Questionnaires:** to help subjects reflect on motivation, method and study skills, learning styles, self-control of anxiety, attribution
  - ❑ **Cards:** to reinforce what they have learned and to exercise, using new strategies, to learn effectively.
  - ❑ **Glossary:** to insert new terms
  - ❑ **Forum:** news, welcome discussion on various topics.
  - ❑ **Homework desk:** to send contribution and homework.
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# ICT AND THE CANCER DISEASE

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The ICT may contribute:

- to limit the inconveniences caused by the disease;
- to help manage emotions and counteract depressive attitudes;
- to reduce isolation in school work and maintain links with the outside world and the reality of the school of origin;
- to motivate pupils;
- to reduce the physical disadvantages;
- to improve the cancer patients' approach to the learning process in order to achieve success.

# ANALYSIS OF THE DATA

**The score obtained in the commitment scale**, both successful and unsuccessful (SC, successful commitment UC unsuccessful commitment), **is the most important to outline the attributive style** of each subject's profile

The commitment and its lack are :

1. matched with educational success,

2. recognized as major attributional factors also in cultures other than the Western one.

**High scores on the commitment scale will determine the profile of a good strategy user (GSU), A PROFILE WHICH WE AIM FOR!**

# STATISTICAL ANALYSIS

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continuous variables were reported as statistical averages and standard deviations (SD);

categorical variables were reported as numbers and percentages

**at the end of the study, the evaluation of the differences between the before and the after training will be carried out with a non-parametric test for paired data (Wilcoxon test).**

# Subjects participating

**22** males, **9** females

**16** young patients in therapy

**15** young patients one year after stopping the treatment

- **Out of a total of 31 young patients: 10** treated at the hospital Burlo Garofolo of Trieste, **13** at the pediatric oncology department at Padua and **8** at the CRO of Aviano, all in Italy

- **17** attended the lower secondary school, **12** upper secondary school, **2** the 1st year of university

- Frequency and Type of disease: 1 Aplastic Anemia, 1 ependymoma, 1 AML, 2 Hodgkin's Lymphoma, 4 non Hodgkin's Lymphoma, 13 ALL, 1 rhabdomyosarcoma, 2 sarcoma, 3 Ewing sarcoma, 3 CNS.T.

# ATTRIBUTION IN YOUNG CANCER PATIENS: INITIAL OBSERVATIONS

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From the average of the scores obtained in the 10 scales considered (SC, FC, SIS, FIS, ST, FT, SL, FL, SEH, FEH), **we got a profile which is within the standard**. However, it can be noted that:

## 1. SCALE SC (SUCCESS/ COMMITMENT)

median 23.00

scref\_l (less) 21.00

scref\_m (more) 32.00

**the median is closer to  
the **lower** reference  
figure**



## 2. SCALE FC (FAILURE/ COMMITMENT)

median 21.00

fcref\_l 18.00

fcref\_m 30.00

**the median is closer  
to the **lower**  
reference figure**

# ATTRIBUTION IN YOUNG CANCER PATIENS: INITIAL OBSERVATIONS

**it can also be noted:**

### **3. SCALE FT (FAILURE/TASK)**

median **24.00**

ftref\_l 16.00

ftref\_m **26.00**

the median is closer  
to the **HIGHER**  
reference figure

### **4. SCALE SIS (SUCCESS /INNATE SKILLS)**

median **17.00**

sisref\_l 8.00

sisref\_m **21.00**

the median is closer  
to the **HIGHER**  
reference figure



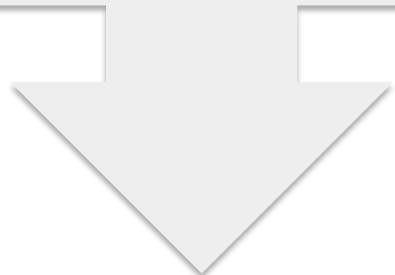
# FROM THE DATA



the **PROFILE** that is emerging is: **DENIER**

## SUCCESS

commitment	-
innate skill	+
external	-



## FAILURE

commitment	-
innate skill	-
external	+

In the training, they will need to understand that there is a relationship between commitment and result, and that **the ability isn't an innate factor, but rather can be improved through commitment.**

A few more interesting data on scales **SC** and **FC**

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## OUT OF 31 SUBJECTS:

