



Active learning *based on project-based pedagogy and the use of Virtual Learning Environment*

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Lycée Blaise Pascal
Charbonnières les bains

Teachers in Sciences and industrial techniques

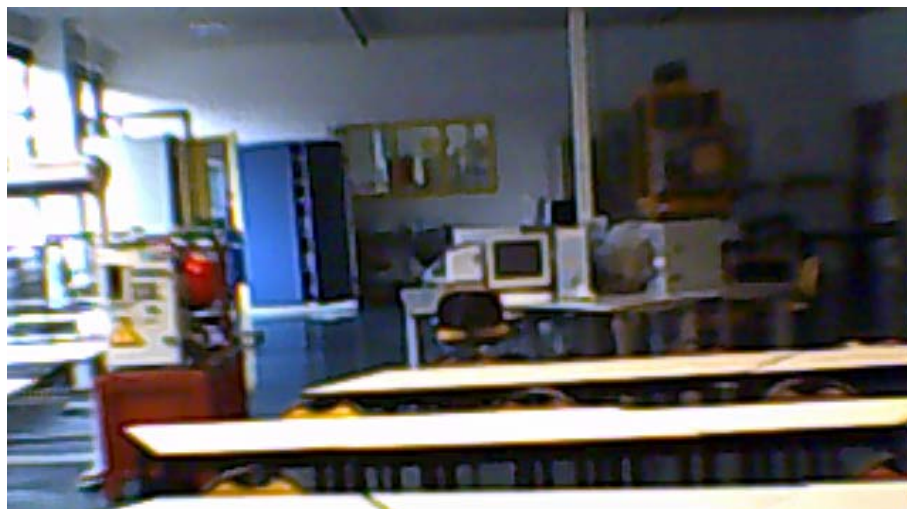
Electrotechnics, Physical sciences, Electronics,...

Pupils in upper-secondary school classes

STI Electrotechnics

External professionals

Domain: electrotechnics



Declining attractiveness

Technical fields

New conditions of appropriation of knowledge,
know-how, attitude

→ Motivation - Attention - Interest - Involvement

→ Enhance our teaching



Problem

Pollution in the city can be reduced by using an electrically-assisted bike (VAE)

Problem « Choice of a VAE »



Objectives

Problem

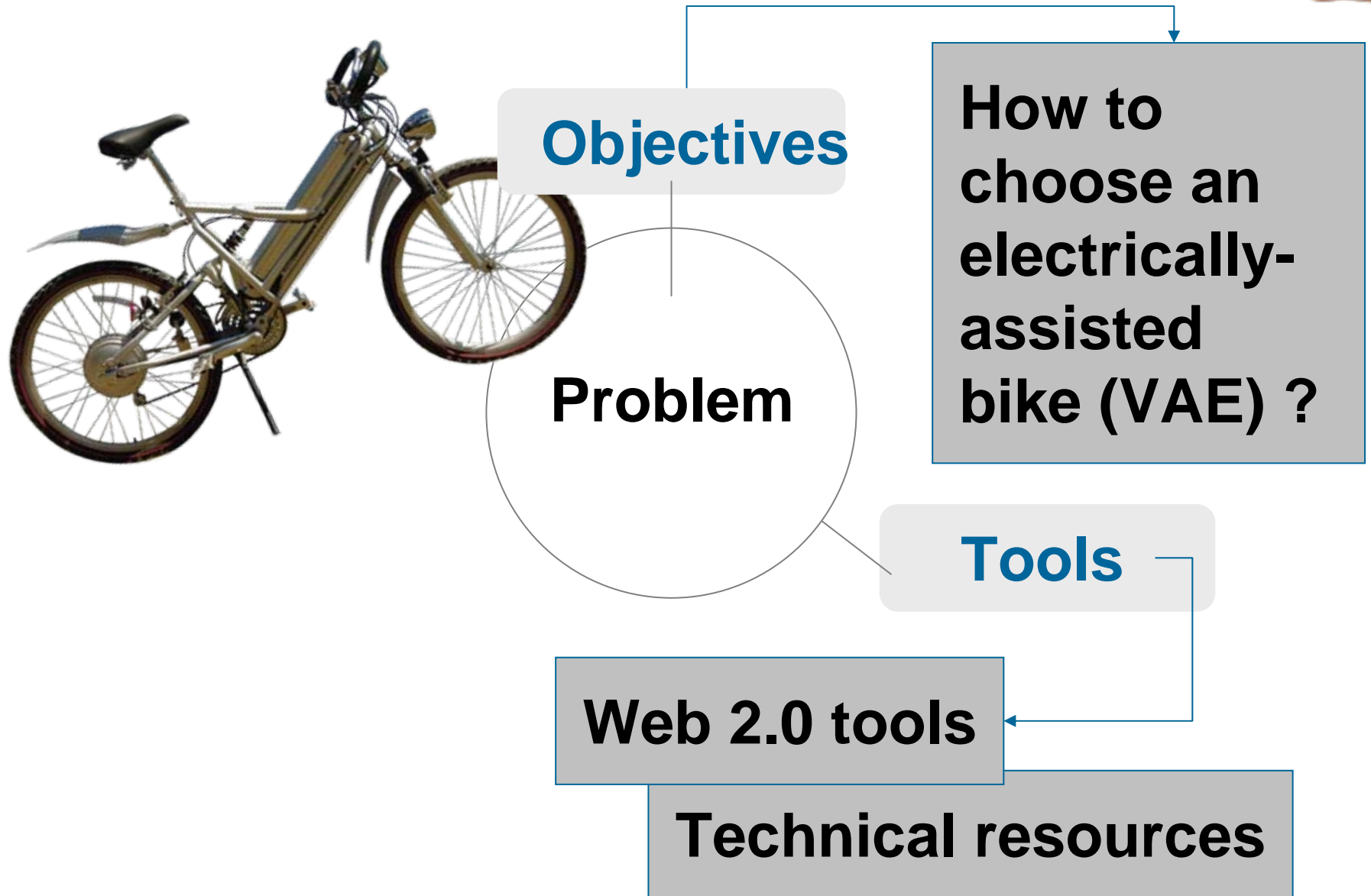
How to choose an electrically-assisted bike (VAE) ?

