

## Johann Sievering

2022

### Summary

- Guidelines;
- Background;
- Issue;
- Project;
- Analysis;
- Project objectives;
- Application of the guidelines;
- Competence matrix;
- Achievements;
- Feedback;
- Recommendations;
- Conclusion;
- Extension of the concept;
- Notes;
- References;
- Acknowledgements.

### Guidelines

The learner at the heart of his/her training  
The learner at the heart of the action  
Harmonised and evolving training

### Context

The training of firefighters in Geneva is carried out in training schools. The referent regulation document is the « règlement connaissances de base » (basic knowledge regulation) of the CSSP<sup>(4)</sup>. The courses are given in classical thematic lessons, which include: theory, demonstrations, practice, discussions and summary. A continuous evaluation allows to determine the level of each learner throughout his training. A final theoretical and practical test validates the learner's training and knowledge.

### Problems

Each person has built his or her own learning style during his or her life according to a multitude of factors, including predispositions, culture, social environment, interests, etc.

A lesson is aimed at a group with different learning styles, predispositions and motivations of each learner.

The frontal theoretical part of the lesson is an effective and proven pedagogical means. However, the rate of assimilation of knowledge as well as the understanding of a wide variety of topics. This rate is mainly dependent on the factors mentioned above, but also on the moment of the lesson, lack of attention, tiredness, distraction and other factors.

So, a lesson that offers both a frontal theory and then a practical application in the field with tools and machines may not be very effective for some who have not fully assimilated the theory in moment.

On the other hand, the time used for the theoretical part prejudices the practical exercises which is the fundamental element of firefighter skills learning.

### Project

The project is to dissociate the learning of knowledge and the learning of know-how by valuing them in their contexts. Knowledge must be acquired independently according to the learner's own learning modes and possibilities.

Know-how should be trained in the field with an instructor and using real equipment and machinery.

To achieve an optimal result, it is necessary that the learner presents himself in the field theoretically prepared.

The "ODL<sup>(1)</sup> SPV<sup>(2)</sup>" project is the organisation of the means of theoretical learning in autonomy of the learner in order to leave the maximum of practice in the field.

The project also includes reference documents and material 24/7 after-school training.

## ODL<sup>(1)</sup> within the volunteer fire department

### Analysis

In order to achieve these objectives, the roles of learning the theoretical elements and putting them into practice must be separated. For the learning of the theoretical elements, I chose the implementation of thematic ODL<sup>(1)</sup>.

An ODL<sup>(1)</sup> is a complementary tool allowing the acquisition of the theoretical elements at the pace, the learning mode and the availability of each learner. These training modules allow learning or consolidating the theory with targeted, modern and interactive means:

- **Targeted:**

the theory is presented in the form of small specific chapters offering the essentials and allowing access to supplements, documents or references

- This allows the student to focus on the key points and to deepen their knowledge according to their needs and the needs of the training.

- **Modern:**

Use of technology for interactive, dynamic, anytime, anywhere learning

- Today, computers, tablets and smartphones allow continuous access and presentation of information in all media (e.g. video clips).