**scale SC**

**scale FC**

Below the lowest reference figure  
**6 (19.4%)**

Below the lowest reference figure  
**9 (29.0%)**

No difference (it corresponds to the lowest reference figure)  
**3 (9.7 %)**

No difference **3 (9.7 %)**

Low total/  
Very low total **9 (29.1%)**

Low total/  
Very low total **12 (38.7%)**

# CONCLUSIONS

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- **29.1%** of the subjects had a low internal attribution given to commitment in the event of success (SC)
- **38.7%** of the subjects had a low internal attribution given to commitment in the event and of failure (FC)



**THE COMMITMENT NEEDS TO BE  
ENHANCED.**

# SHARING THE EXPERIENCES



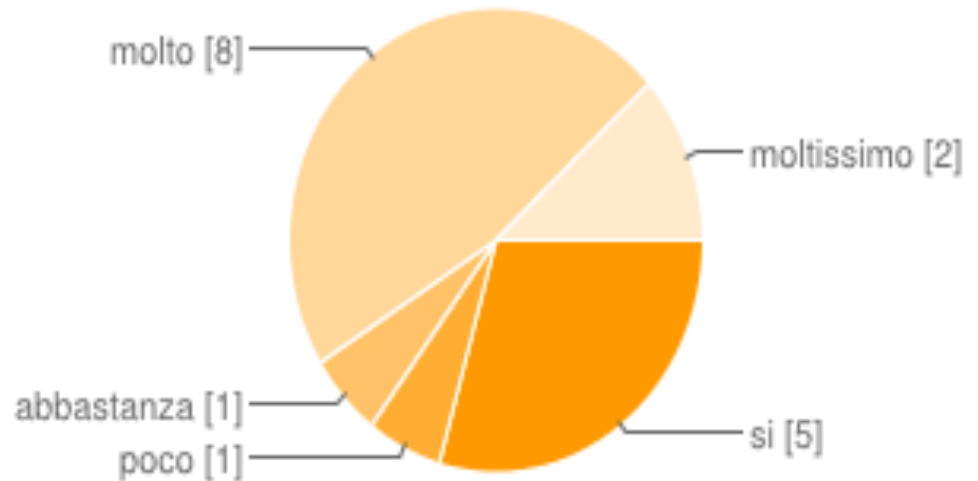
# OTHER FEEDBACK

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## Did you like working with the e-learning platform?

Out of 17 answers

<b>Yes</b>	<b>5</b>	<b>29%</b>
<b>Pretty much</b>	<b>1</b>	<b>6%</b>
<b>A lot</b>	<b>8</b>	<b>47%</b>
<b>Very much</b>	<b>2</b>	<b>12%</b>
<b>A little</b>	<b>1</b>	<b>6%</b>



# Yes, because...

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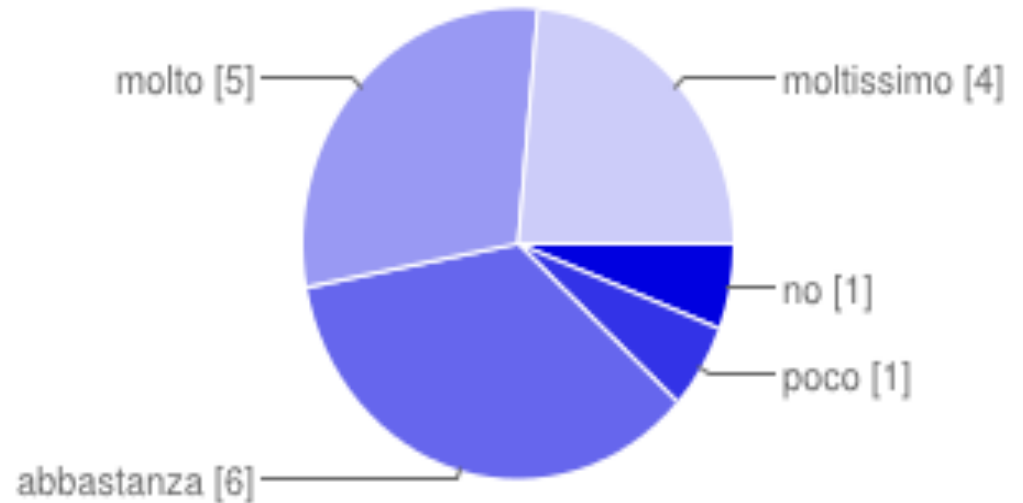
- ... *It was a new thing and I met new people;*
- ... *the material was available at anytime;*
- ... *I understood the various study methods which were useful to deal with any situation;*
- ...*the platform was very well organized;*
- ... *this way I found my study method!*
- ...*It was fun! It was more convenient! Because it helped me a lot to return to learning;*
- ... *It helped me with my problem and also to talk about it with other people;*
- ...*It helped me to keep up with the program;*
- ... *you can get good advice; in addition to reflecting on the issues, it helped us to achieve the pre-set objectives;*
- ... *It's helping us to get back to school.*

