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# Born to Code.
# An interview with Olivier Crouzet from School 42 in Paris

*Maria Zając*

**MZ:** It is said that the name of the school originated from the book *The Hitchhiker's Guide to the Galaxy*, in which 42 was the answer to the question of life, the universe, and everything. Does it mean that 42 is the symbolic answer to the contemporary market needs for programmers?

**OC:** At first, 42 has been actually presented as the answer to what modern education should be. In the era of the digital revolution, every field of the economy has been shaken, and education should not be left apart. We believe that we are one of the possible ways of digital transformation in education. Other ways should also exist; not everyone fits into the same system. Regarding the market needs, we also are a possible answer. Our model is highly scalable and can provide a large number of ICT professionals that are lacking in numerous countries.

**MZ:** Why is it possible?

**OC:** Our main strength is our pedagogical model. It has been designed from scratch, without economic constraint, with companies' expectations in mind and previous experiences. Today, we still try to keep our "think out of the box" and agile state of mind to update the model when it is needed. Unfortunately, this is not the case for public education, stuck with the model designed to fit the industrial revolution 150 years ago.

**MZ:** At School 42, you declare that there no classes, no subjects, and no teachers, but you still call it a school; why?

**OC:** In France, we just use 42, and everyone knows. With a foreign audience, at the conferences where speech time is limited, using the name School 42 is an easy way to explain what we are. While having more time, we usually present ourselves as a learning experience. Also, your question reflects - from my point of view - the fact that for many people, a school is a place where teachers do their lessons. For me, it is the place where children/students learn. It should always be student-centric. In 42, our students do learn ICT.

And we do have subjects! No teacher, no lessons, but with a learning path built of many subjects which are sets of challenges, growing in difficulty and size.

**MZ:** Do you think the model applied by School 42 could become a new model of any contemporary school? Is this model replicable to other areas of knowledge or skills?

**OC:** I strongly believe that our peer-learning model can be adapted to primary schools, high schools, and different areas of knowledge in higher education. I will give you several reasons here. First, we definitively have connections with classic pedagogical models proposed by such researchers like Celestin Freinet, Maria Montessori, Jean Piaget, and Lev Vygotsky. These models have proven their efficiency and mainly did apply to primary school. Also, our learning context fits the latest research in neuroscience about education in general, not only ICT (Olivier Houdé). Finally, because a lot of simulations, sometimes using VR, can be done these days, which encourages the trial-and-error approach. And that is mandatory for our model to be applied: to have a sandbox, to experiment, to try - not necessarily with success, but with no danger nor consequence. That is also possible for chemistry, business, health, and many more. We have already been asked by a prestigious French business school to cooperate with them; unfortunately, we cannot be deeply involved: I'm a geek, just like my students. We need a real specialist in pedagogy to carry out an in-depth analysis of our model, extract the fundamental pillars, and only then be ready to apply it to another topic in collaboration with a field expert on that topic. The main point here is to split between ICT as a learning topic, and ICT as a support for the learning pedagogy.

**MZ:** You are responsible for pedagogy at School 42. Could you briefly describe what the core of the pedagogical approach applied by 42 is?

**OC:** Our students are facing software development challenges (called projects). They need to create

a piece of software. With no teacher, no lecture, no online MOOC, and no knowledge pointed out by the staff, and they need to collect information, filter this information by testing it heavily, and then use it to create or co-create the software requested by the subject of the challenge. That cannot be achieved alone. Collaboration is a crucial element, and that is why our model is called Peer-Learning. Students discuss, explain how they understand the subject, how they think it can be solved. The goal here is to create collective intelligence and find a new hypothesis that no one brought in the first time. When the project is over, the peer-evaluation is done by five other students from the community, using guidelines provided along with the subject. In case of failure, the project is retried. If successful, it unlocks the next project(s) of the curriculum. Also, the student earns experience points to progress through the subsequent levels and to improve their own skills profile. This is part of the gamification of the curriculum. We do have quests, badges, coalition (like houses in Harry Potter). This gaming approach legitimates the try-fail-try-again approach, and geeks do love it! The freedom of pace and path is naturally embedded in the gamification.

MZ: If there are no classes and no teachers, from whom can students learn? Do they have mentors or experts to ask for advice or an explanation, or is it only their peers to learn from? Do they use any paper or electronic handbooks?

OC: They exclusively learn from their peers, and from the information they gather. There is no mentor nor expert nor handbook, for a simple reason: there is no doubt from these three sources. Any student would automatically believe and apply any information told by a referent. We definitely want our students to doubt and test every piece of information they get. In ICT, something true to-day can be false or obsolete tomorrow. A professional should always forget their ICT knowledge after a project and get it back the next time they need it! This approach makes sense in a world with too much information available. Developing tests and critical thinking regarding what you read is not only useful for ICT but almost everything in your life.

MZ: And how about grading? Do you use any grades? Is it allowed to make a failure?

OC: Grading is done through peer-evaluation. Grades are from 0 to 100. In everyday life, we all are judged by the others. Being evaluated should be natural but also relative. In 42, it is not a unique "superior" human being, but five peers, who are at the same level as you are, and do not necessarily agree on the result of your work. We try to

avoid failure stigmatization and lead our students to a natural and peaceful try again outcome.

MZ: Students at School 42 come from different backgrounds and even different cultures. What makes them collaborate rather than compete?

OC: This is the job of our selection process. 30.000 applicants register online every year for the Paris campus. They do online tests, then 3000 are selected for the Piscine. The Piscine is the second part of the selection. It is a four weeks long immersion in 42. Applicants taste if they do like coding and if they do fit into the peer-learning model. We tell them that to be admitted, they need to collaborate. Isolated applicants do not progress fast enough, and they got stuck very quickly. After a few days, this is very clear for all of them. And diversity is an asset for collective intelligence, not uniformity. People think differently and can bring various points of view.

MZ: Students do not pay any tuition, what happens if someone withdraws from 42 before completing the program?

OC: They just quit the program. We knew from the very beginning, that was going to happen, and our primary donor is entirely OK with that. We also have a dedicated system to exclude students too lazy, with not enough focus on the curriculum. The freedom of pace is enough for a slow student and a student with a part-time job living in Paris, but we ask students with no progress at all to leave their seat for someone else. Also, the surprise of peer-learning comes in the Piscine. Once admitted, you precisely know what to expect for all the curriculum.

MZ. You mentioned that the school has already 18 branches all over the world, and two others are being prepared to be open soon. What do they have in common? Are they all based on the same pedagogy?

OC: All our campuses are 100% clone of Paris. The same conditions apply, the same pedagogy.

MZ: Could you tell a few words about the future plans? Do you plan to open schools in other countries as well?

OC: We do have a lot of demands. Opening new campuses and providing the appropriate support to all of them is rapidly filling up our schedule for the next few years.

MZ: Thank you for the conversation, and good luck with your efforts. Education worldwide does need new ideas and approaches, and 42 definitely seems to be a unique experience and one of the possible answers both to the educational needs of contemporary societies and the labor market.