Pollution in the city can be reduced by using an electrically-assisted bike (VAE)



Final aim

Problem « Choice of a VAE »



Problem « Choice of a VAE »



Objectives

Problem

Methods

How to choose an electrically-assisted bike (VAE) ?

Tools

Web 2.0 tools

Project pedagogy

Technical resources

Pedagogical process



**Lecture &
Formulation du problème**

**Formulation & Organisation des
hypothèses**

Plan d'étude

Repérage de l'information

Mesure, Expérience, Observation

**Analyse critique de l'information
recueillie et résolution du
problème**

Restitution argumentée

Présentation orale

Approfondissement des notions

Bilan

Reading and problem formulation

**Formulation & organisation of
hypothesis**

Study plan

Identifying information

Measure, Experience, Observation

**Critical analysis of information
and problem solving**

Argumentative restitution

Oral presentation

Refinement of the concepts

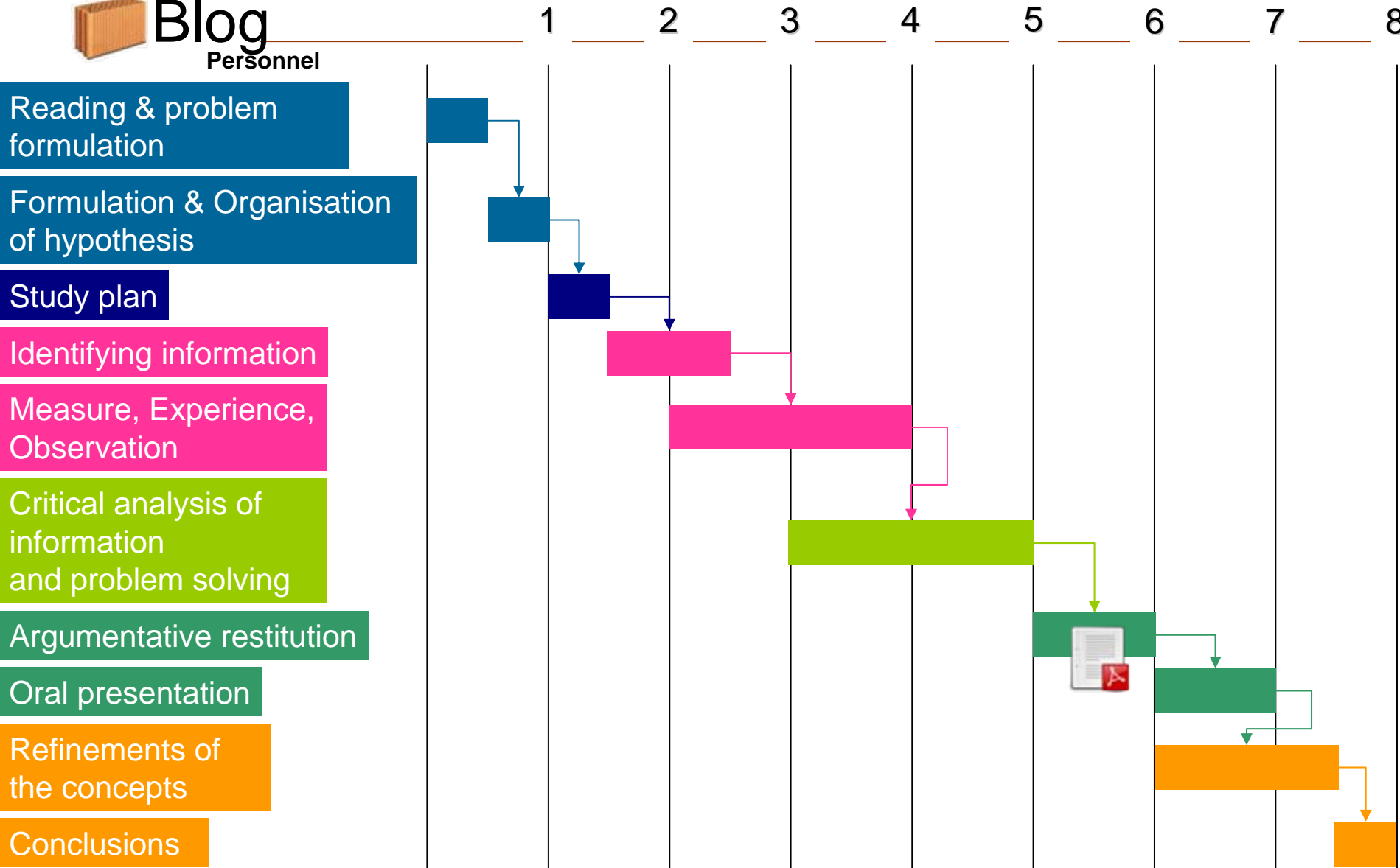
Conclusions

Project pedagogy « Choice of a VAE »



Blog

Personnel



Web 2.0 & Project pedagogy « Choice of a VAE »



Blog

Personnel

1 2 3 4 5 6 7 8

Reading & problem formulation

Formulation & Organisation of hypothesis

Study plan

Identifying information

Measure, Experience, Observation

Critical analysis of information and problem solving

Argumentative restitution