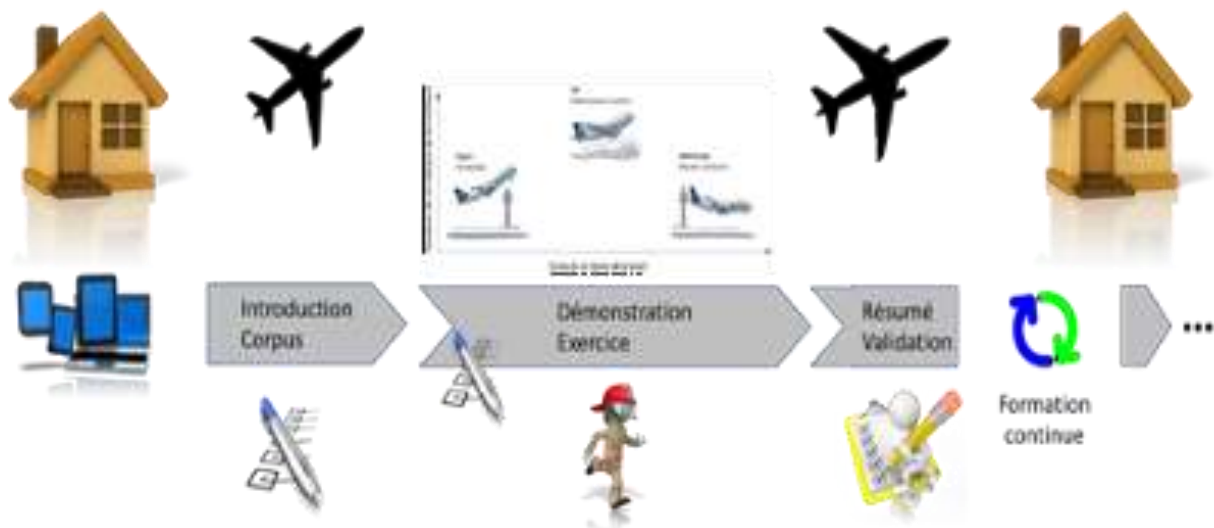
- **Interactive:**

Theory is always presented in the form of text and images, but also in the form of interactive activities, videos and quizzes.

- Quizzes allow validation and self-validation of the knowledge learned, which helps to identify the subjects to be reviewed.
- They are tools to help keep knowledge up to date in an enjoyable, continuous and fun way.

A lesson integrating ODL<sup>(1)</sup> is not limited to the lesson itself, but is a continuum between prior preparation, practical application and continuous training of the topic covered.

It is structured in 5 steps:



- **Self-preparation:** learning the "theoretical" material on your own using tools that provide 24/7 access to the course;
- **Introduction to practical application:** reminder, validation, answering questions;
- **Demonstration and exercises:** presentation and practice of the know-how by an instructor;
- **Summary and conclusion:** consolidation, control, discussion, correction, synthesis;
- **Continuous training:** access to information and learning materials on a continuous basis after the training.

## ODL<sup>(1)</sup> within the volunteer fire department

---

### **Project objectives**

- To allow each learner to acquire the theoretical elements at his or her own pace, according to his or her learning style and availability;
- To allow maximum time in the field for practical work and experience sharing with the instructor;
- To provide constantly updated teaching material available 24/7;
- Harmonise the training throughout the course, with the board, and allow it to evolve;
- Reduce the duration of some courses by delegating autonomous learning.

### **Application of the guidelines**

#### **The learner at the heart of his/her training**

Everyone has built up their learning style over the course of their lives according to a multitude of factors.

#### **The key points**

- Every learner has a personal learning style;
- Frontal training is effective for concepts involving relationships between learners or requiring participatory demonstrations;
- Creating a momentum for self-directed learning allows each learner to acquire the "theoretical" concepts in an optimal way;
- ODL<sup>(1)</sup> allows : (1) to provide opportunity for autonomous learning, (2) to make the teaching material available 24/7, (3) to build a coherent global training.

#### **The learner at the heart of the action**

Practice, or training by doing, is the most important phase for acquiring know-how, whatever the learner's level of training: learning, consolidation, or application.

#### **The key points**

- Practice is the crucial phase for acquiring the skill;
- It is necessary to visualise the procedure or operation at the same time as it is performed in order to execute it correctly;
- Assimilation of a procedure is a process that takes time;
- Knowing the sequence before the lesson allows the instructor to concentrate on the know-how;
- ODL<sup>(1)</sup> allows: (1) self-preparation prior to practical application, (2) focus on procedures or operations in the field.

### **Harmonised and scalable training**

In composite training contexts (with a variety of themes), the learning elements are frequently presented in the form of modules. These modules are organised according to a training plan, and are sanctioned by summative assessments which validate the learning outcomes. When a learner has completed a course of study or reached a given number of credits, he/she is considered to have sufficient knowledge, skills and attitudes to be able to put the learning into practice on his/her own.

