

# *2023 Interview on De-encapsulation of School*

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The interview with Professor Yrjö Engeström took place on March 16, 2023, at his home in Sipoo, Finland, with Katsuhiro Yamazumi (Professor, Faculty of Letters, Kansai University) as the interviewer.



## **Katsuhiro Yamazumi**

I am very interested in your cultural-historical activity theory-based research project, *In Search for Significance: Fostering Movement across Adolescents Worlds*,<sup>1</sup> from the viewpoint of expanding the scope and impact of school learning due to current societal transformations. I have read your paper “The hybridization of adolescents’ worlds as a source of developmental tensions: A study of discursive manifestations of contradictions”<sup>2</sup> with great interest. This paper is very exciting because it combines the findings that the hybridization of

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adolescents' worlds is a source of developmental tensions with an invitation for schools to take on the challenge of de-encapsulation of schooling.

I would be very grateful if I could hear about the progress and findings of this project to date. In particular, I can take a closer look at the implementation of the Change Laboratory in this project, that is, the Change Laboratory which promotes expansive de-encapsulation actions by the eighth-grade students as participants.

### **Yrjö Engeström**

Indeed, we are just completing a paper on de-encapsulation.<sup>3</sup> That will probably give you more detailed and well-grounded information about this. But I will now just try to summarize.

### **Katsuhiko Yamazumi**

Thank you.

### **Yrjö Engeström**

We needed to develop a method to actually document actions of de-encapsulation. The method is quite simple. We recorded all the Change Laboratory sessions with each one of these project groups. In the article, we took four project groups because we were four researchers, myself, and three researchers. Each one of us was responsible for one group of students. We analyzed the recorded and transcribed group meetings and identified the de-encapsulation actions. There were actions of going out of the classroom and school, and there were actions of bringing something from the outside world into the school. So de-encapsulation actions could be moving outward or inward. De-encapsulation happens both ways.

We also looked at what is the mode of de-encapsulation. Is it a physical movement of people, or is it the movement of information and representations? The third and most difficult modality was imaginary movement. One of the groups engaged in creating a tabletop role-playing game. They were doing a lot of collective imagining. Most of their actions took place in an imaginary world—yet it was also a material world, represented as a map created by the participants. This turned out to be a big challenge methodologically. How do you identify actions of imagination, collective actions of imagination? It is not easy because not all of them are explicitly verbalized. A lot happens just by gesture, gaze, physical movement, and so on. Collective imagination is very difficult to analyze empirically. It is not the same thing as analyzing regular discourse or regular conversation.

That challenge was not resolved in the article. We identified it as a challenge that must be worked on. Basically, what we found was that each one of these project groups had a very different pattern of de-encapsulation. One group was making a documentary against bullying and for accepting people as they are.<sup>4</sup> They took a very large number of de-encapsulation actions. It was a very

intense and rich process. Some of these groups emphasized bringing in something from the outside world, and some of them emphasized going out.

Our conclusion is that it is very hopeful that there is this diversity. It means that de-encapsulation can be done in different ways. It is an open field and we should not impose a strict definition of which way is right. We should allow a lot of experimentation by students to design and implement their projects. All of these groups made significant efforts at de-encapsulation, and all these four groups saw this as a way to learn in a meaningful way.

It is a bit problematic to use the concept of project here. Usually a project is understood as having a final ending point and a timetable. The group that created and played the fantasy role-playing game did not stop when the project was formally finished. They continued developing and playing the game in the following school year. This was very important for us because we could see the risk that we, as adults or researchers, say when an activity ends. The notion of project easily leads us to impose such an artificial end point.

On the other hand, as we had our own limited resources as researchers, we would have to tell them that our project ends that and that day. Yet the role-playing group went on, as did another group in the second school where we conducted the Change Laboratory the following year. These groups were not interested in our timetable, they wanted to continue. In a way, that is also a very important deviation. The concept of a project is a poor substitute for activity. Activity is not supposed to have a final endpoint. It reproduces itself continuously. A project is something between action and activity; it's a string or cluster of actions that has a finite endpoint.