Oral presentation

Refinements of the concepts

Conclusions



Diagram Designer

Monitoring



facebook



Wiki

Synthèse

Gr. A

Gr. B

1. —
2. —
3. —
4. —

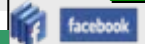
1. —
2. —
3. —
4. —

1. [Gr. B & n] _____
2. [Gr. A] _____
3. [Gr. B] _____
4. [Gr. ...] _____



Wiki

Groupes



facebook





▲ Etape

▲ Intentions

... ■ classe entière-résoudre-Résoudre une situation problème

▲ Stratégie : Situation problème et pédagogie de projet

- ▲ ● Lecture et Formulation du projet
- ▲ ● Formulation et Organisation des hypothèses
- ▲ ● Plan d'étude
- ▲ ● Repérage de l'information
- ▲ ● Analyse critique de l'information recueillie et résolution du projet
- ▲ ● Restitution argumentée / Présentation orale
- ▲ ● Approfondissement des notions
- ▲ ● Bilan de l'équipe et de chacun de ses membres



Conclusions

- [+] Surprise at the issues raised by pupils
- [+] Enhance dynamics through digital tools
- [-] Collaborative work
- [-] Pyramidal intelligence

Perspectives

- Digital Identity
- ePortfolio >> Better guidance
- Collective intelligence

The end...



Thank you for your attention ☺

Any questions

???

STI Project

<http://www.netvibes.com/sti-electrotechnique>

ScenEdit Project

<http://eductice.inrp.fr/EducTice/projets/scenario/scenedit>

EducTice Team

<http://eductice.inrp.fr/>