The high school's farm in 2050

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Scholarly context

The project is focused on two high school classrooms:
- Course on the initiative of the institution for the **« Conduct and Management of the farm » professional Baccalauréat** : consolidation of methodological skills, reading guidelines, management of the written pathway, organisation of work, autonomy, use of the documentary tool…
- Multidisciplinary activities for the **« Agronomic sciences and technologies » Baccalauréat**: work topics chosen by the the teachers' students, individual or collective projects.

Educational goals

Common goals from different disciplines:
To think about the issues concerning agriculture of tomorrow
To set up a meeting with agricultural stakeholders from the local area
To establish the various points of view and support the students in taking a position
Disciplinary goals:
To work on the interpretation of mathematical results
To create adapted communication materials
To introduce tools for the digital modification of images
To distinguish the social and cultural issues within an area, a model and agricultural practices
To identify the place of animal breeding in the area in 2050
Skills used:
To prepare and conduct an interview
To look from a critical distance from the information collected
To expose solutions that could answer the future challenges of agriculture
To expose ideas and argue about points of view

Problem

We [the teachers] have radically different approaches and an important aspect of the controversy is between the Zootechnics and Socio-cultural education disciplines. On one hand, Zootechnics has a more technical approach, orientated towards the methods of agricultural production coming from professional and scientific spheres. The analysis criteria of the practices are technical (environmental efficiency, economic efficiency…). On the other hand, Socio-cultural education borrows theories and ways of representing the world from the social sciences, with a critical and distanced look at existing models. Consequently, this discipline is critical about professional practices. The criteria of analysis are focused on the ethical, social, aesthetic etc aspects.
Mathematics, computing & multimedia teachers stay out of the controversy.

The project targets work in groups by the students, in a *démarche d'enquête* (« socio-scientific inquiry ») from the following problem-situation:
To explore the issues identified (agricultural crisis, environmental issues…), you will prepare and conduct an inquiry based on the stakeholders in the area. You will present the results to the other students and propose a scenario to answer the question: how do you imagine the high school's farm will be in 2050? You will answer this question by taking the information collected from all the stakeholders into account.

Expected outcomes from the students

A log book of the course including (see annex):
A stakeholder's sheet
Questionnaire or interview grid used during the inquiry
Summary of the interview with the stakeholder met
Communication materials presenting the high school's farm in 2050:
Digital image of the farm of today and the farm of tomorrow
Explanatory text under each image (key, summary...)

To answer the question, the students will use a research process and manage a grounded inquiry following two approaches:
Path #1 (about 20 students from the two classes): FNSEA (Farmers' Union for Intensive Agriculture), Biocoop (organic food shops), an urban consumer from Poitiers city centre, INRA (French National Institute of Agronomy).
Path #2 (about 20 students, from the two classes): Confédération Paysanne (Farmers' Union for more local and reasoned agriculture), Leclerc (conventional supermarket), a rural consumer from the little city of Lusignan, a farmer using a conventional model (polyculture and animal breeding).

Scenarios given to the students for the projection in 2050 on the high school's farm:
In 2050, urbanization destroys a lot of agricultural land. The high school's farm extends over 20 hectares (compared to today's 92 hectares).
In 2050, the city of Poitiers expands a lot and 90% of the department's people live in it. The high school's farm is the only farm around and needs to adapt to this new situation.
In 2050, 50% of the people are vegetarian. The high school's farm needs to adapt its production to the new ways of food consumption.
In 2050, an important world crisis limits the trading exchanges on Earth. The farm needs to undertake a relocation of the production and marketing processes.

There will be two phases of restitution:
First, the inquiry report (based on stakeholders met on the two paths).
Then the report of the scenarios predicted for the high school's farm.
All the working groups will present to the other students and will feedback their ideas during a collective debriefing.

Timeline for the first course:
Presentation of the project and distribution of the log book (15 min)
Explanation of the guidelines, dividing in groups (stakeholders and scenarios) (30 min)
Theoretical inputs: observations and issues (1 hour)
Agricultural crisis: political (farmers waiting for support from the government), economical (over-indebted farms, control of production by agri-business industries…), social (farmers' suicides, critics of the conventional model from civil society…) but specific sectors growing (organic agriculture, farmers' local shops…) or in good health (cereals, wine).
Environmental issues: global warming, pollution problems, loss of biodiversity, rise of sustainable development.
Public health issues: sanitary quality of the agricultural products, problems linked with industrial animal breeding, farmers' health problems …
Demographic issues: how to feed a human population in continual growth?
Start of the research work by groups (stakeholder's sheet) (2 hours)

List of the documents in annex, web links...
Log book (reminder of the activities, stakeholder's sheet...)
Activity assessment grid
Project assessment grid