You make a big mistake if you start using project as a substitute for an activity. That mistake was made by Andy Blunden when he suggested project as the main unit of analysis in activity theory. The very point of activity theory is that activities continue. You can drop out, but the activity continues. It is not about individuals. It's about the activity and its object. As long as the object is there, and there is a societal need for it, the activity goes on. But when you are talking about intermediate or transitional steps toward the zone of proximal development, then projects may be necessary because they are goal-directed and compact but more durable than a single action.

I think that we can talk about projects as instruments for moving from action to activity, but never to replace activity. That is one of the issues we are also writing a little bit about in this article: the concepts of action, activity, and project.

As I just mentioned, we conducted a similar Change Laboratory process the next year in another school, in the city of Tampere. In the first school, in Helsinki, the students' projects were to a large extent about conflicts in relations among students, about tensions of tolerance, acceptance, discrimination, even racism. In the other school, the tensions were related primarily to the school and pressures from the school.



So we have two different profiles of concerns and conflicts of motives. In one case, they were about relations among adolescents. In the other case, they were about relations with the school. Already from this, we can see that at least these two seem to be large sources of conflicts of motives among young people in this culture. This could be so in many other cultures, too. But the tensions may also be very different in other cultural settings.

In Tampere, one of the groups consisted of special education boys. Six or seven boys were in a special education group, a group that was considered difficult. At the beginning, they were saying that the teacher is a dictator and they are slaves. Eventually, they selected a project in which they created a classroom parliament of their own. This assembly regularly met with the key teacher and made proposals for how to make the school more meaningful. The teacher collaborated, showing open-mindedness and flexibility.

As we speak, this classroom parliament has been going on for more than half a year. We have not intervened. They meet roughly once a month. They prepare an agenda. Students make proposals and suggestions, and then they discuss them and make decisions. Of course, you can say that this is rather naïve because they don't have real power. But for them, it is a test to see how the school reacts to what they want. This is their own idea.

Some of their initiatives have been received well, some of them have been considered impossible. But this gives the students a collective voice and allows them to articulate ideas that otherwise would be just chaotically floating among them. This is especially relevant when there is a conflict of motives that makes the students feel that they have been ignored, that they are not taken seriously. That is how this group of boys felt. So this is a means for them to test: Are we taken a bit more seriously when we formulate our demands and suggestions in a meaningful way?

If things go well, this can become a permanent practice. Now the boys are in the ninth grade, and after that, they go away, to further education or to work. What happens when this cohort is gone? Will there be anything left? Also, in

this case, there was quite a bit of de-encapsulation because the participants used this class parliament, for instance, to discuss what would be a meaningful place where they would want to visit. It was also an instrument for opening up.

De-encapsulation is in itself a contradictory concept. A lot of what we might call chaotic de-encapsulation is going on. There are all kinds of forces that want to come to the school to market their products, for instance. There are also all kinds of events happening that are supposed to bring the students out of the school. But there is no strategy; there is no vision for this. It's just the sort of thing that happens. This is chaotic de-encapsulation.

In this article, we distinguish between chaotic de-encapsulation and expansive de-encapsulation. Expansive de-encapsulation means that there is a conscious strategy or perspective of what kind of opening up is needed. It is typically something that is connected both to school instruction and to some meaningful forces outside the school. And it is basically student-led; students take the lead.

This type of de-encapsulation is very different from some businesses coming to school to sell products to the students. De-encapsulation is not a unitary phenomenon. It is a dialectical phenomenon that has contradictions.

### **Katsuhiro Yamazumi**

That's interesting. Now, in Japan, the government is pushing an educational reform in which they claim some kind of de-encapsulation of schooling. Because of that, as you said, we need to distinguish a different kind of de-encapsulation.

