DIPARTIMENTO
DI INFORMATICA
SISTEMISTICA
E COMUNICAZIONE

Designing the content of a Social E-Learning Dashboard

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me

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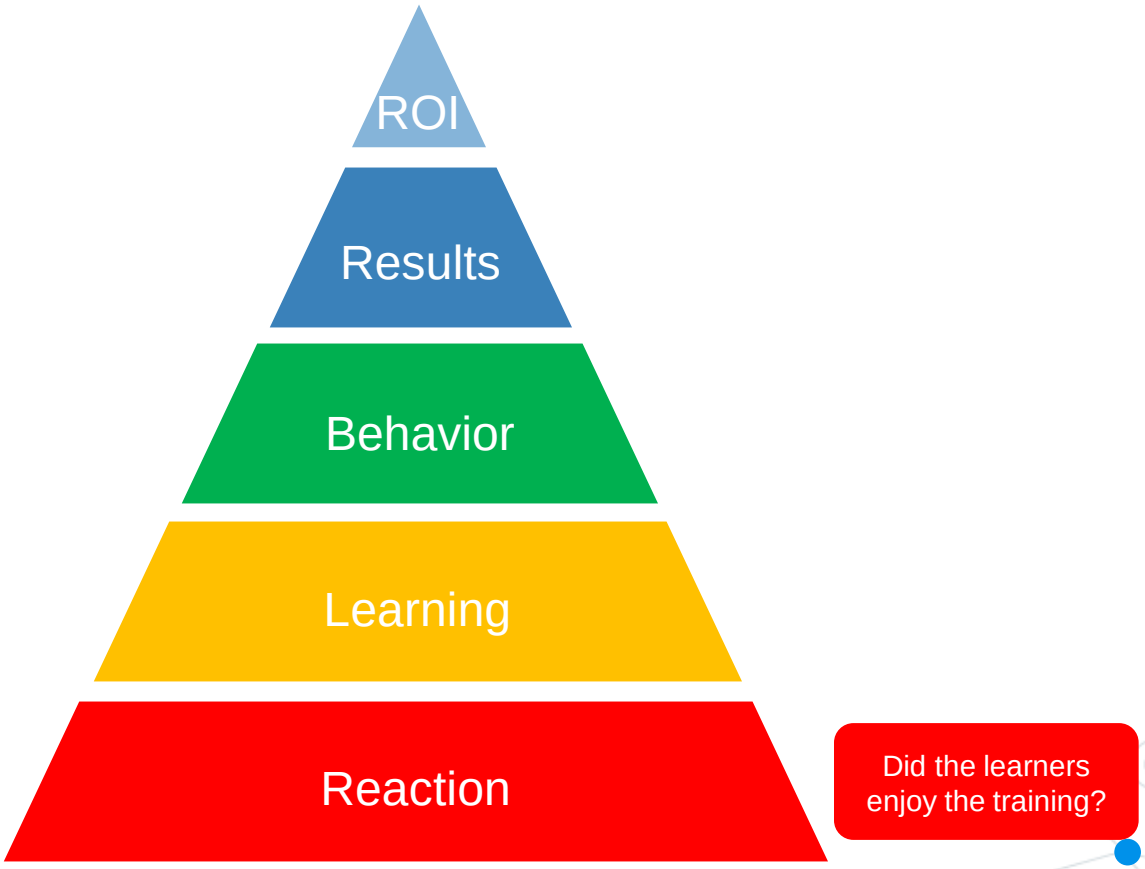
the Kirkpatrick-Phillips (KP) model

This model is used to assess the quality of a company training:



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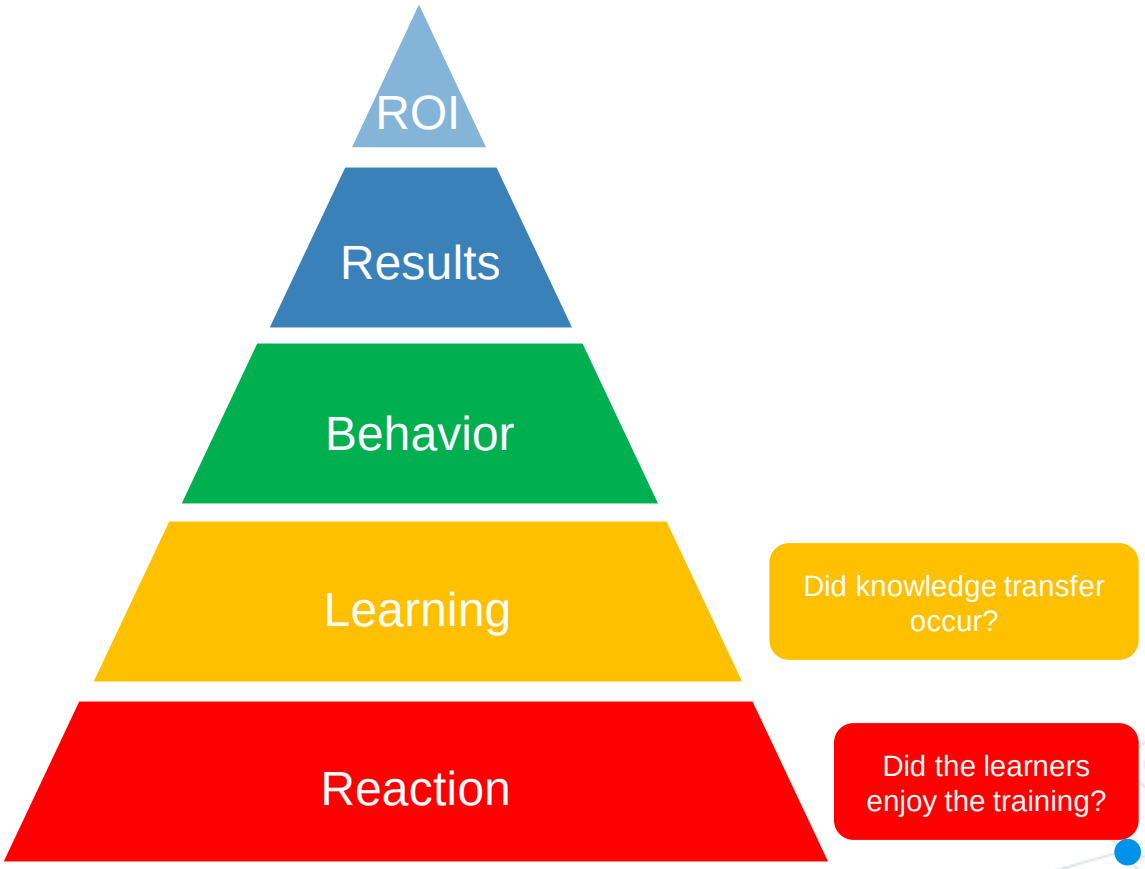

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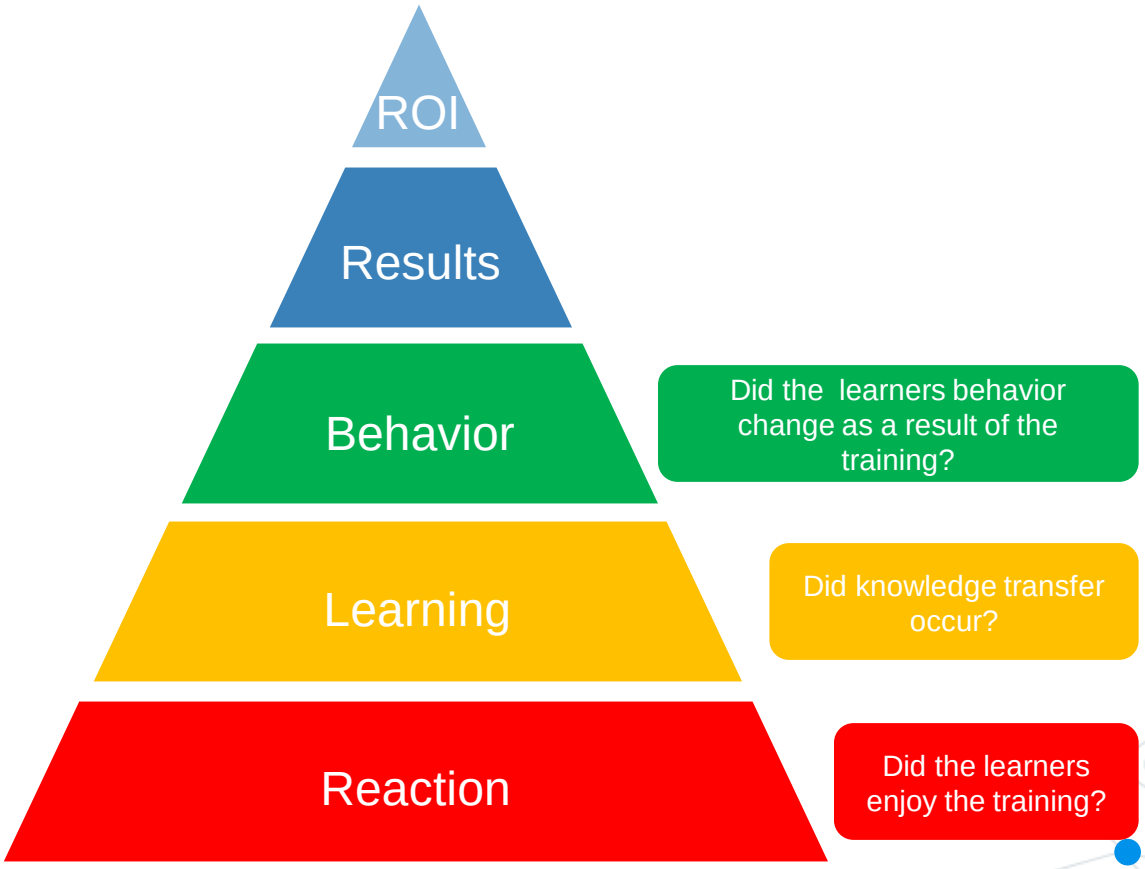

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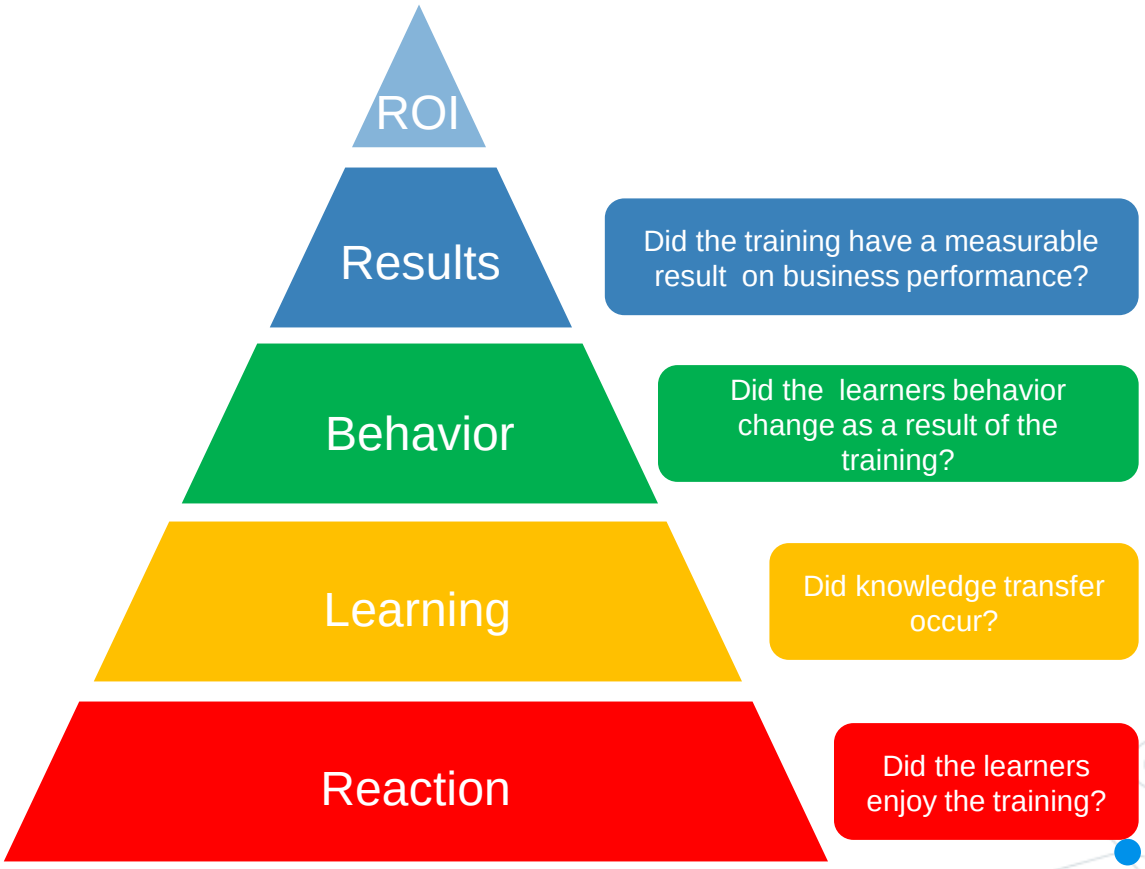