#### **The key points**

- Composite courses, such as those for firefighters, are structured in modules;
- A learner is considered as trained when he/she has validated all the modules corresponding to his/her training (SP, SOF, OF, specialists, etc.);
- ODL<sup>(1)</sup> allows: (1) to transcribe the training plan, (2) to make a detailed follow-up of each learner's course, (3) to make available a dashboard of individual, course and global training.

# ODL<sup>(1)</sup> within the volunteer fire department

---

## Competency matrix

Why include the notion of a competence matrix in this ODL<sup>(1)</sup> project?

The vision of the ODL<sup>(1)</sup> SPV<sup>(2)</sup> project is not only to provide specialised training modules, but also to propose coherence between the teaching modules, to allow each learner to situate himself in his training cursus, to follow the learners of his course by each instructor, and finally to allow to obtain a general view on the training as a whole.

If the construction of the generalised course outline is considered from the start of the project, this will simplify the development of the training modules and allow the prioritisation of the project tasks. On the other hand, from the very first lessons onwards, monitoring will be active and will allow for immediate access to the dashboard.

The competency matrix allows the definition of the skills needed to perform the firefighter's job, the procedure or the operation and the means to achieve them.

The ODL<sup>(1)</sup> centralising the learning modules allows a global vision of the individual and group courses, as well as the provision of a training dashboard.

The competence matrix allows a synthetic visualisation of a large amount of data that would otherwise be difficult to analyse.

I have elaborated the competences matrix in the framework of ODL<sup>(1)</sup> according to

- The course followed by the learner: each module completed is taken into account;
- The assessments: all the formative and summative assessments carried out by the learner;
- Comments: as the course progresses, the instructors can comment on the course;
- Specialisations: the learner can take a specialised course at any time to complete his training cursus.

## Competency Matrix Trackers

Follow-ups are real-time projections (views) in the form of tables and/or graphs of the status of ongoing training. Indicators are used to measure the relevant data.

## Achievements

See and test the summary of all achievements: <https://jsilab.ch/cspv/foad/>

- Creation of a complete training environment for the basic training school (Moodle);
- Creation of a training environment for the Geneva company n°1 (Moodle);
- More than fifteen interactive ODL<sup>(1)</sup> modules;
- Facilitation of inter-company working groups for the creation of common ODL<sup>(1)</sup>;
- Implementation of training seminars for the creation of ODL<sup>(1)</sup>;
- Conferences, presentations and articles on the project "ODL<sup>(1)</sup> SPV<sup>(2)</sup>".

## Feedback

In order to realise a proof of concept and to achieve the above-mentioned objectives by means of ODL<sup>(1)</sup>, a complete learning environment was developed and then tested in real life.

The experimental environment consists of

- The complete curriculum of the basic fire brigade training school;
- The BLS-AED company course;
- The company course on fire extinguishers;
- The "TOOTEM" supplementary module used in section exercises.

This represents more than 200 hours of courses involving more than 300 learners.

# ODL<sup>(1)</sup> within the volunteer fire department

---

## Modality

Preparation in autonomy by self-learning the "theoretical" material by means of tools offering 24/7 access to the courses

- Preparations to be made BEFORE the lesson;
- Introduction to practice: QUIZZ at the beginning of the lesson
  - Duration about 5 minutes - to review safety and key points, prior to practice.
- Demonstration and field exercises
  - Practice of the lesson topic (independent of ODL<sup>(1)</sup>).
- Synthesis and discussion
  - Analysis of the practice, complements and answers to questions (independent of ODL<sup>(1)</sup>).
- Summary and conclusion: end of lesson QUIZZ
  - Duration about 5 minutes - to review key practical points that have been achieved in the field.
- Continuing education: anytime and anywhere after the lesson
  - Continuous access to information and learning materials after the training.

## Learner feedback

### Positive feedback

- Anytime, anywhere access to courses and materials;
- The material, documents and activities are cut out by lesson, allowing the learner to focus only on what needs to be learned and understood;
- Videos are an excellent complement to the theory;
- Possibility to train and self-evaluating as many times as desired;
- The "start-up quizzes" provide a good introduction to the field;
- The "quizzes recapitulation" allow to prepare well for the exam;
- The ODL<sup>(1)</sup> will remain accessible even after the training.