### **Yrjö Engeström**

Absolutely! The worst would be that there is some authoritarian force saying how schools should be opened up to whatever economic and political forces are in the interests of the existing power. That type of chaotic de-encapsulation has been going on for a long time because schools are an attractive market. For instance computer makers have been selling their products to schools very actively. Reflecting on this, Larry Cuban wrote the book, *Oversold and Underused: Computers in the Classroom*.<sup>5</sup>

Of course I don't know how this new Japanese policy is working out. But if it is very centralized, it might become detrimental to the autonomy and agency of the schools. Schools should actually find their own partners. It is very important that schools engage in building partnerships that are meaningful and not just profitable.

### **Katsuhiro Yamazumi**

In Japan, such educational policy divides school curricula into two different types. One is the curriculum of drills and practice for acquiring basic knowledge and skills. Such content of the curriculum is seen as achieved by optimal personal learning for each person using a tablet and its app. This kind

of learning is conducted by individual students according to their own performance or abilities. Another type of learning is called inquiry, problem-based learning, or project-based learning. That invites private companies and sectors. Schools build a partnership with private companies, and, for example, information technology companies provide schools with inquiry learning programs. Various kinds of private companies join such partnerships with schools to develop inquiry learning programs. Teachers' role is disappearing in such a movement, and the traditional type of school is broken towards a new type of schooling conducted by not teachers but by various agents outside of the schools.

As I have been hearing from you so far, your research group, through the analysis of the Change Laboratory sessions in the In Search for Significance project, has focused on students' expansive de-encapsulation, which is distinct from chaotic de-encapsulation. Based on this distinction, could I ask you more about your thoughts on expansive de-encapsulation?

### **Yrjö Engeström**

Historically, obligatory schools were created to protect children from child labor and other hardships during the early ages of industrialization. However, this also led to the separation of school from life, and to a form of alienated learning. Today encapsulation means the exclusion of students' other worlds from the world of school activity. However, other worlds do penetrate and hybridize with the school world without anybody planning or permitting it. It just happens, for instance when students bring social media into the school with their smart phones.

In an encapsulated classroom, the school text is the knowledge conveyed by teachers and textbooks, and reproduced in exams. Textbook knowledge required in tests and exams tends to become the object of activity instead of being an instrument to understand the world. In other words, study becomes focused on the text rather than the relationship between the text and the world. This also means that the instrumental resources of the students are impoverished because the text is not an instrument, but a pseudo-object. Typically, this tends to lead to superficial memorizing.

This has the worst consequences for students whose families and communities are not familiar with working with text. They are the most vulnerable to begin with, because they are not accustomed to textual work.

Encapsulation is closely connected to compartmentalization, which refers to the fragmentation of learning into different school subjects and within the subjects, into different compartments. Encapsulation and compartmentalization are very closely intertwined.

One of my first articles<sup>6</sup> was about how students explained the origin of life. I asked the same question in a mathematics lesson and in a lesson on religion, and the students answered the same question very differently, depending on the lesson.

**Katsuhiro Yamazumi**

So, the concept of compartmentalization is not only connected to the division of labor of activity system, but...

**Yrjö Engeström**

No.

**Katsuhiro Yamazumi**

No.

**Yrjö Engeström**

It is also very much connected to the idea that school knowledge becomes the object itself.

**Katsuhiro Yamazumi**

Object itself.

**Yrjö Engeström**

Therefore, it must be packaged. This is also a fertile ground for further commoditization.

**Katsuhiro Yamazumi**

Commoditization.

**Yrjö Engeström**

When you compartmentalize knowledge, you are already stabilizing and fixing it, such that the knowledge becomes a dead object. Then, it is very easy to start treating it as something that can be bought and sold because it has already been packaged. So, it can be turned into commodity. Unfortunately, the school offers a fertile ground for those who want to turn curricula into pre-packaged knowledge, and thereby into commoditized knowledge. Then, the interest is to measure the study points and so on. The content is not relevant anymore. It basically becomes just symbolic markers of achievement.

**Katsuhiro Yamazumi**

What is the reason for school education to compartmentalize knowledge and package it although school education is based on the public interest and common good?