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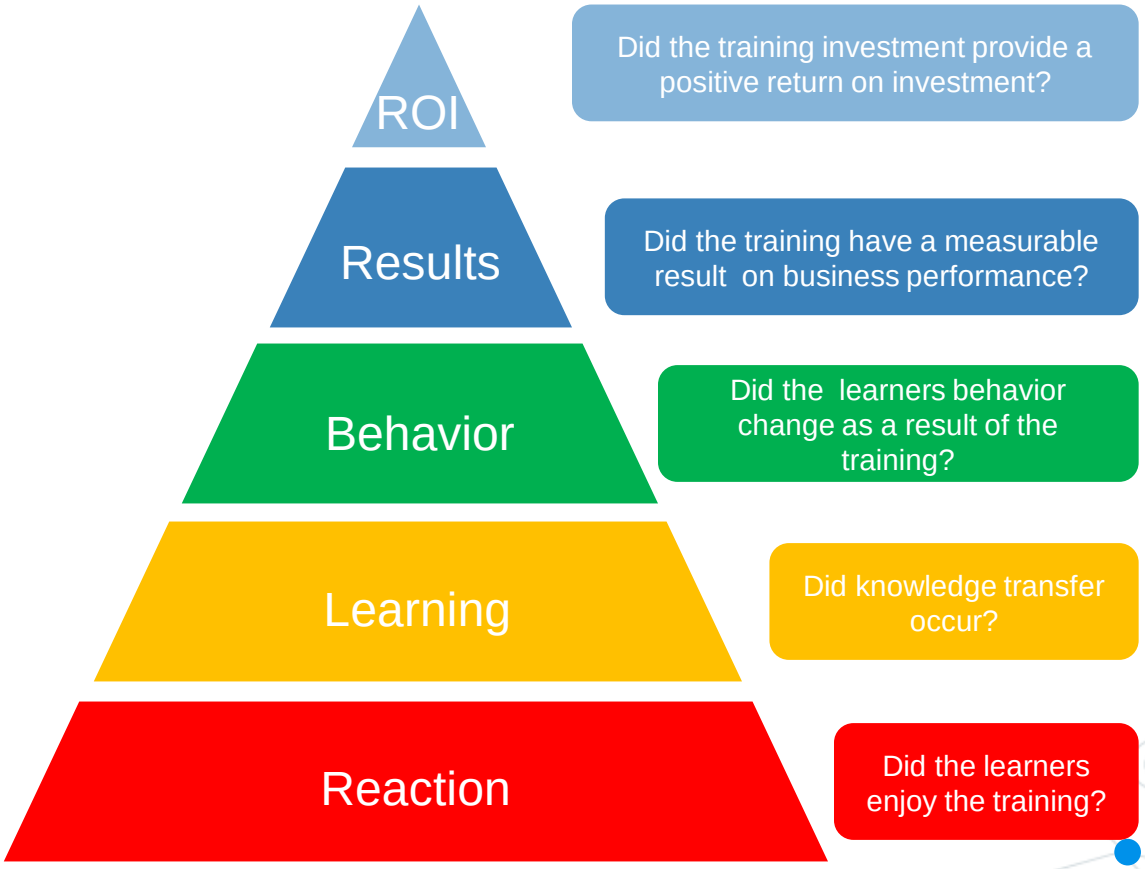
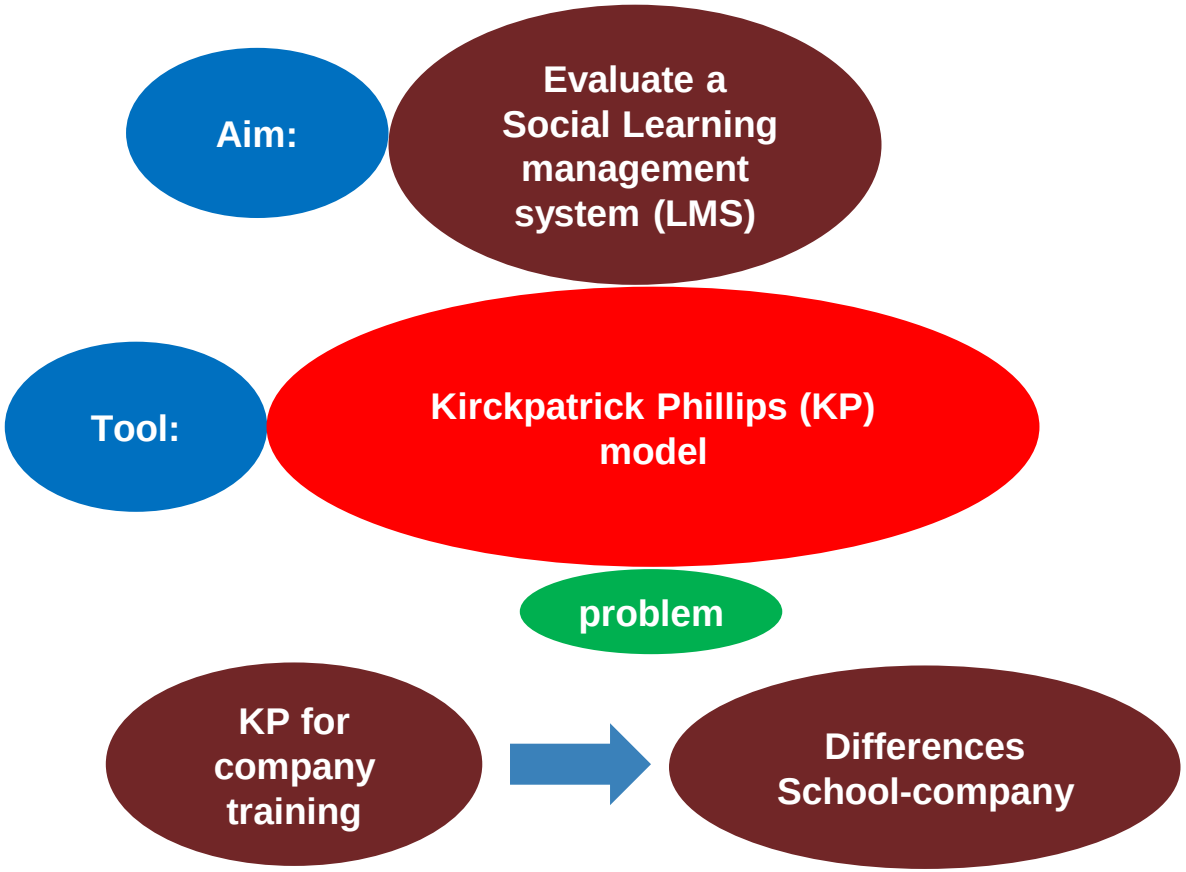



Aim:
Evaluate a Social Learning management system (LMS)
Tool:
Kirckpatrick Phillips (KP) model
problem
KP for company training
Differences School-company

What is the aim of a school?

What is the aim of a school?

global growth of the person: grades and social skills

What is the aim of a school?

global growth of the person: grades and social skills

What are the costs in a social LMS mediated school environment?

What is the aim of a school?

global growth of the person: grades and social skills

What are the costs in a social LMS mediated school environment?

Social effort

What is the aim of a school?

global growth of the person: grades and social skills

What are the costs in a social LMS mediated school environment?

Social effort

What are the methods to achieve these goals?

What is the aim of a school?

global growth of the person: grades and social skills

What are the costs in a social LMS mediated school environment?

Social effort

What are the methods to achieve these goals?

Add material on the social LMS

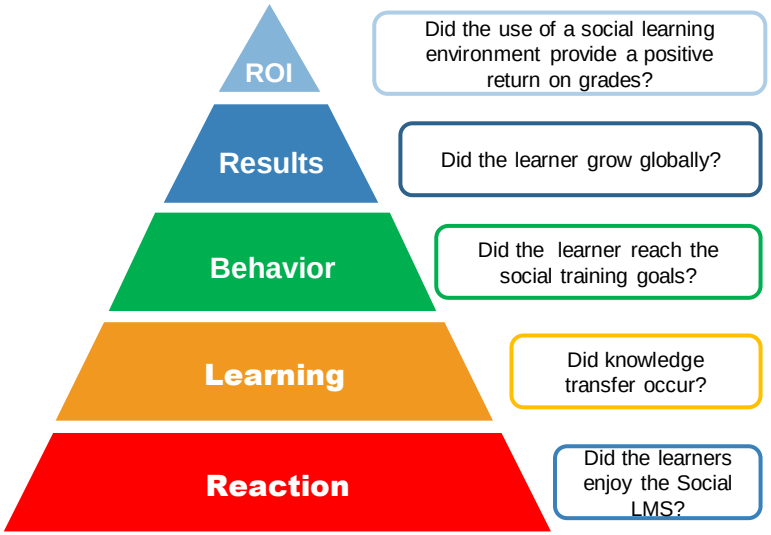
towards a NEW Kirkpatrick-Phillips (KP) model

(Old)

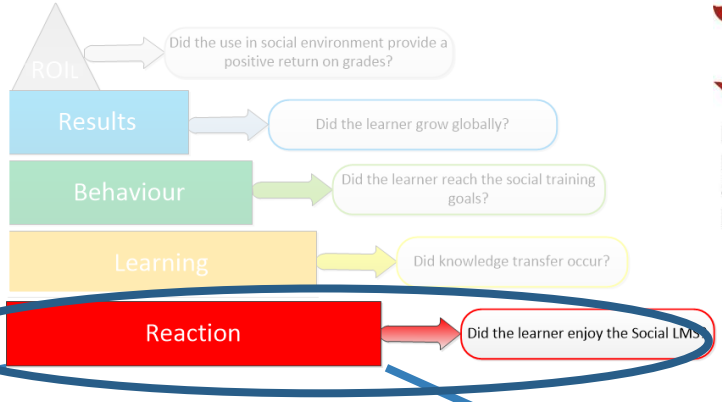
company training

(New)

Social LMS evaluation



Old does NOT mean surpassed, just that it arrived first, NEW does not mean that it replaces the old concept but that it redefines it for a new environment!



REACTION

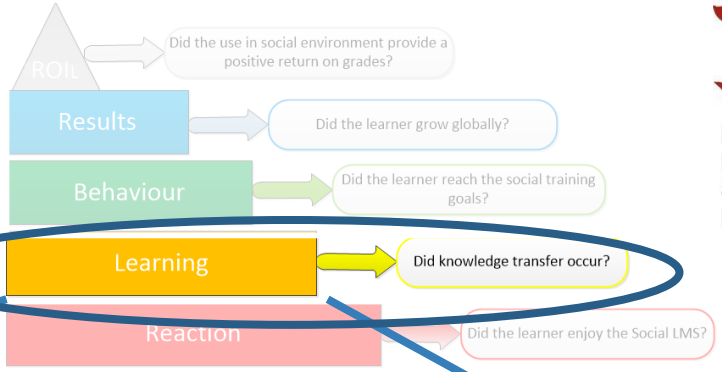
Did the learner enjoy the Social LMS?

Explicit

- "like" buttons
- Explicit statements
- questionnaries

Implicit

- Click through data analysis
- sentiment analysis
- Query and log analysis



LEARNING

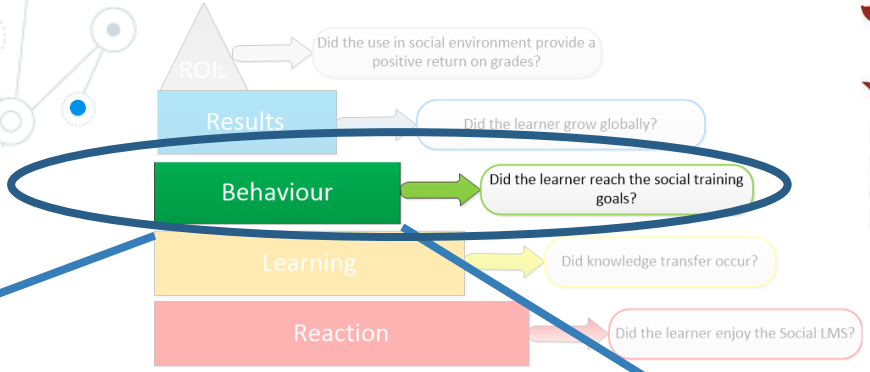
Did knowledge transfer occur ?

Formal

- Written tests
- oral tests

Informal

- Quantity of the material
- Quality of the material



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BEHAVIOR

Did the learner reach the training goals?