# WAS THE FORUM USEFUL?

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**Out of 17 answers**

<b>No</b>	<b>1</b>	<b>6%</b>
<b>A little</b>	<b>1</b>	<b>6%</b>
<b>Pretty much</b>	<b>6</b>	<b>35%</b>
<b>A lot</b>	<b>5</b>	<b>29%</b>
<b>Very much</b>	<b>4</b>	<b>24%</b>



# Yes, because...

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- *...we could compare our experiences;*
- *...If I didn't agree we could clarify the matter;*
- *...everyone has an opinion, I said mine and compared it with the others;*
- *...I've learned to relate more with the others;*
- *...using the forum I could read the opinions and thoughts of others;*
- *...I used it a little but it was useful to compare myself with others;*
- *...everyone can express what they think.*



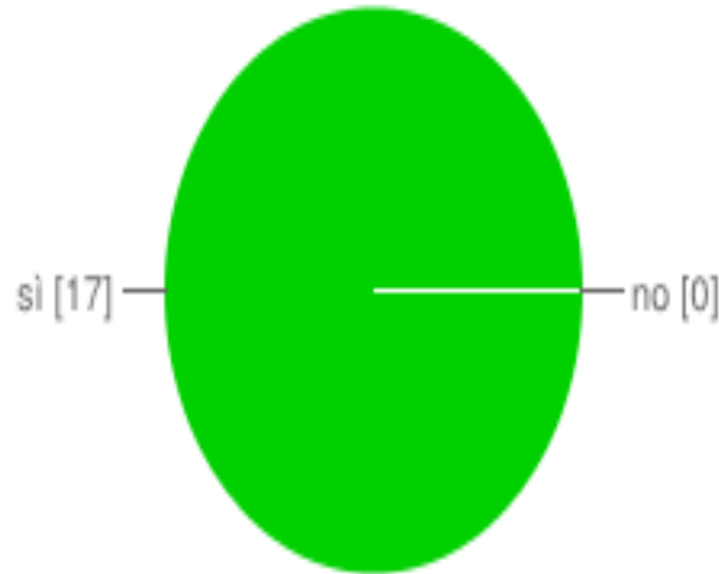
# WOULD YOU RECOMMEND THIS COURSE TO OTHER HOSPITAL STUDENTS?

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**Out of 17  
answers:**

**Yes 17 100%**

No 0 0%



# SOME PARENTS' OPINIONS:

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## **E-learning platform: yes, because:**

- *...It allows you to take advantage of every available moment and especially the times when the child feels well;*
- *...being able to access the platform and then also compare her experience with other students helped my daughter very much;*
- *...It avoids isolation and especially it helps not to completely lose the school pace;*
- *...It was crucial because it allowed my son to continue the school activities.*

# FIRST RESULTS:

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- The preliminary data indicate that the group at the beginning of the experiment had an attributional style mainly characterized by uncontrollable factors and with low internal attribution.
  - Much importance is ascribed to external causes (i.e.: the type of task; its level of difficulty), when young learners experience failure.
  - The metacognitive and attributional training has enabled us to develop a more internal attributional style that recognizes greater importance to commitment.
  - Furthermore, this training has helped learners to develop the belief that success depends on internal causes and it has strengthened their persistence on the task even if there are learning difficulties.
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# CONCLUSIONS AND RECOMMENDATIONS:

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- ❑ The first results obtained so far indicate the importance of a metacognitive and attributional training.
  - ❑ Developing interest, motivation, and willingness has enhanced, in cancer patients, a positive self-attribution which has facilitated living with their illness, improved their quality of life and their success in the field of education.
  - ❑ The suggested training owes its success to the fusion of two basic elements: the metacognitive and attributional approach and the methodology used, through ICT.
  - ❑ The improvement in the attributional style, the learners' involvement and the interest shown by all participants, led us to consider the opportunity to extend the tested methodology to all young learners with chronic diseases.
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