**Yrjö Engeström**

This is a contradiction indeed. The public school originates in the interest of common good because it was meant to equalize—to offer everybody the chance to acquire knowledge. However, at the same time, what led to this strong compartmentalization of knowledge? It has to do with also the inheritance of



the enlightenment idea of knowledge as an encyclopedia. Knowledge as something that is already in a book that can be just looked up. This encyclopedic knowledge and also the influence—especially in Europe—of religion, because when secular, non-religious school systems were created, it was very important for the Church to have its own place in the curricula. That is why the subject of religion was an important compartment, and the Church needed to protect it. So, it became a compartmentalized area in itself. I don't know if this has ever been an issue in Japan, but in Europe...

### **Katsuhiko Yamazumi**

In modern Japan, the Japanese government introduced the Western way of organizing school and knowledge.

### **Yrjö Engeström**

It would require specific historical studies to understand the origins and development of compartmentalization. But the curricula, practically in all Western countries, have been built on strongly compartmentalized subjects. Basil Bernstein was interested in this aspect of how school knowledge becomes framed in this kind of very compartmentalized way. This would be a possibility to include Bernstein's work in this dialogue.

We see the consequences of compartmentalization today in what is like double encapsulation. First, school tends to isolate knowledge from the surrounding world, and then it also splits this knowledge into boxes. Of course, there is also a kind of decompartmentalization, which is also very problematic, and comes from neoliberalism. Take for instance the OECD, which started talking about “21st century skills” that are not compartmentalized. Supposedly they cut across the curriculum: “you have to learn to collaborate, you have to learn to be creative, etc., etc.” But these are completely divorced from the contents. So, you create this formal set of skills, which are presented as if they were completely abstract. In reality, these skills must have some object, they must be related to something. What is the point of teaching critical thinking without knowing what to be critical of?

In this sense, it is yet another new form of splitting up in the name of decompartmentalization, in the name of saying: “Hey! The old subject matter-based teaching is not sufficient for today's modern world...we need to have 21st century skills that cut across the subjects.” In fact, these skills are divorced from the content and become just a formal repertoire or skills.

In our project, the first Change Laboratory was conducted in a school in Helsinki in 2021. It is a lower middle-class area, not wealthy but not very poor either. You could say that in many ways it was quite an average area in Helsinki. The students selected five projects that spanned the entire school year. As I mentioned earlier, we distinguished between physical de-encapsulation which is movement of people; discursive de-encapsulation, which is movement of talk, text, and other representations; and imaginary de-encapsulation which is



movement by means of imagination. There were also cases of re-encapsulation, wherein the students wanted to protect their own projects from the outside world.

Then, we developed graphic symbols to indicate, first, the direction—either out of school or bringing something into the school. The small arrow indicates that the movement happens just out of the classroom into the broader school, while the bigger one indicates movement out of entire school—and the same inward. Adding to this, is it an individual action, a group action, or organizational action? Then, the colors would indicate the modalities: people physically moving, text or discourse moving, or imaginary movement. And finally there is a symbol for actions of re-encapsulation.

We used these kinds of simple graphic symbols and carefully studied these four cases. One group was interested in the phenomenon of bullying and how students could affect each other. This was the project that I was supervising. One of the members of that group was of a foreign origin, and there was the issue of racial or ethnic discrimination.

The other project produced the documentary film. The third project was the tabletop fantasy role-playing game called “Brotherhood of Steel.” The fourth group focused on Korean pop music, K-pop. Each group produced quite interesting outcomes.

The one which I was analyzing made a questionnaire that was answered by 108 students, recounting their experiences of discrimination and bullying. They picked examples from the students’ responses and one of the girls drew pictures. These were presented in a booklet and on posters, which were then distributed in the school and in other schools as well. The booklet the group created was called “Small Action, Big World.” It recounts what other students told them in their questionnaire answers. For instance, “They called me homosexual.” This is an example of how discrimination can be generated on the basis of thinking of somebody’s sexual orientation. Or, “My friend told me that I have Asperger’s.” Such a comment can have serious impact on a vulnerable 14-year-old. They also have examples of positive things that can be said, of how students can counteract intolerance and bullying. It was not only about the negative, but also the positive, that is, the potential to positively influence other people. As a first action of de-encapsulation, the members of this group went out to the headmaster of the school to ask if they can do this questionnaire.