Global

- Social Network properties

Personal

- % of learning program
- Informal success

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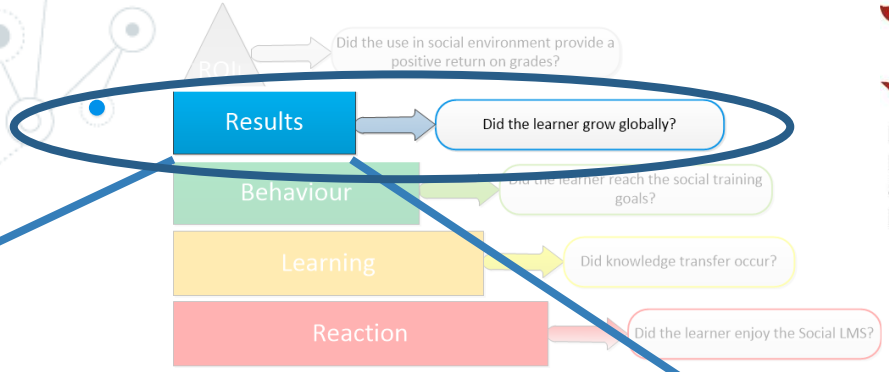
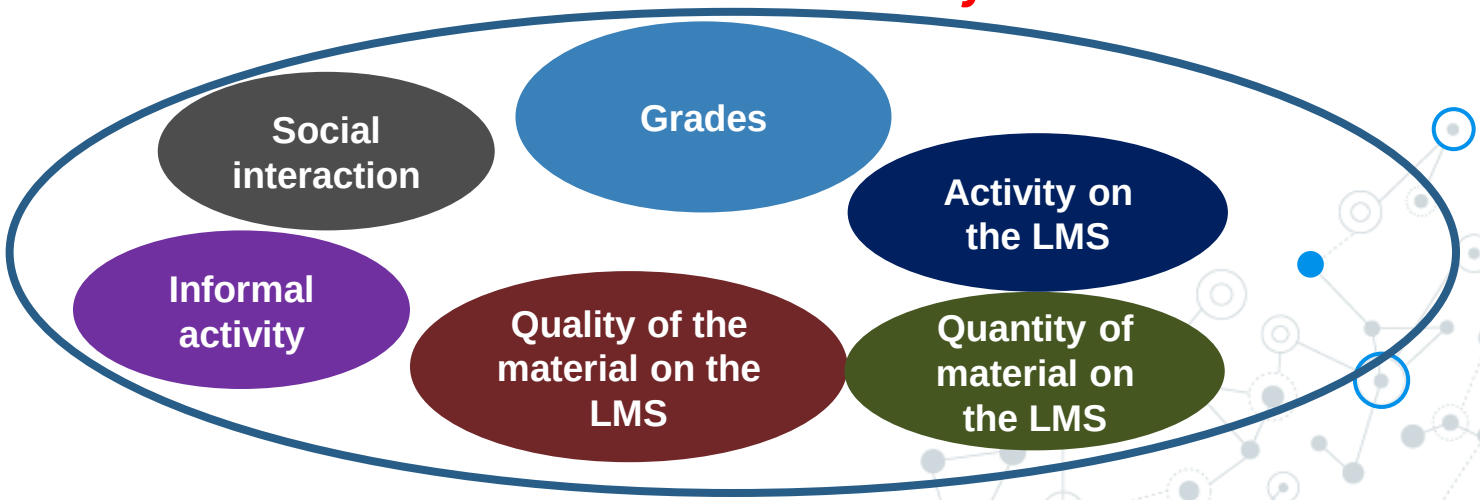
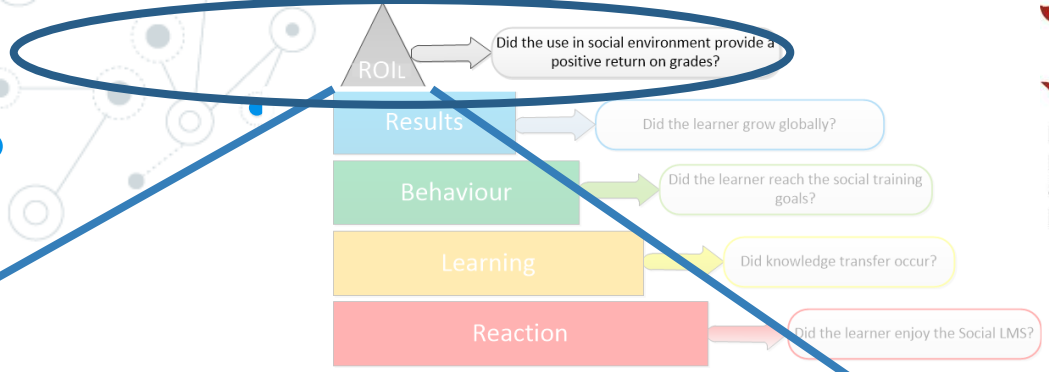


RESULTS

Did the learner grow globally?

Academic Performance and **Social Activity**



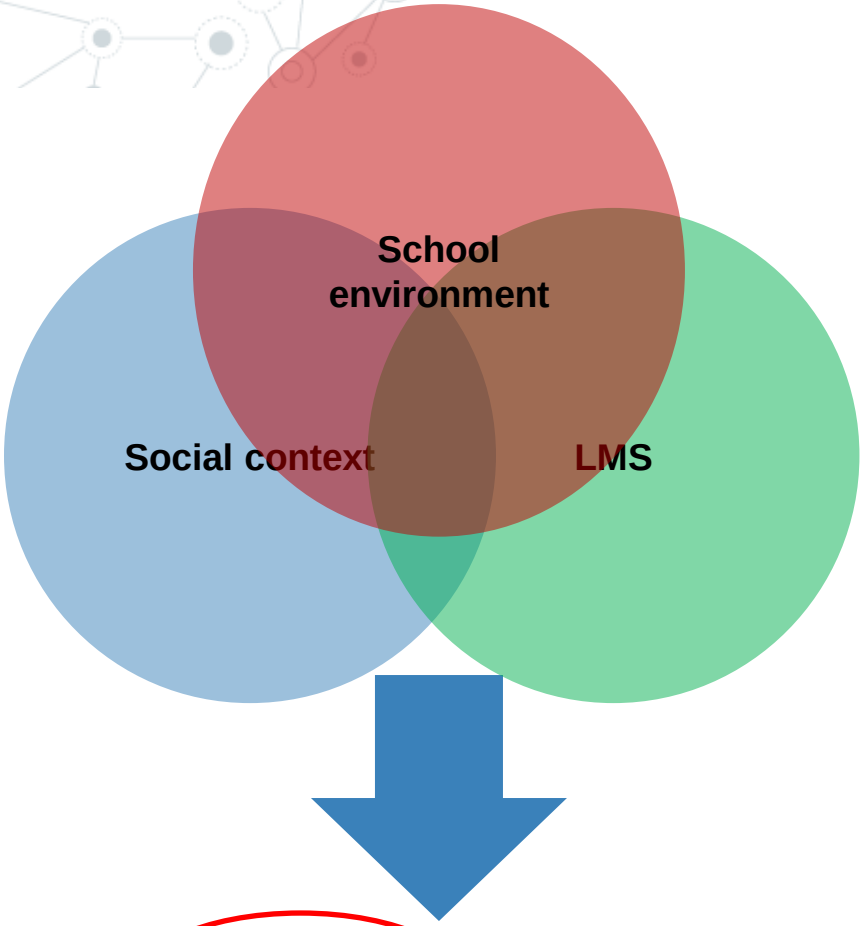


RETURN ON INVESTMENT (ROI)

Did the use of social environment provide a positive return on grades?

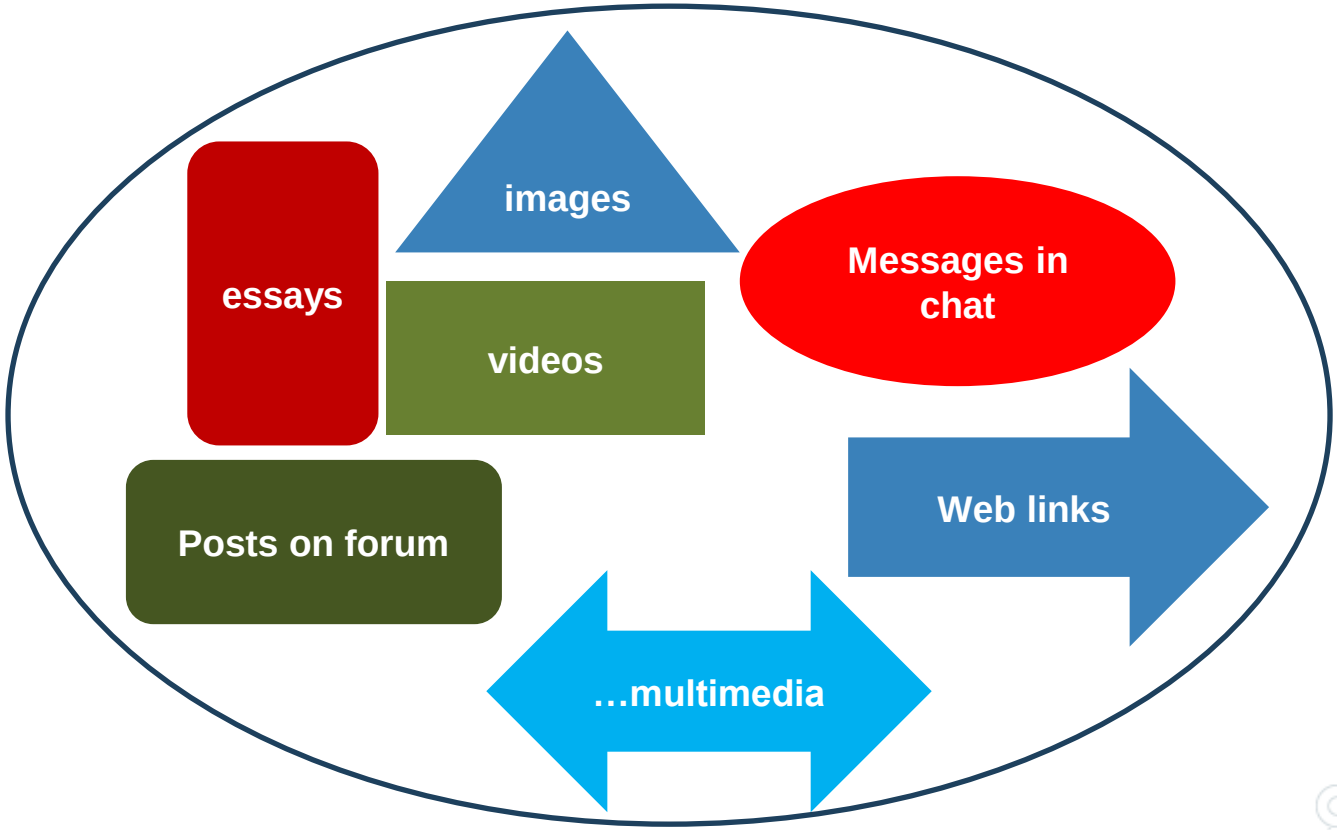
have you improved your grades…

… by using the social LMS?



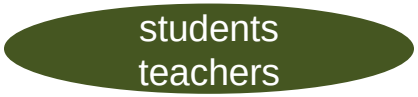
a network is defined by interaction of the learners by the material!

the material:
Formal and Informal



We focus on the Chat and Forum

Social LMS mediated Interaction



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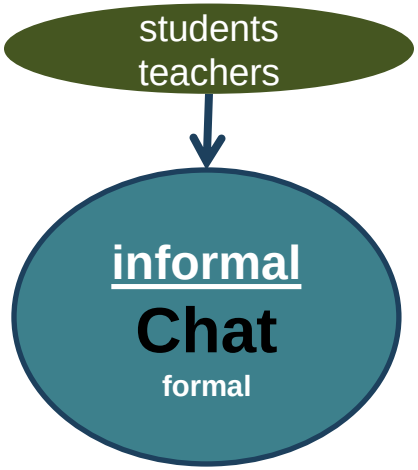

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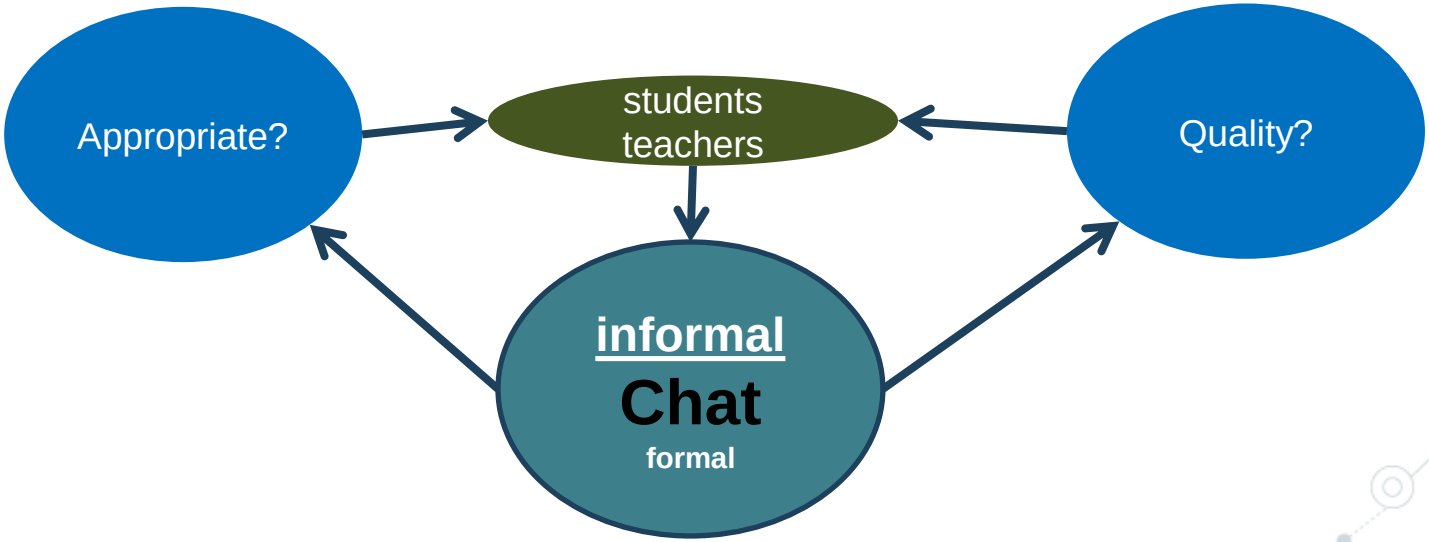