### Points for improvement

- For some people, learning on their own posed problems of time management;
- In the current state, not all videos have been made yet.

### Conclusion

- The learners immediately embraced the concept of out-of-class learning and the use of ODL<sup>(1)</sup> in the field with their smartphones;
- Their feedback and encouragement motivate us to develop this approach.

## Instructor feedback

### Positive feedback

- Organising lessons with a reduced theoretical part, which leaves more time for practice;
- Learners come prepared, which allows for more comprehensive or specific exercises;
- The possibility of accessing the documents on the field, via ODL<sup>(1)</sup> web application;
- All instructions are harmonised by a common reference.

### Points for improvement

- Training of instructors in the use ODL<sup>(1)</sup>;
- Facilitated organisation of joint lessons between instructors.

### Conclusion

- As the ODL<sup>(1)</sup> approach to training has spread to all areas, its introduction into SPV<sup>(2)</sup> training needs to be considered and should be a topic for discussion in the short term.

# ODL<sup>(1)</sup> within the volunteer fire department

## Stakeholder feedback

### Positive feedback

- We have had a great adhesion and support from all stakeholders, e.g. from the OCCPAM<sup>(5)</sup>, the FGSP<sup>(3)</sup> and from the SPV<sup>(2)</sup>, which has allowed to develop the concept comfortably;
- When the concept was presented to new stakeholders, we receive a positive reception and often even an intention to develop the concept further.

### Points for improvement

- While the content and form of ODL<sup>(1)</sup> are easily recognisable, the management group that runs this project is currently not yet formally defined (who does what, who is who, is not clearly identified).

### Conclusion

- The relevance and usefulness of ODL<sup>(1)</sup> is clearly recognised by the whole stakeholders as an effective complement to the training of SPV<sup>(2)</sup>.

## Recommendations

- The design of a ODL<sup>(1)</sup> module must take into account all the factors presented in this document;
- It is a matter of a team, each one in his or her own speciality being able to optimise the quality of the modules;
- It is therefore important to carry out the entire development process, to document all the steps, and to test each of the elements proposed to the learners, in order to guarantee an optimum quality of training.

## Conclusion

I was surprised and enthusiastic by the quick adhesion of all the people to whom I presented this project. Indeed this project meets:

- **A need:**
  - More time in the field;
  - Continuous training, self-assessment, 24/7 availability of documents.
- **A demand:**
  - Learners are now all connected and are very comfortable with these technologies;
  - Harmonisation of content and documents.
- **Context:**
  - The equipment allows effective and efficient use of ODL<sup>(1)</sup>;
  - The COVID containment situation has favoured these means of training.

This is why I am convinced that it is necessary to continue this experimentation, to improve it by involving all the actors, and by making it available to all the people concerned or interested.

## Extension of the concept

This concept and experience of the "ODL<sup>(1)</sup> SPV<sup>(2)</sup>" project can be transferred to any other area with similar objectives.

## Notes

- <sup>(1)</sup> ODL: Open and Distance Learning;
- <sup>(2)</sup> SPV: Sapeur-Pompier Volontaire ("volunteer firefighter");
- <sup>(3)</sup> FGSP: Fédération Genevoise des Sapeurs-Pompiers ("Geneva Federation of Fire Fighters");
- <sup>(4)</sup> CSSP: Coordination Suisse des Sapeurs-Sompiers ("Swiss Fire Brigade Coordination");
- <sup>(5)</sup> OCCPAM: Office cantonal de la protection de la population et des affaires militaires (Cantonal Office for Civil Protection and Military Affairs).