**Katsuhiko Yamazumi**

Yeah. Very interesting. Symbolizing movement.

**Yrjö Engeström**

Exactly.

**Katsuhiko Yamazumi**

Various kinds of movement.

### **Yrjö Engeström**

This group brought in outside expertise for the design of the booklet and posters, but it was not needed for the questionnaire. In the case of the K-pop project, they also had a point when they wanted to re-encapsulate. They feared that other students would ridicule their music taste, and so they wanted to keep it to themselves. However, in the end, they did open up and presented their project outcome to a broader audience. For them the issue was, we like Korean pop music whereas most of the other students would like rap or something like that. So, they felt that they were different. So, it was again a question of how to tolerate differences, how to deal with differences among your peers.

This age group, adolescents, can be very cruel and they can tell you that you are stupid, ignorant, whatsoever. They can really isolate people. Even though it was ostensibly about pop music, it was also about themselves: “Are we different? Can we be accepted?” For instance, there was a moment when one of the group members said, “Everything that interests me is not significant in any way.” The conflict of motives was that they felt that their topic was not important for other people, so they did not want to share it—and yet they wanted to be accepted. It was a process of overcoming this, of realizing that what we think and feel can also be significant, it is not automatically something that must be put down. It was a journey into their own self-confidence and self-value.

Then there was the project group that produced the documentary.<sup>7</sup> This was an interesting process because they took a very large number of de-encapsulation actions. They went out, they even contacted the office of the former President of the nation. They knew that this female President, Tarja Halonen, had told an interviewer that when she was a student, she was discriminated against and bullied. She had a working-class background and was bullied when she was younger because she was the child of a single, divorced mother, had no father, and came from a poor family. It created a kind of stigma for her. The students wanted to interview her. She could not make it, so they found others to interview. They contacted a number of people for interviews. Some said yes, some said no. For instance, they got this rap music star. He told them that he had been bullied because of the color of his skin, but also that he became a bully himself, as a sort of revenge reaction. So they interviewed him about how this dynamic of bullying develops and connected it to racism. They also interviewed a deaf person because disabilities are a part of this issue of accepting differences. Obviously, people with different skin color were interviewed as well. This was all driven by the personal experiences of conflicts of motives. It also became clear that they could not produce a good documentary by themselves. They needed help from an expert, and so they asked us, the researchers, to help them find one. The documentary required a lot of de-encapsulation.

Finally, the last project was a fantasy role-playing game that the students developed. In this group, they also analyzed their own activity with the activity system model. This is a topic of different analysis, soon to be published by Piia Ruutu who supervised this group. The challenge in this group was that most of

the de-encapsulation actions happened through imagination. It is very difficult to identify and separate actions in imagination because it is a kind of continuous flow. This group also undertook clear physical and discursive actions of de-encapsulation, but much of it was happening through imagining places and situations outside the ordinary school world. It presented a methodological challenge for us.

Can students initiate de-encapsulation which can be expanded into a deliberate strategy for the entire school? Who might be the potential outside partners with which students and eventually the whole schools could form durable coalitions? How to resist and overcome the tendency of such coalition-building to become another adult-led or imposed initiative? There are some of prominent partnerships in schools; for instance, some schools have a partnership with the opera. But these are created by the adults. The students are supposedly benefiting from them, but it is not their own thing.

One of the students reflected at the end of the Change Laboratory process: “We got to decide what we actually do all the time. We were able to get the graphic artist, which probably would not have been possible in school. It would not have happened because we often do not have much power. For instance, like in presentations, there may be a certain topic or length or amount. Here we had a lot more influence over the project. And then, of course, we haven’t done anything like this in school before.” It is interesting because the student is almost saying that this could not happen, that it would not be possible in school. But this did happen in school.