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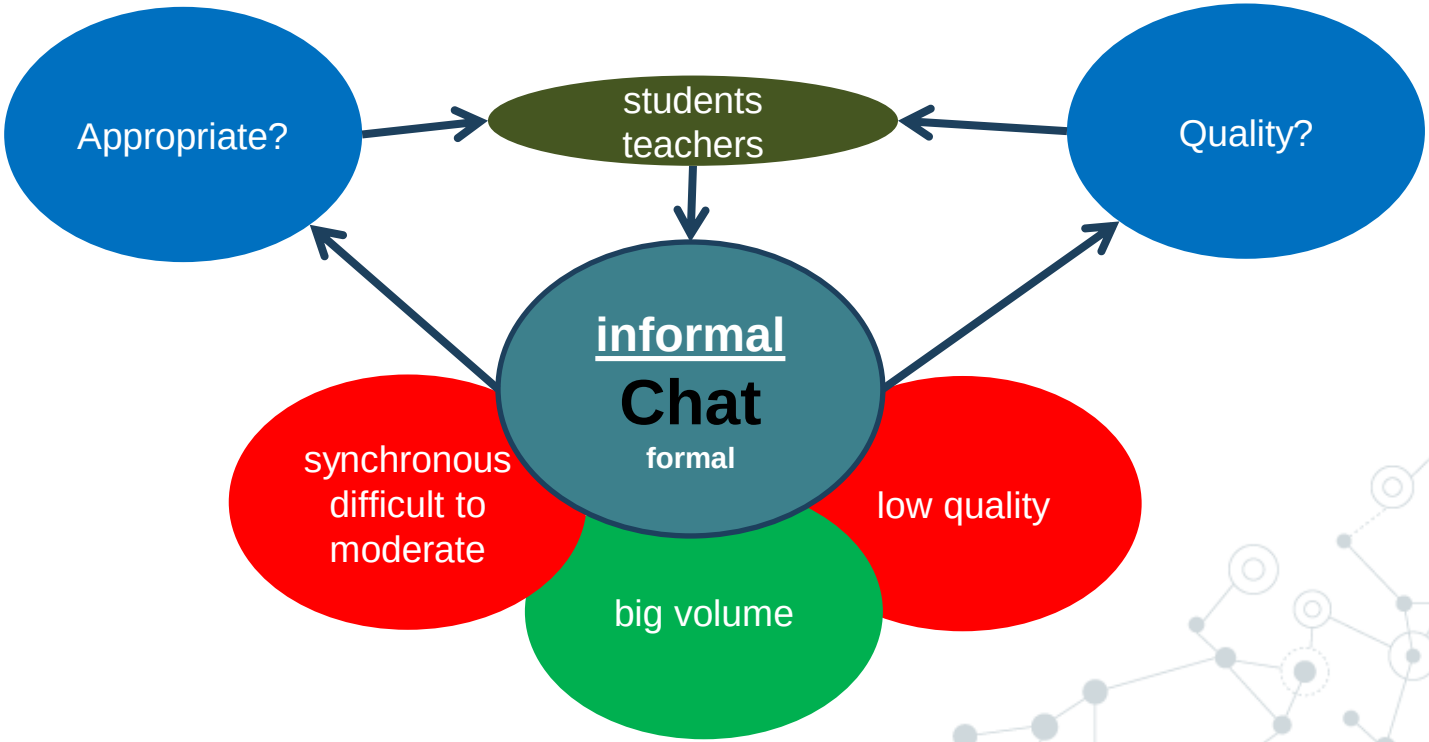

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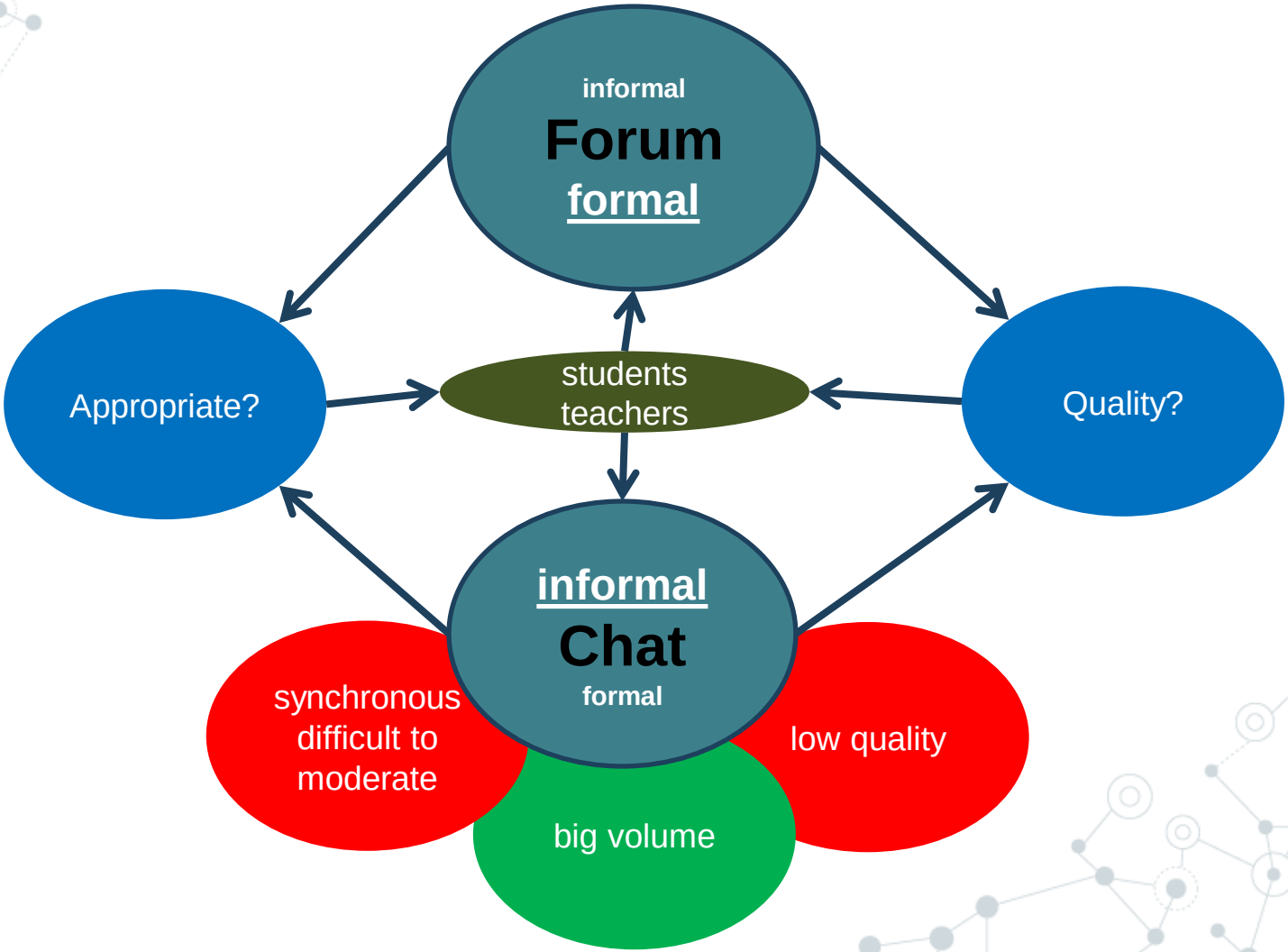

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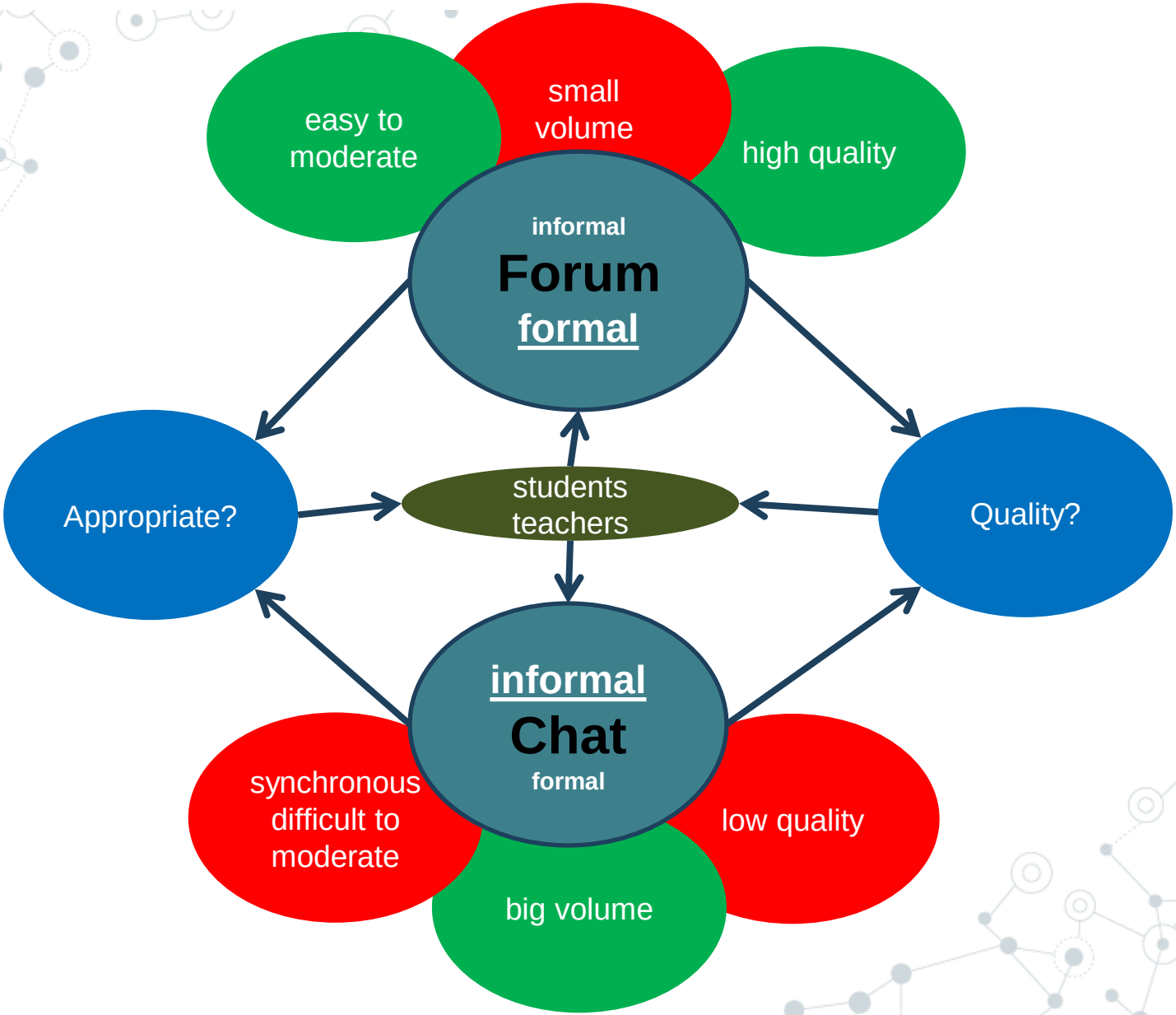

Forum and Chat
new Key Performance Indicators (KPI)

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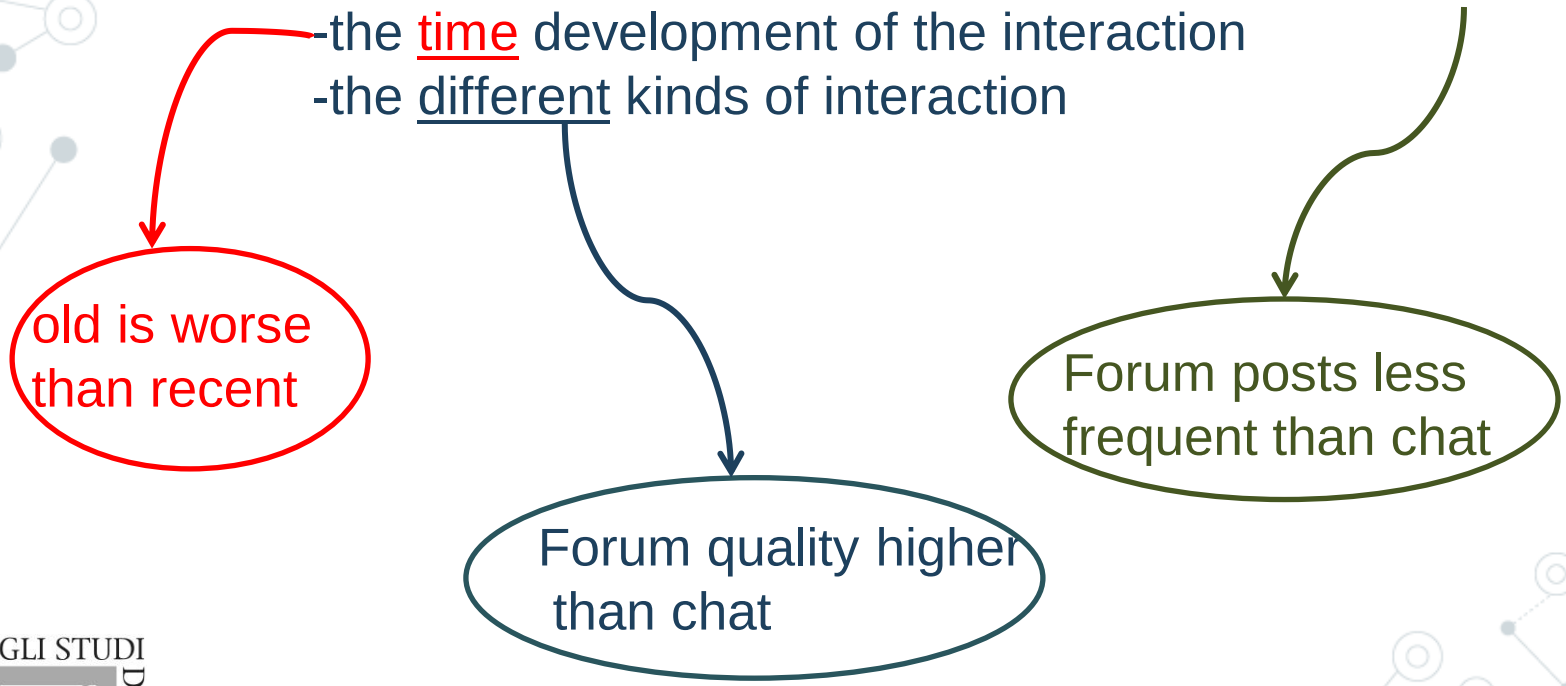
Chat and Forum mediated networks:

We need an indicator which considers:

-the amount of (Social LMS mediated) interaction among people
-the time development of the interaction
-the different kinds of interaction



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Forum and Chat
new Key Performance Indicators (KPI)

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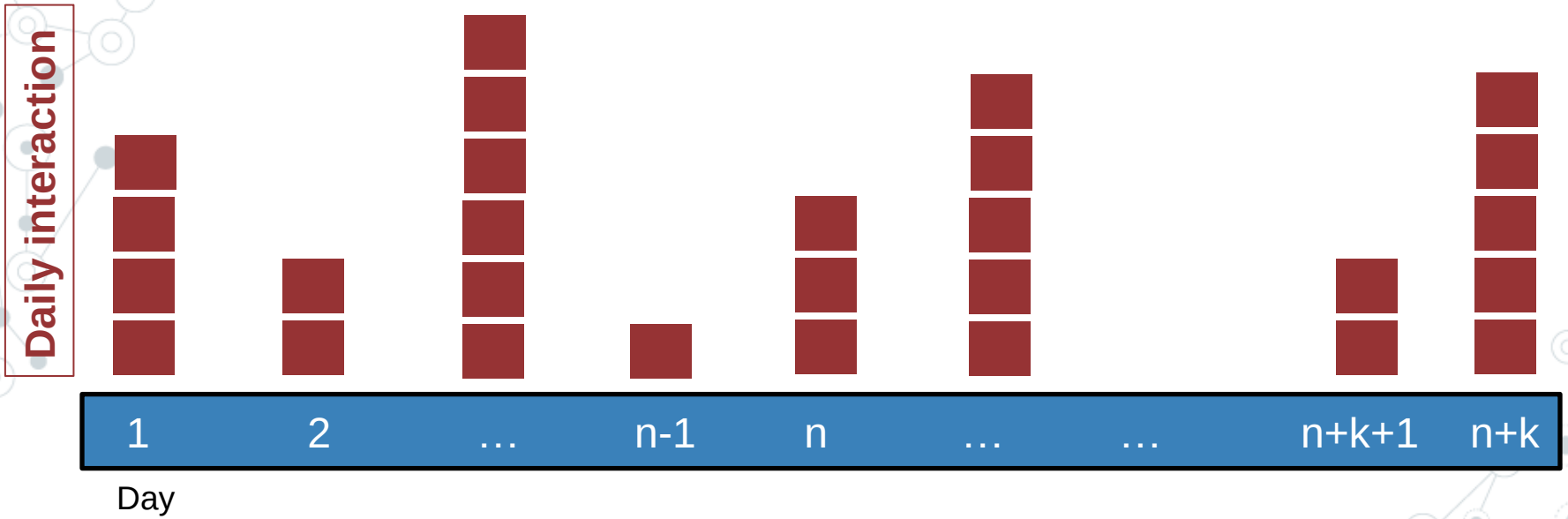
total CONNECTION: K^F
(between person “a” and “b”)



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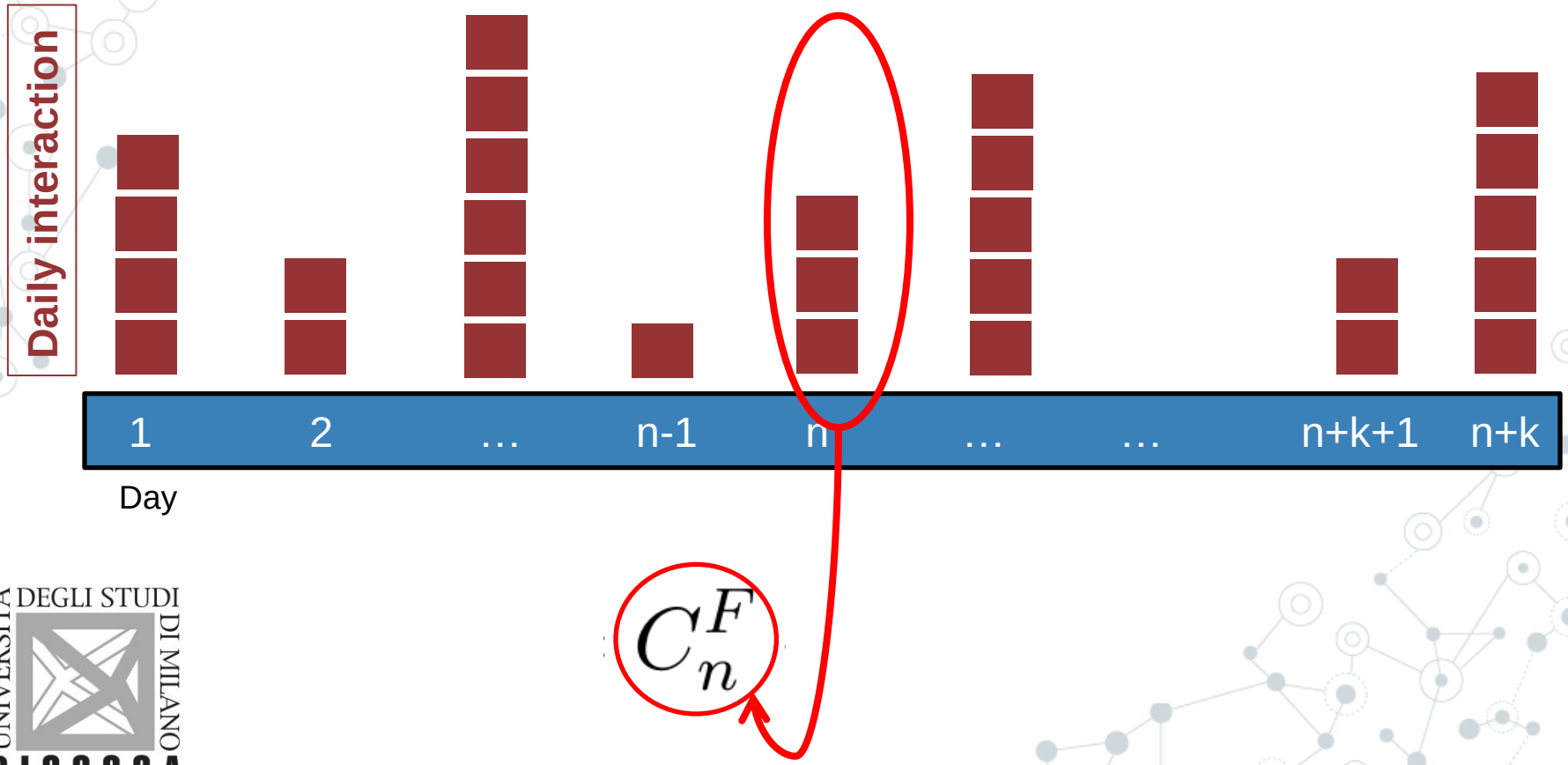

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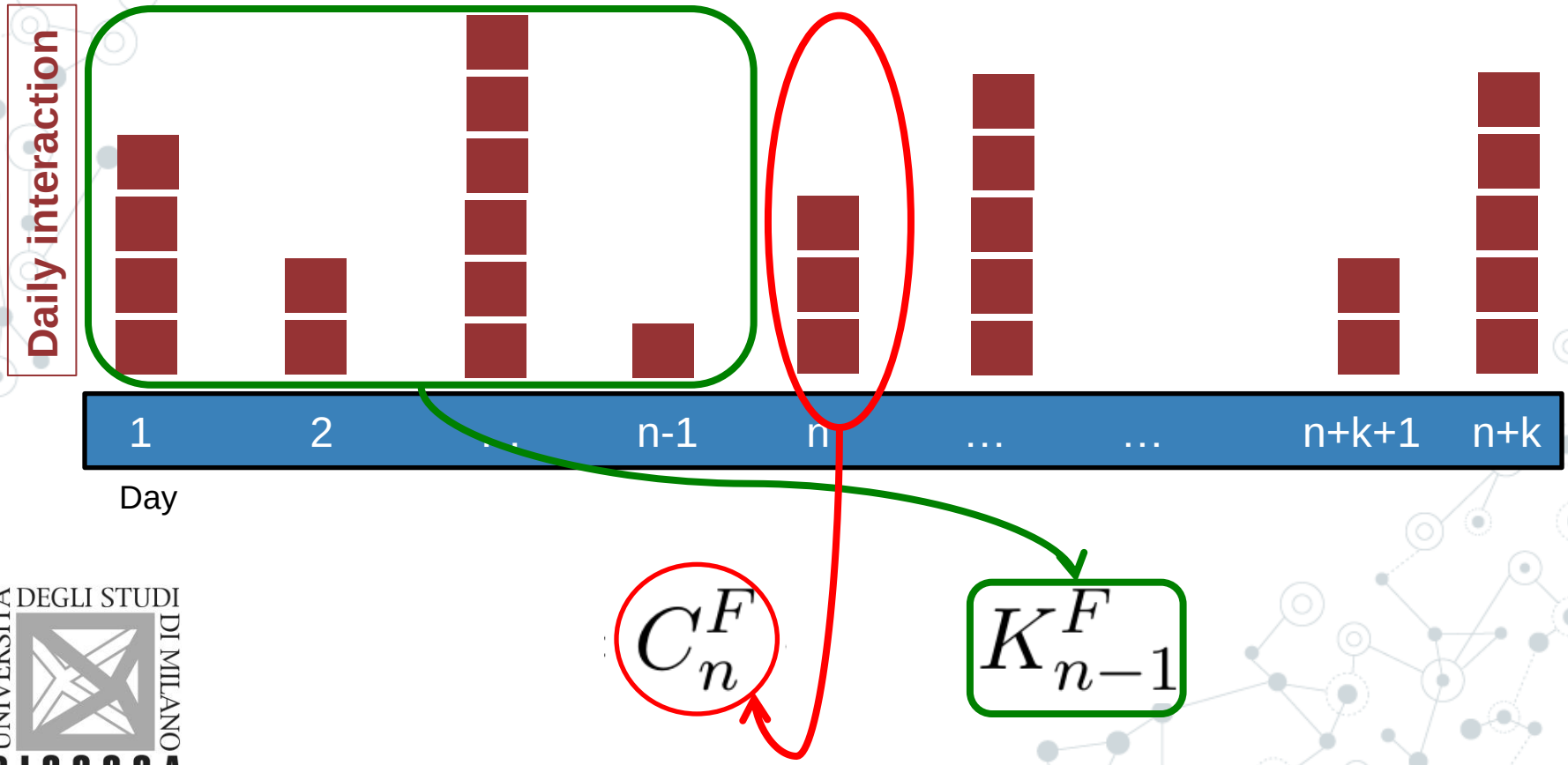

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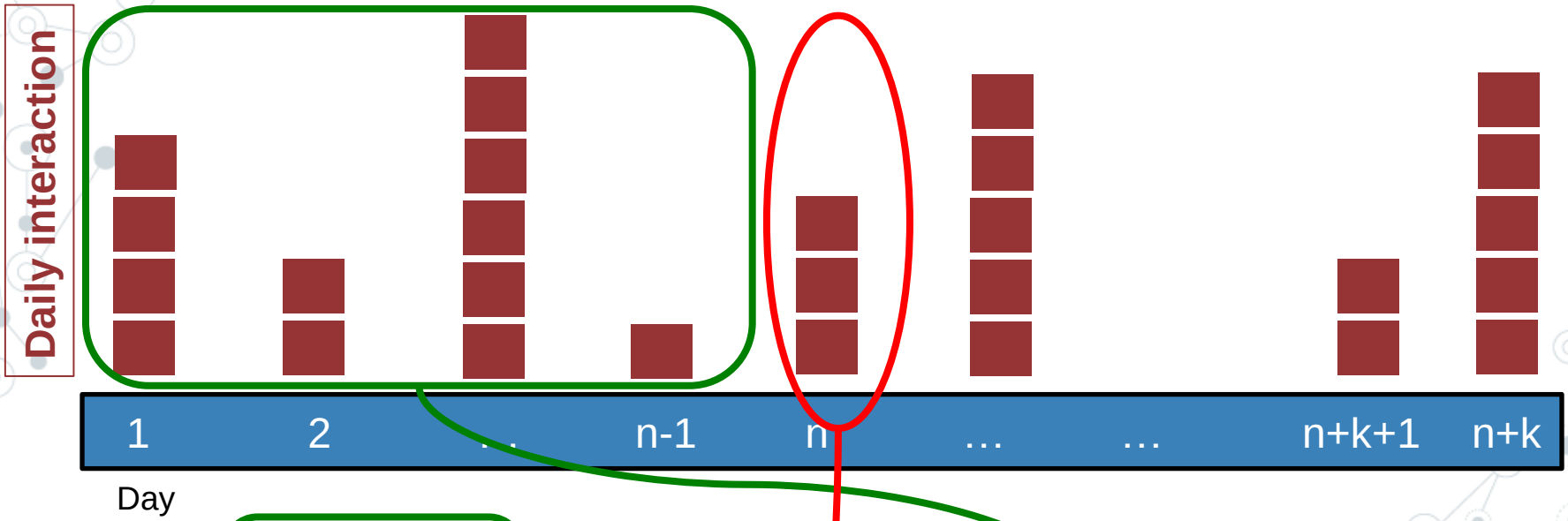