# ODL<sup>(1)</sup> within the volunteer fire department

---

## References

To access to the all ODL<sup>(1)</sup> courses

- <https://jsilab.ch/cspv/foad/>

ODL<sup>(1)</sup> SPV<sup>(2)</sup> project design 2020 (19-page document)

- [https://jsilab.ch/doc/spv/CSPV\\_FOAD\\_PlanDeProjet\\_\(2020-02-26\)\\_FR\\_JSI\\_v06.pdf](https://jsilab.ch/doc/spv/CSPV_FOAD_PlanDeProjet_(2020-02-26)_FR_JSI_v06.pdf)

ODL<sup>(1)</sup> SPV<sup>(2)</sup> experience report 2020 (8-page document)

- [https://jsilab.ch/doc/spv/FOAD\\_SPV\\_RapportExperience\\_\(2020-10-09\)\\_FR\\_JSI\\_v05.pdf](https://jsilab.ch/doc/spv/FOAD_SPV_RapportExperience_(2020-10-09)_FR_JSI_v05.pdf)

Proposal for a new department within the FGSP<sup>(3)</sup> (8-page document)

- [https://jsilab.ch/doc/spv/FOAD\\_SPV\\_PropositionDicastereFOAD\\_\(2021-02-09-14\)\\_FR\\_JSI\\_v02.pdf](https://jsilab.ch/doc/spv/FOAD_SPV_PropositionDicastereFOAD_(2021-02-09-14)_FR_JSI_v02.pdf)

ODL<sup>(1)</sup> SPV<sup>(2)</sup> business plan 2020 (7-page document)

- [https://jsilab.ch/doc/spv/FOAD\\_SPV\\_BusinessPlan\\_\(2020-02-21\)\\_FR\\_JSI\\_v02.pdf](https://jsilab.ch/doc/spv/FOAD_SPV_BusinessPlan_(2020-02-21)_FR_JSI_v02.pdf)

Complete presentation of 2020 ODL<sup>(1)</sup> (41-slide document)

- [https://jsilab.ch/doc/spv/FOAD\\_SPV\\_Presentation\\_FOAD\\_\(2020-12-06\)\\_v06\\_Finale.pdf](https://jsilab.ch/doc/spv/FOAD_SPV_Presentation_FOAD_(2020-12-06)_v06_Finale.pdf)

ODL<sup>(1)</sup> lesson plan and structure (1-page document)

- [https://jsilab.ch/doc/spv/FOAD\\_SPV\\_PlanDeSequence\\_\(2020-02-05\)\\_FR\\_JSI\\_v01.pdf](https://jsilab.ch/doc/spv/FOAD_SPV_PlanDeSequence_(2020-02-05)_FR_JSI_v01.pdf)

Règlement « connaissances de base » de la CSSP<sup>(4)</sup> (basic knowledge regulation)

- [https://jsilab.ch/doc/spv/CSSP\\_Reglement\\_ConnaissancesDeBase\\_FR.pdf](https://jsilab.ch/doc/spv/CSSP_Reglement_ConnaissancesDeBase_FR.pdf)

## Acknowledgements

**Among many other people who have supported this project, I would like to thank:**

**Lt Nicolas SAUCY:** OCPPAM and CP39

- With whom we form the core team of this project;
- And who is involved in several modules.

**Major Hubert Borcard:** administrative entity OCPPAM<sup>(5)</sup>

- Who gave me the opportunity to design and start this project in the base school for firefighters in Bernex.

**M. Mauro Tessari:** former president of FGSP<sup>(3)</sup>

- Who has always supported and continues to support this project.

**Cap. Fabien MONTET and Cap. Denis Micheloud :** OCPPAM<sup>(5)</sup> School Commanders

- Who supported this project in the field and in the classes of the training school.

**Cap Jean-Daniel Dougoud:** captain of the company n°1 of Geneva city

- Who allowed me to implement ODL<sup>(1)</sup> in the company's exercises and specific training.

**Cap Pascal Christin:** instructor OCPPAM<sup>(5)</sup>

- With whom we developed the first ODL<sup>(1)</sup> module and who supports me in this project.

**Plt Frédéric Demierre:** OCPPAM et CP1;

**Plt Carlos de Oliveira:** CP2;

**Lt Vitold Kapshitzer:** CP1;

**Cap Carlos Paiva:** GI (groupe d'instruction) ;

The staff of the communes of **Perly-Certoux, Plan-les-Ouates, Bardonnex, Troinex, Veyrier.**

And all the other not mentioned people who supported this project, but without whom this project would not have been able to develop so well.