This is the paradox here. Some teachers were also very impressed. They said that schooling is still perhaps a bit old-fashioned when you think about how fast development is otherwise going forward, compared to how schools have evolved. We may have been a bit slow, they said. Still, to find connecting points to regular instruction is not very easy.

So far, accounts of de-encapsulation have often been just telling a story about how the students went out and did various interesting things. But when you analyze such processes systematically, in terms of actions, you can also find different profiles and different ways of de-encapsulation. It has to be done systematically so that it is not just anecdotes.

There are also other articles that we are working on. Like I said, Piia Ruutu, one of the members of our research group, is finishing an article about this fantasy role-playing game. She discusses it in terms of the third space. This refers to a space between the agenda of the school and the agenda of the students—a space in which novel ideas and practices can emerge. Pauliina Rantavuori has written an article opening up critical discussion on what is actually taught in the school. She calls it opening up a black box, because she found out in interviews both with, with teachers, and with outside partners of the school that people do not talk about what is actually taught in the school. They talk about how students interact and disciplinary problems, but not about what is actually learned. That is taken for granted, which is kind of dangerous.

It also means that, for instance, the concept of school engagement becomes very superficial because it does not ask why you are interested in something. It just looks at some students being engaged and that they're active and involved etc., but it doesn't connect it to the actual knowledge content.

**Katsuhiro Yamazumi**

Yeah. Thank you very much. I can get various insights from your explanation of the research project. Very interesting. I have some questions. Especially one concerning the germ cell model. I am struggling to find the germ cell in order to ascend from the abstract to the concrete in Change Laboratory on teachers and schools. As you said, de-encapsulation is contradictory.

**Yrjö Engeström**

Yes.

**Katsuhiro Yamazumi**

De-encapsulation and encapsulation are essentially opposite to each other.

**Yrjö Engeström**

Yeah.

**Katsuhiro Yamazumi**

In fact, it is similar to your distinction between two broad types of knowledge, namely "stabilization knowledge" and "possibility knowledge," in terms of how knowledge is used in organizational learning.<sup>8</sup>

**Yrjö Engeström**

Yeah.

**Katsuhiro Yamazumi**

Teachers and schools need to stabilize their school work because as you said, they want to survive the complex situations and tasks. So, teachers and schools should complete encapsulation of school learning. But, in order to move toward possibility of school learning, de-encapsulation is...

**Yrjö Engeström**

...is necessary.

**Katsuhiro Yamazumi**

...necessary.

**Yrjö Engeström**

Indeed, it is a genuine contradiction. In terms of the germ cell, my advice is that it is best to let the germ cell become clear gradually. It is not wise to try to

push it or force it, because it typically must be something that you can start identifying in the actions of the participants. It cannot just be implanted from the outside. In a Change Laboratory process, you will start to see what kind of dynamics emerge. That can lead to the germ cell being discovered, often only after a fairly long period of interaction, observation, and intervention. It is rarely so evident at the outset because the germ cell must be based on action. It is not just a kind of intellectual idea; it is grounded in action. Davydov was very clear about that. He said that a theoretical concept must be manifested in action. It is grounded in action and not only in ideas.



In your own intervention work, you will have an opportunity of practically following them participants for a lengthy period. Observing what kinds of actions start to emerge, how they start talking about their own contradictions, and the kind of perspective that starts to emerge, allows you to probably identify the germ cell much more reliably than just pushing for it from your own perspective. So, be patient.

Annalisa Sannino has recently described the emergence of the germ cell concept of “Housing First 2.0” in the eradication of homelessness.<sup>9</sup> The simple idea is that work with the homeless must become mobile work because the clients’ mobility is increasing and the service system is fragmented. Mobility must become the glue to the system. The emergence of this concept is something that has taken from 2018 till now, and we were able to model it as a germ cell only in 2022. It has taken four or five years. So, don’t push it. Otherwise, the risk is that it becomes your intellectual idea, which is not fully grounded in people’s own actions. There is no rush with the germ cell.

### **Katsuhiko Yamazumi**

Yeah. That’s true of the Change Laboratory, don’t rush and don’t push, and be grounded and based on actions—concrete actions.