Total connection at time n

$$K_n^F = C_n^F + \lambda_F K_{n-1}^F$$

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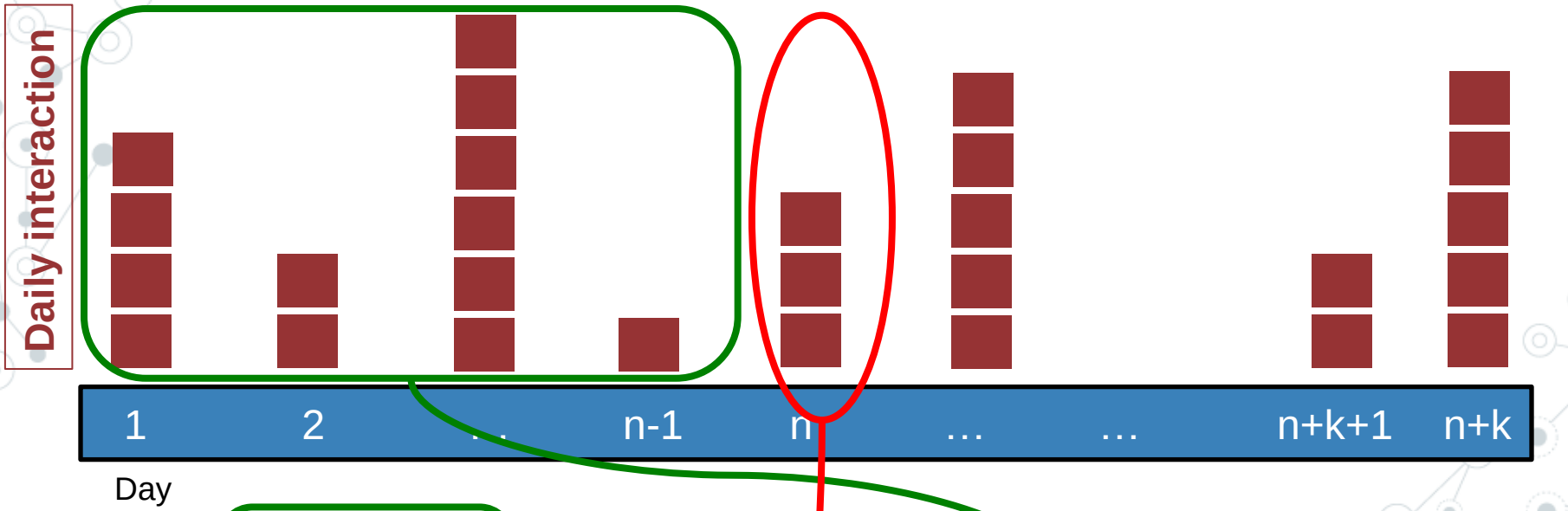

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time window

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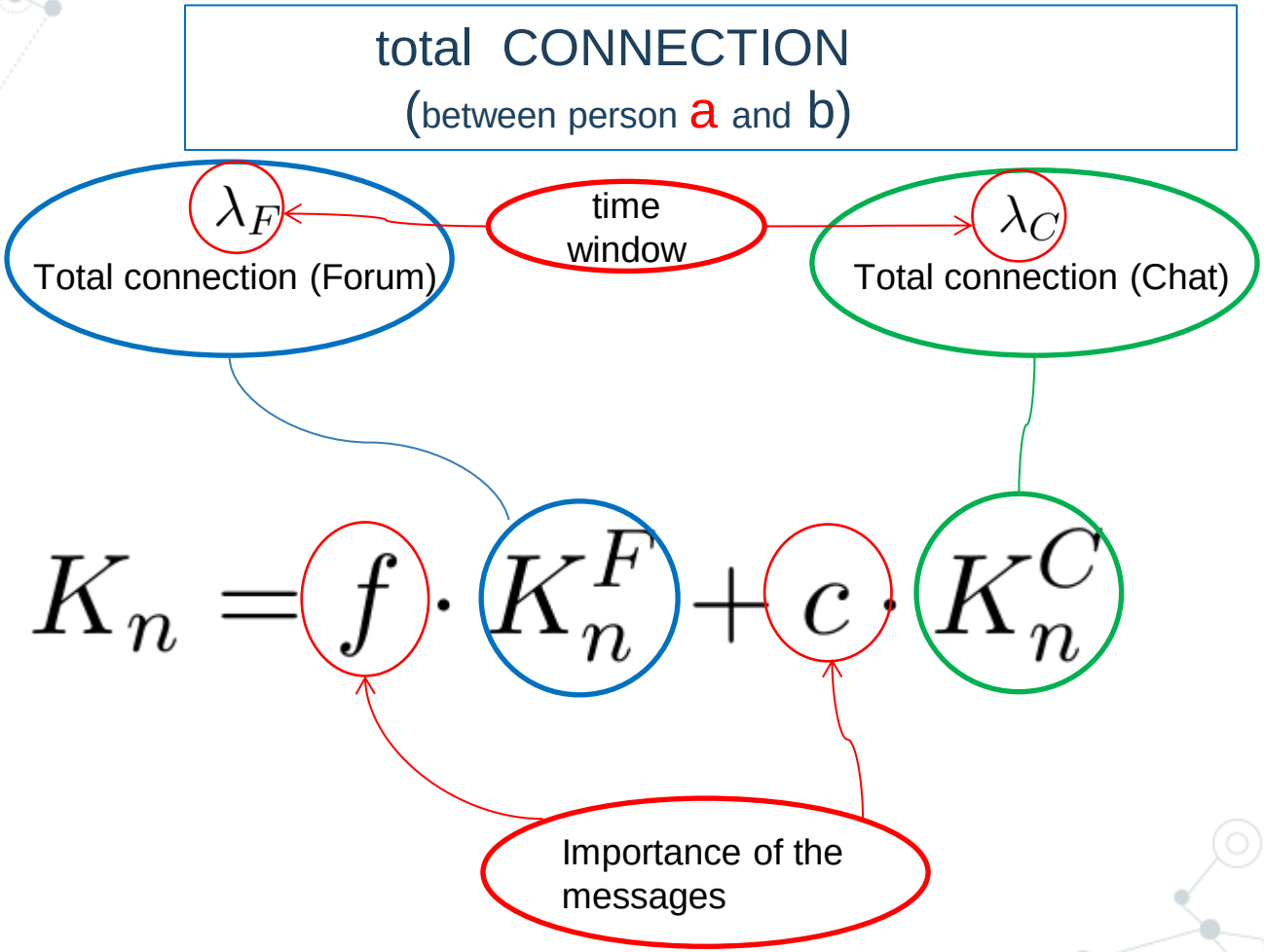

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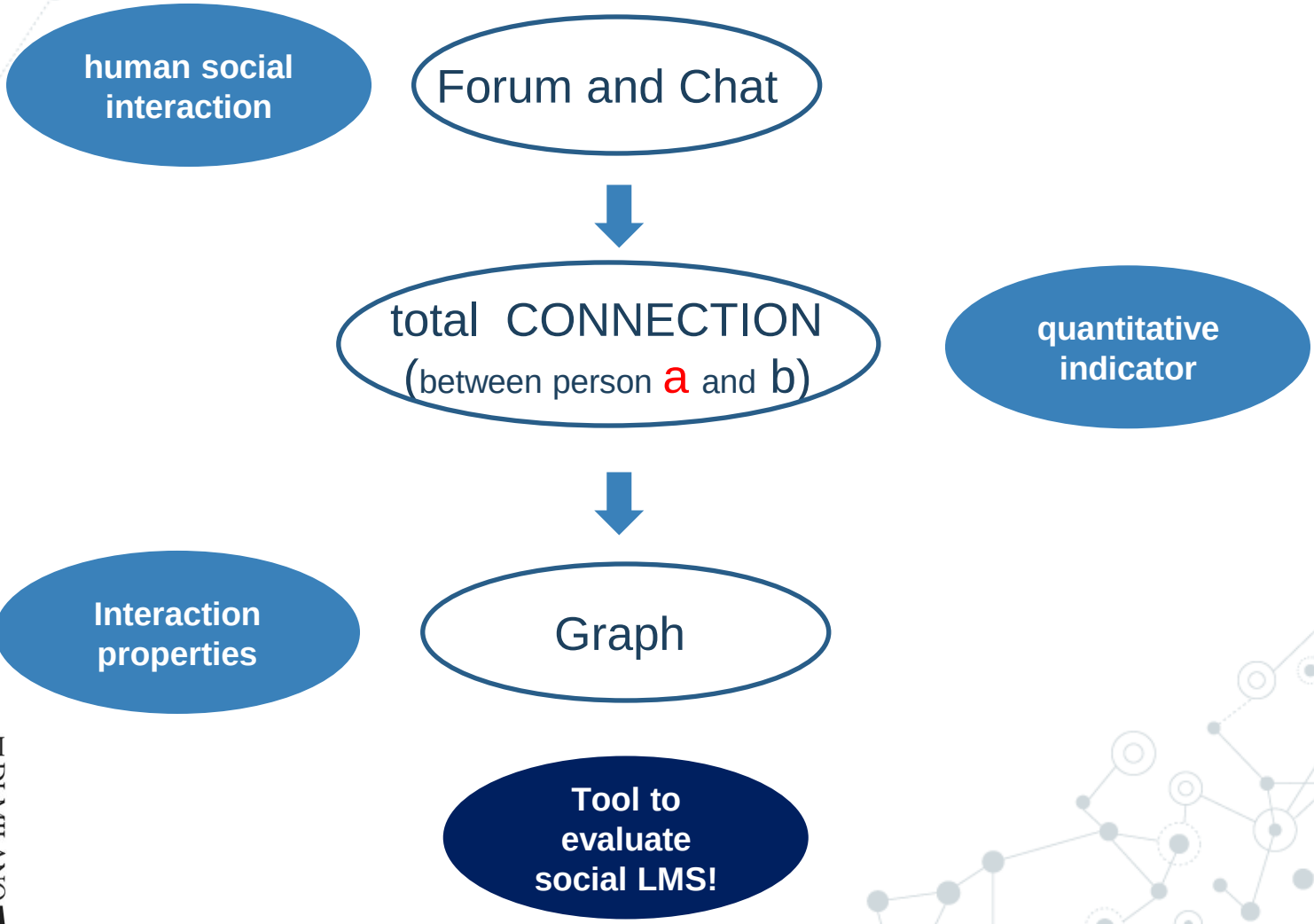
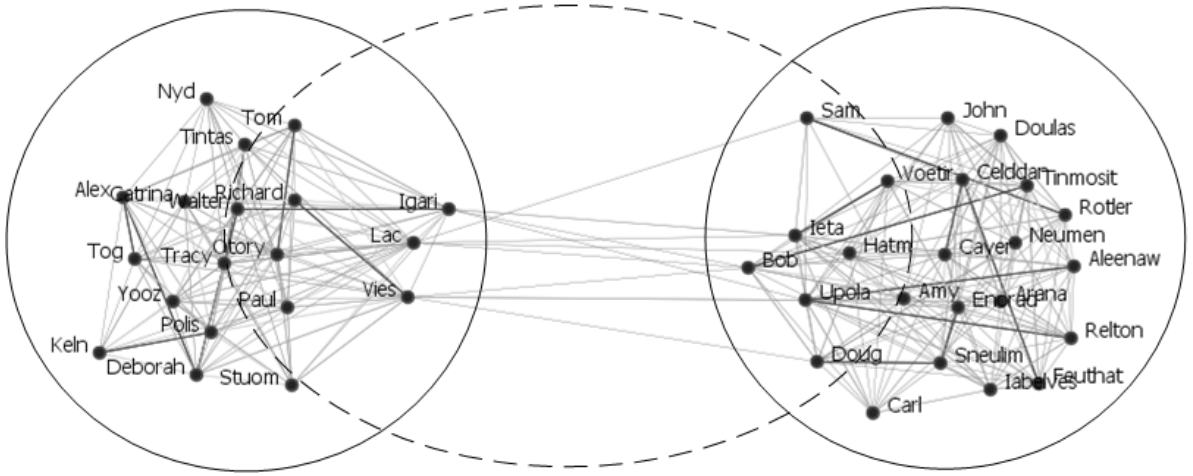


Educational Social Network (EduSN): A network of learners:

Social learning



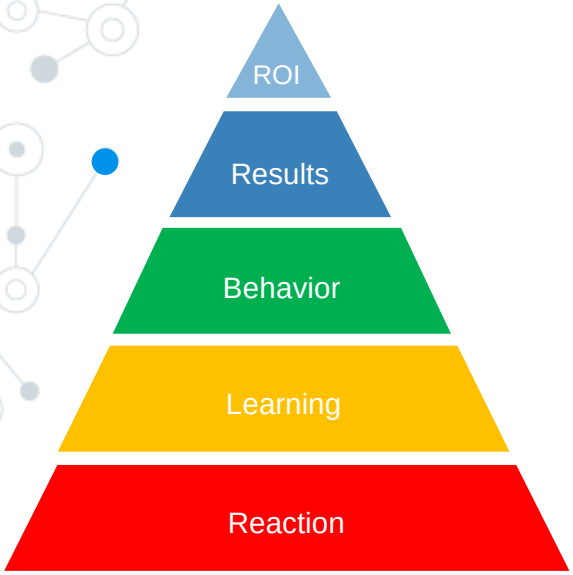
time dependent!