**Yrjö Engeström**

Yes. Of course, you should provoke the participants when you see that they are not fully involved. But that is different, that is not telling them what the germ cell is. It is provoking them to face their contradictions, use the mirror material and make them aware that this is a unique opportunity for them to take the next step. But, with regard to the content, the core idea, you have to be tolerant that it may also need to evolve, that the first versions may not be satisfactory. Then they gradually take shape so that it doesn't appear as one brilliant idea. It takes time, and probably multiple variations.

To my knowledge, Davydov never fully explained how he developed the germ cell as foundation for his mathematics curriculum. It is such a simple idea. You start measuring, and that is how you gradually create the concept of number. Simple measurements, like weighing things or measuring things, are the starting point. How did he develop this and how long did it take? He has probably never fully told the story, but I am sure it took years.

**Katsuhiro Yamazumi**

Yeah. That's true. I agree. On the other hand, I'm very interested in the concept of de-encapsulation emerging from this recent project of yours. In our new research project,<sup>10</sup> the core idea is de-encapsulation of school learning. I would like to search for the de-encapsulation with the school teachers to create new forms of learning activities in school.

**Yrjö Engeström**

Excellent, yeah.

**Katsuhiro Yamazumi**

But, it's a very contradictory and difficult thing. If teachers move to de-encapsulation, it's very risky.

**Yrjö Engeström**

Very risky. That's what the germ cell concepts are, because they open up something new. They open up something which has only been experimented with under the surface, not publicly and not fully consciously. With the intervention, that becomes something that we do purposefully together. It is stepping into a dangerous zone. You can be quite open about that with the teachers, that this is taking a risk but is also the way to move forward. You can only create something new by taking this risk. If you fail in some aspect, you just fix it and move forward. Failure is part of it. It is not something that they should expect you to have the answer for. They must find the answers.

**Katsuhiro Yamazumi**

Yeah. So this is a contradictory potential or motive for de-encapsulation, but schools—the possibilities of schooling can be this movement of de-encapsula-

tion. That's very contradictory. But teachers would be engaged in and have the desire to create possibilities of learning for students.

**Yrjö Engeström**

Right.

**Katsuhiro Yamazumi**

That is something like motive or their own existence as a reason. But it is very contradictory, very latent, and invisible.

**Yrjö Engeström**

Much of your work is to make it more visible. So that it is not only latent, it becomes something that the participants can talk about. And actions, even just small actions, can be taken. It becomes something that is not a silent issue anymore, but something that can be articulated, discussed, and experimented upon. They don't need to have a complete solution. But they need to have the direction, the vision toward what to move. That is why the zone of proximal development is such an important concept here. You cannot expect the practitioners, in this kind of a situation, to create a final model. It may be that the model emerges long after the Change Laboratory. But the Change Laboratory must enable them to start moving in the direction they see as necessary. So at least the direction and first steps need to be taken. Actions are taken. It's important that it doesn't remain only a vision, but also gets enacted in practical, material actions. Otherwise the germ cell cannot really emerge - it must be observed in real actions. We could never have figured out "standing up from the chair" as germ cell of sustainable mobility for elderly home care clients until we saw it being done. We saw that it is actually the first movement you must make in order to start moving. You have to stand up. If you stand up using your arms all the time, it's different from doing it without them. It's a contradiction. If you do it without the support of your arms, you feel that it is risky, but it's more effective. If you do it with support, it is safe but it doesn't really strengthen your muscles and enable mobility.

The idea is that you can start working with the contradiction by means of real actions, practical actions. This is the key to finding the germ cell, so that it becomes visible. The germ cell is already present, but nobody notices it. We don't notice it because it is hidden among the complexities of life. This is why it is important that the participants keep talking about real practice. It is also important that it is not only talk. Perhaps at some point you should also enter classrooms to observe them in action.

**Katsuhiro Yamazumi**

Yes. It is included as one of the tasks of interventionist researchers in the Change Laboratory.



### **Yrjö Engeström**

That is good. It is very important because if the participants only talk, they can never fully articulate what is actually going on in the classroom. Talk and action are not the same thing.

### **Katsuhiko Yamazumi**

How can we use such observations in Change Laboratory sessions as mirror material?

### **Yrjö Engeström**

You can use selected classroom observations as mirror material. But it is important that the teachers are involved in selecting them, and also that they want to discuss these observations. They should not feel that they are only being observed - they are also generating something for each other.

Video recordings are effective. It is a lot of work to select the most important and powerful clips. If you have only observations and notes, without any video support, it is difficult to convey in rich detail what actually happened. Carefully selected video clips are usually the best and work very powerfully. Naturally this is something that one needs to negotiate in the school with the teachers. They will have their own ideas. The point is that when you start digging into the contradictions and the zone of proximal development, it is best to ground them in the participants' everyday work in the classrooms. It is wise to start out with interviews. If you go right away to observing the participants in action, some of them might feel they are being subjected to some sort of a control.

How do you see a contradiction and the potential for the zone of proximal development? In the best case, you have examples in which both can be seen, both a manifestation of a contradiction and an effort to overcome it. How you identify those depends on what you find out in the first sessions devoted to questioning the current situation and especially to historical analysis. The historical analysis allows you to generate a working hypothesis of what might be the most important contradictions in the current phase of the development of the activity.



## Notes

- 1 This cultural-historical activity theory-based research project was led by Professor Emeritus Yrjö Engeström and funded by the Research Council of Finland (2019–2023). It sought to identify and test ways in which adolescents can find and cultivate significance in their lives, understood as perspectives and actions that connect the adolescents' personal interests with activities and projects for a just and equitable world. The link to the project's webpage is as follows: <https://www.helsinki.fi/en/researchgroups/center-for-research-on-activity-development-and-learning/research/in-search-for-significance>
- 2 Engeström, Y., Rantavuori, P., Ruutu, P., & Tapola-Haapala, M. (2024). The hybridisation of adolescents' worlds as a source of developmental tensions: A study of discursive manifestations of contradictions. *Educational Review*, 76(2), 321–342.
- 3 Engeström, Y., Rantavuori, P., Ruutu, P., & Tapola-Haapala, M. (2023). Finding life beyond the classroom walls: A Change Laboratory supporting expansive de-encapsulation of school. *Éducation & Didactique*, 18(2), 125–141.
- 4 One group chose the topic “Everyone should be accepted as one is” and decided to create a documentary film that deals with themes important for the group: equality, bullying, and mutual acceptance. The link for this documentary film project is as follows. The documentary film that was produced is also uploaded to this web page. <https://www.helsinki.fi/en/researchgroups/center-for-research-on-activity-development-and-learning/news/everyone-should-be-accepted-as-one-is>
- 5 Cuban, L. (2001). *Oversold and underused computers in the classroom*. Cambridge, MA: Harvard University Press.
- 6 Engeström, Y. (1981). The laws of nature and the origin of life in pupils' consciousness: A study of contradictory modes of thought. *Scandinavian Journal of Educational Research*, 25(2), 39–61.
- 7 See note 4.
- 8 See Engeström, Y. (2007). From stabilization knowledge to possibility knowledge in organizational learning. *Management Learning*, 38(3), 271–275.
- 9 Sannino, A., Engeström, Y., & Kärki, E. (2023). *Multiprofessional mobile support for overcoming homelessness: A study of Nopsajalka work in Jyväskylä*. Tampere: Tampere University, Faculty of Education and Culture. [https://research.tuni.fi/uploads/2023/02/e806d7d0-jyvaskyla-nopsajalka\\_reportenglish\\_23.2.2023\\_pdf.pdf](https://research.tuni.fi/uploads/2023/02/e806d7d0-jyvaskyla-nopsajalka_reportenglish_23.2.2023_pdf.pdf)
- 10 This refers to a year-long Change Laboratory intervention study conducted by Katsuhiro Yamazumi and his research group in a Japanese elementary school.