Graph

Vertex = learner ← **G(V,L)** → Link (edge) connection between learners = K_n

KP model for EduSN

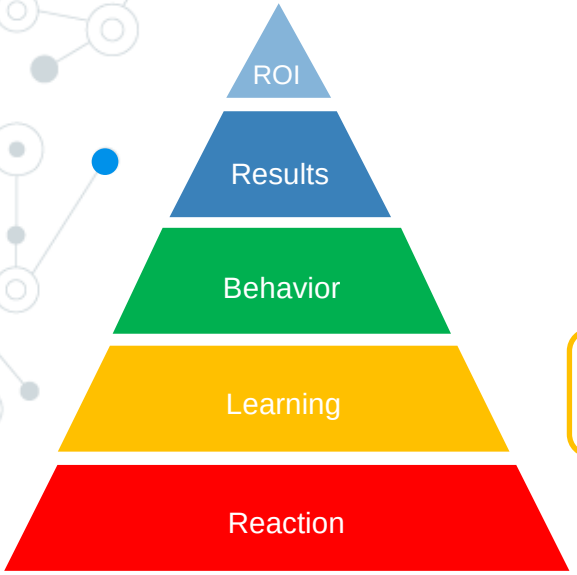
KPI



Compactness	amount of interaction within social LMS (Forum and Chat)

KP model for EduSN

KPI



Social Contribution

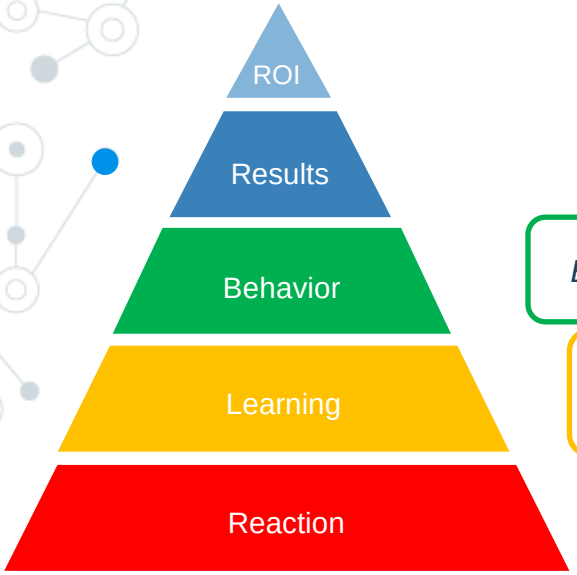
mix of appropriateness, quality and quantity of the material added on the social LMS

Compactness

amount of interaction within social LMS (Forum and Chat)

KP model for EduSN

KPI



Betweeness and *informal success*	Graph properties (centrality measures) and success in non strictly academic activities
Social Contribution	mix of appropriateness, quality and quantity of the material added on the social LMS
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KP model for EduSN

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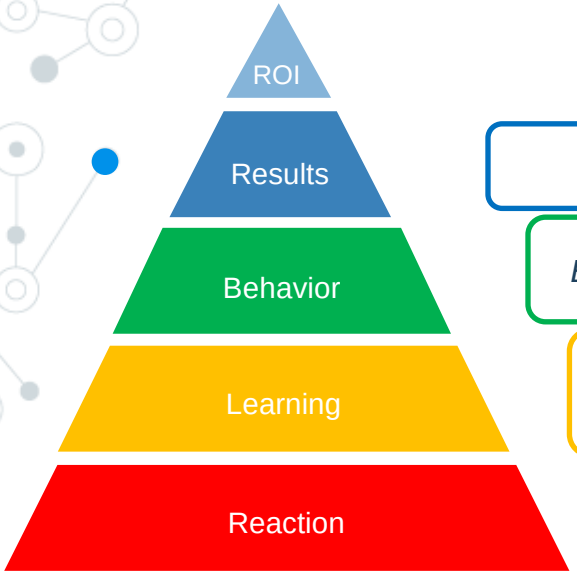

Influence factor	value which includes the personal (learning) and global aspects (related to the structure of the graph)
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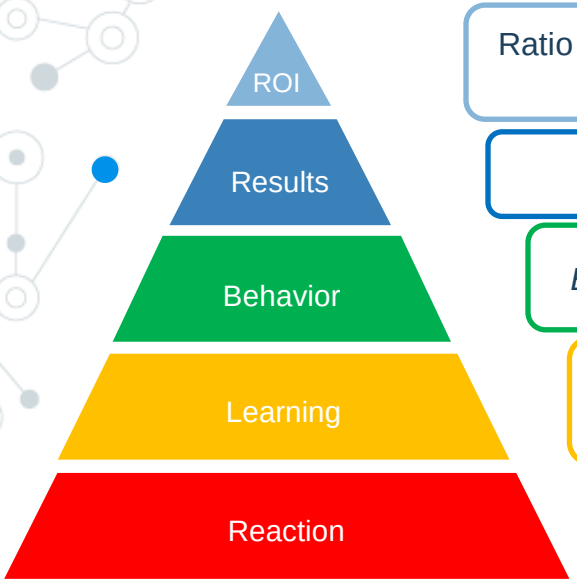


KPI

Ratio of the *academic results* and social *influence factor*	to what extent the effort in the social interaction/production affected the quality of the academic results of the learners
Influence factor	value which includes the personal (learning) and global aspects (related to the structure of the graph)
Betweeness and *informal success*	Graph properties (centrality measures) and success in non strictly academic activities
Social Contribution	mix of appropriateness, quality and quantity of the material added on the social LMS
Compactness	amount of interaction within social LMS (Forum and Chat)

Needed:
a tool to evaluate the success of the Social LMS

(and to obtain useful data for all the users?)

DASHBOARDS

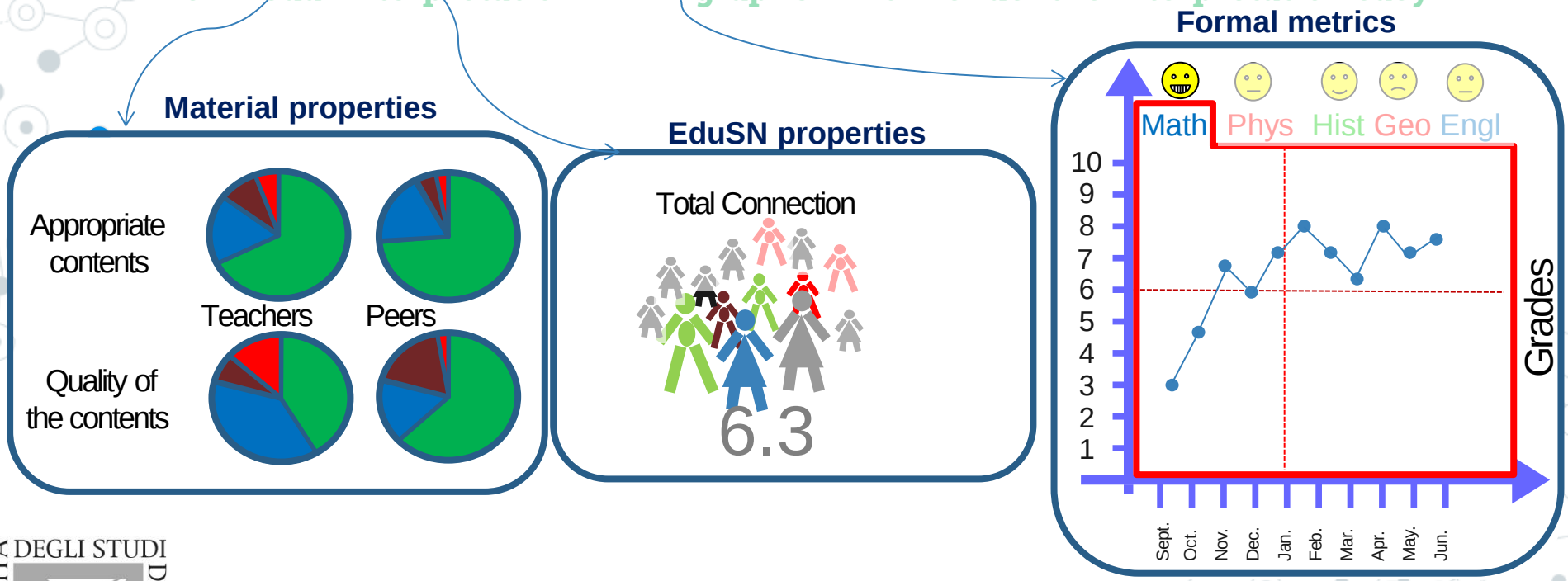
What features do we need?

Control of the EduSN: DASHBOARDS

1- Modular: **different KPI for different people**

2- Time evolution: the EduSN evolves with time

3- Visual interpretation: graphs which render the interpretation easy



Control of the EduSN: DASHBOARDS

1- Modular: different KPI for different people

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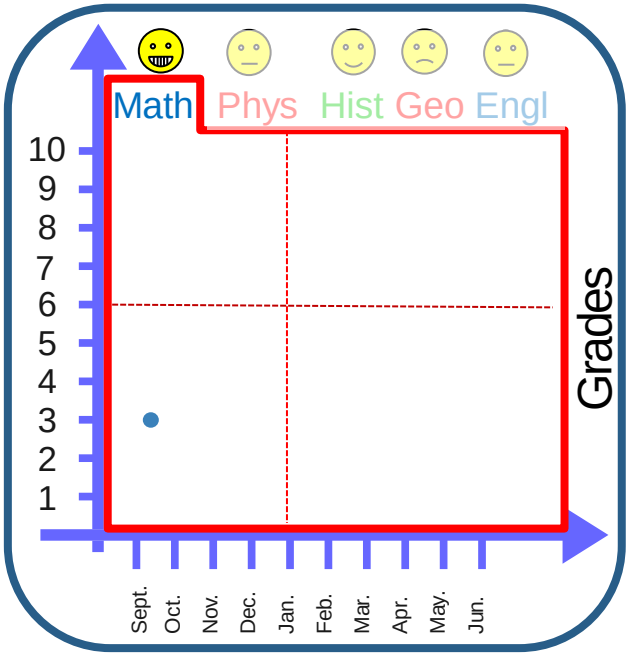
formal activity



Informal activity

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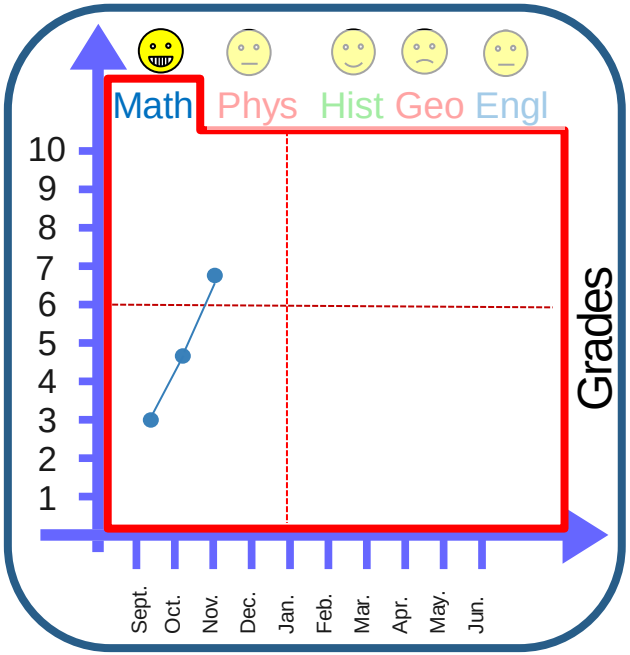

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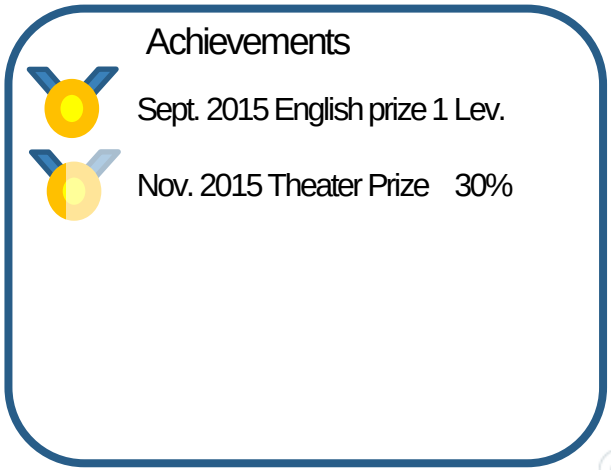

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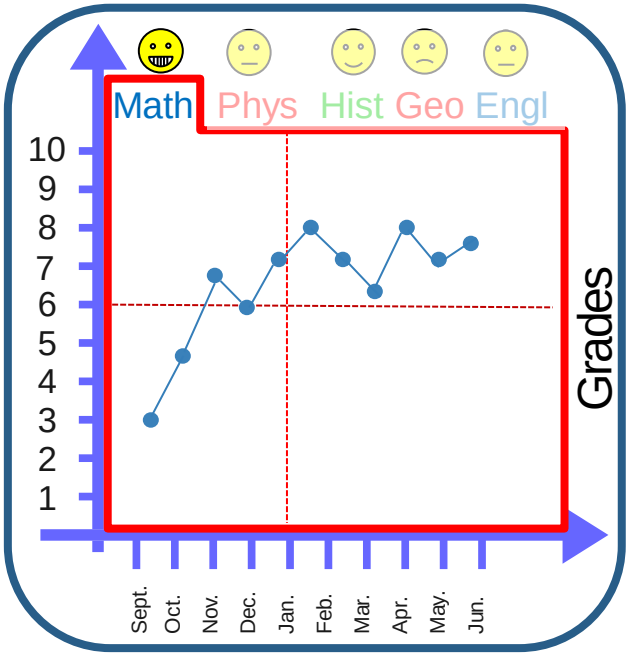

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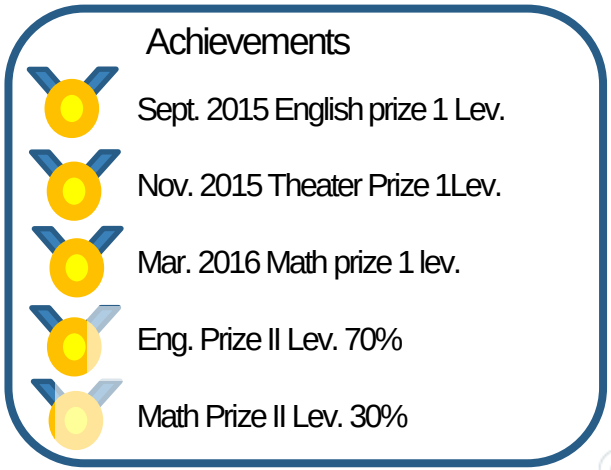

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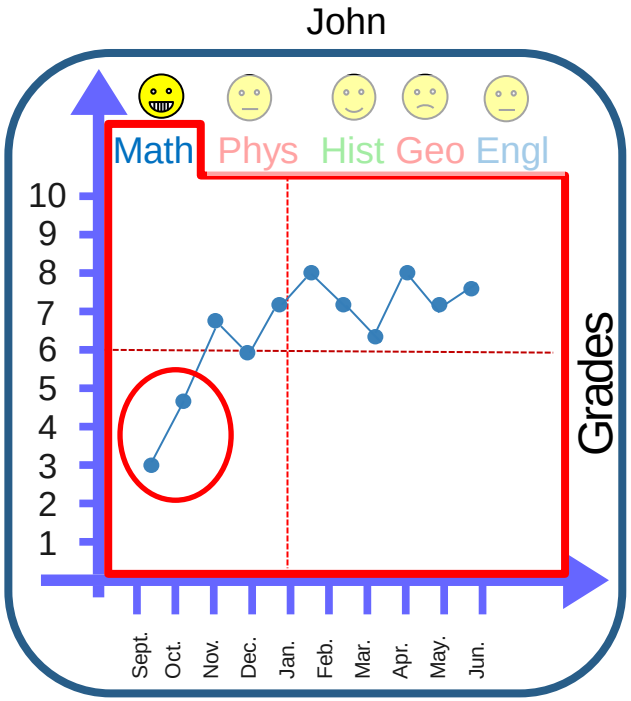
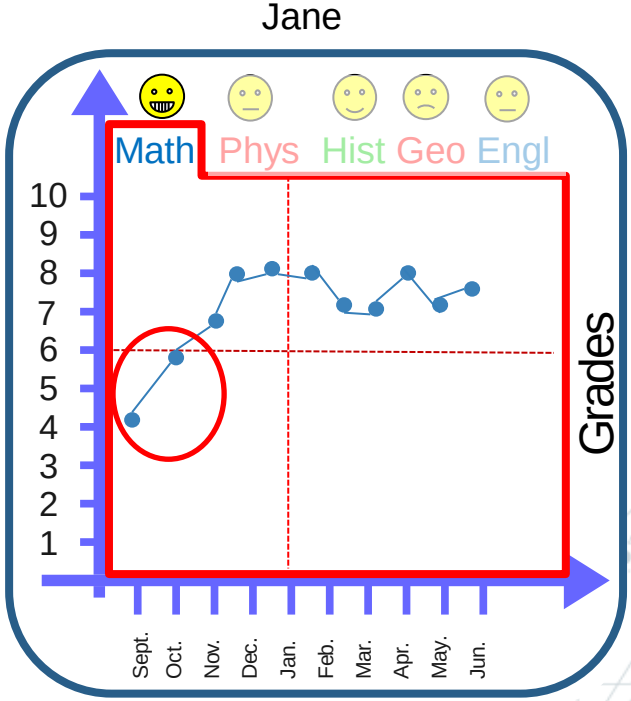
2- Time evolution: the EduSN evolves with time (dyachronous aspect)

3- Visual interpretation: graphs which render the interpretation easy





Synchronous aspect

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CONCLUSION

-revised Kirckpatrick-Phillips model for Social LMS
-new Key Performance Indicators (for chat and forum)
-creation of an EduSN
-control method: modular Dashboard

PERSPECTIVES

-dashboards for different roles
-improved KPIs including directionality of connections
-consider the quality of the connections
-interaction among structures

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questions, comments?

contact me!

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questions, comments?

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Hello!

I am Paolo Avogadro

I am here to introduce a model for evaluating social LMS with dashboards

You can find me at:
paolo.avogadro@unimib.it

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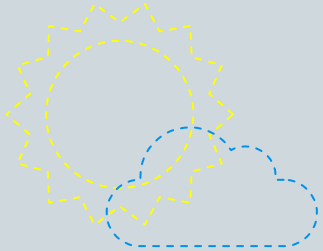
SlidesCarnival icons are editable shapes.

This means that you can:

- Resize them without losing quality.
- Change line color, width and style.

Isn’t that nice? :)

Examples:



Forum and Chat
new Key Performance Indicators (KPI)

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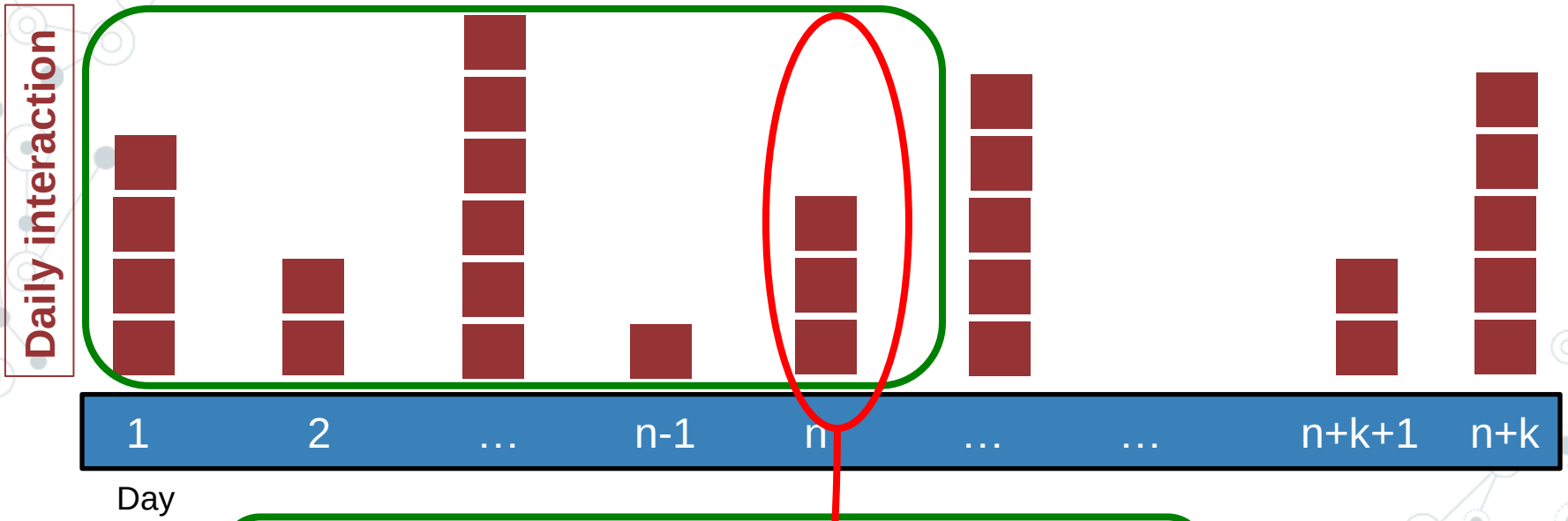
total CONNECTION: K
(between person “a” and “b”)



Total connection at time n

$$K_n^F = C_n^F + \lambda_F K_{n-1}^F$$

time window

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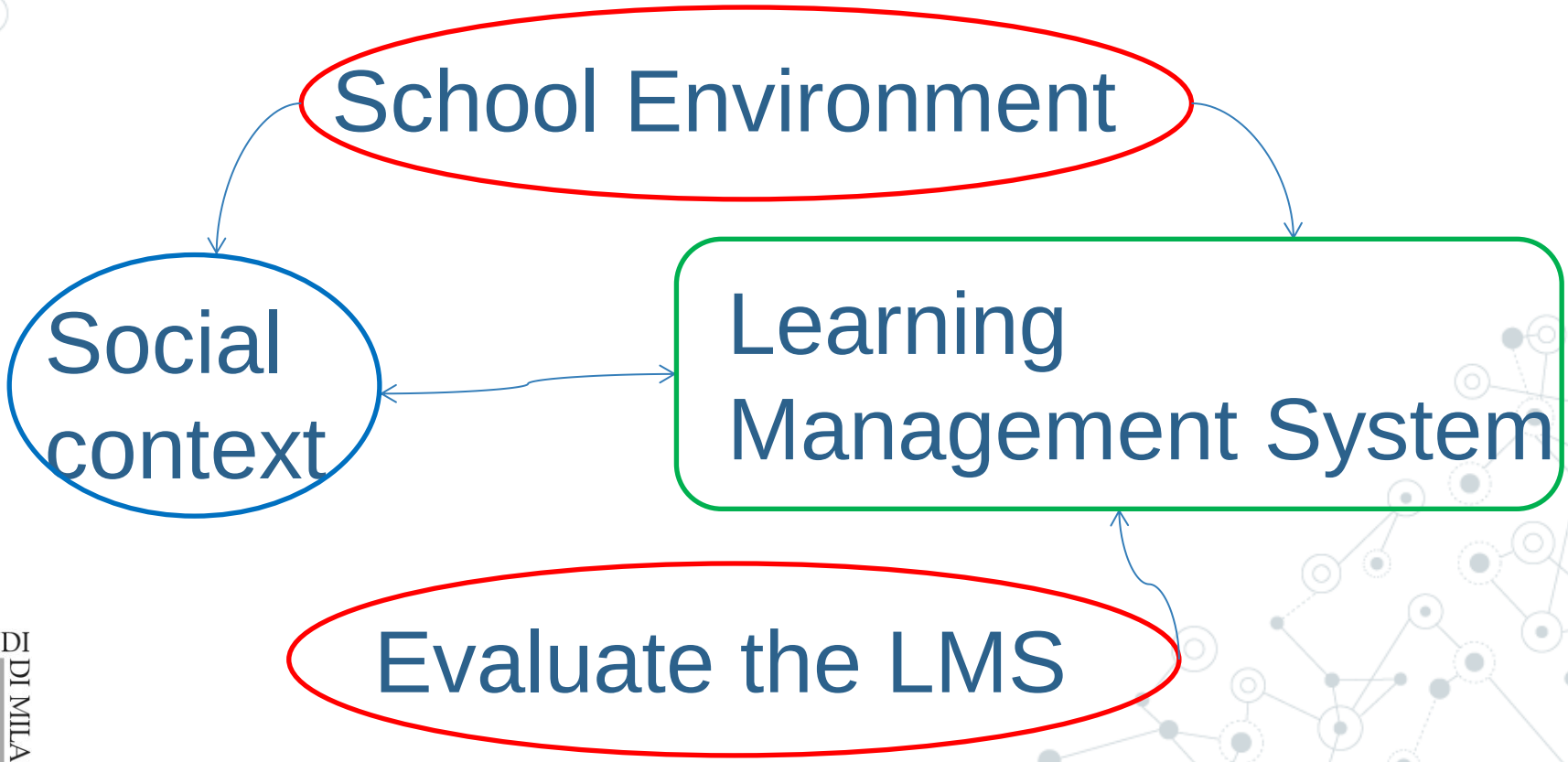
apply the new KP model



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The LMS mediated interaction:

social network!

the network is defined by the material!

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