

On learning and education as discussed in connection with Tartu semiotics

Ekaterina Velmezova,¹ Kalevi Kull²

Abstract. At first glance, there does not seem to be much explicit interest in the semiotics of learning and education as regards the Tartu–Moscow School of Semiotics in the 20th century, yet at the same time the field of learning and teaching emerges as extremely important from the point of view of general semiotics. The article presents some reflections on problems of learning and education as published in the journal *Sign Systems Studies* and discussed in the Tartu School of Semiotics in various epochs, as well as in the academic context surrounding it. It takes a particular interest in how the issues related to education were approached by the School's leading figures Juri Lotman, Vyacheslav Ivanov, Boris Uspenskij. It also appears that several scholars who have closely collaborated with Tartu semioticians (Paul Cobley, Myrdene Anderson, etc.), have also displayed an interest in learning and education. The rise of interest in this field can be explained by the influence of cognitive semiotics which has been advancing considerably in the 21st century.

Semiotics has been defined, in particular, as a theory of knowing (Percy 1957; Todorov 1978: 1), or as a propaedeutics for sciences (Morris 1955; Gherlone 2021). Therefore, semiotics has a special relationship with learning and teaching, since its field of study is knowledge itself.

More specifically, learning and semiotics can be connected in several ways, for example:

- (a) culture as a system of norms established by learning (e.g. Lotman, Uspensky 1971: 149; 1978: 215: “culture [...] identifying itself with the constant norms of its memory”);

¹ Université de Lausanne, Faculté des lettres, SLAS/CLSL, Quartier UNIL-Chamberonne, Anthropole, CH-1015, Lausanne, Switzerland; e-mail: ekaterina.velmezova@unil.ch/Faculty of Arts and Humanities, University of Tartu, Lossi 3, 51003 Tartu, Estonia; e-mail: ekaterina.velmezova@ut.ee.

² Department of Semiotics, University of Tartu, Jakobi 2, 51005 Tartu, Estonia; e-mail: kalevi.kull@ut.ee.

- (b) culture as a semiotic system to be learnt and taught (e.g. Lotman 2009);
- (c) learning as a mechanism of cultural inheritance (e.g. Ojamaa *et al.* 2019);
- (d) semiotics of the education process (e.g. Stables *et al.* 2018);
- (e) learning as a part of the meaning-making process or semiosis (e.g. Merrell 2002; Campbell *et al.* 2019).³

Topics such as learning and education might be central for semiotics of all times, since “semiosis as the fundamental process of meaning-making implies, as its central aspects, *learning*, *memory*, and *knowing*” (Campbell *et al.* 2019: 353). However, we can observe that from a semiotic perspective the study of learning and education gained particular momentum only since the 2010s (see, for instance, Deely, Semetsky 2017; Molinari Lean-Cole 2023; Nöth 2010; Olteanu, Campbell 2018; Radford 2013; Roth 2023; Semetsky 2014, 2017; Sessa, Aiello 2026; Stables, Semetsky 2015; Stables *et al.* 2018; Strand 2021). Whether or not these interests appeared earlier, in particular in, and in connection with, the Tartu School of Semiotics, deserves attention, among other aspects in the context of the current movement towards general semiotics.

In this article, we highlight some observations on the topic of learning and education, as

- (1) presented in the semiotics publications of the Tartu School of Semiotics;
- (2) appearing as a theme in our conversations with some semioticians connected to this School, as well as viewed by some erstwhile members of the Tartu–Moscow School.

1. ‘Education’, ‘learning’, ‘teaching’ and ‘knowing’ in *Sign Systems Studies*

Let us turn to the oldest semiotic journal still active today, which for a long time has been the main print outlet of the school – *Sign Systems Studies*.

³ Teaching of semiotics itself constitutes a particular topic of study and is indirectly related to our topic as an application of semiotics of education in education of semiotics. Semiotics of learning and teaching of semiotics have sometimes been addressed together (Nöth 1990), as have also semiotics of didactics and didactics of semiotics (Nöth 2000). The introduction of semiotics curricula in universities can be followed starting from the institutionalization of semiotics in the 1960s; however, the development has been rather slow (see, for instance, Chávez Herrera 2023). Nevertheless, there have been further developments since a review published in 2011 (Kull, Väli 2011).

Based on the complete list of articles published in *Sign Systems Studies* from 1964 to 2022 (about 1060 articles in volumes 1–50, see the list in Kull, Puumeister 2022), we can find all articles containing words such as ‘education’, ‘learning’ or ‘teaching’ (or, in Russian-language papers, ‘образование’ or ‘обучение’) in their titles. At first glance, the result seems rather modest.

In fact, there are only six articles containing the word ‘education’ in their titles, and the first one was published only as recently as in 2008: Rückert 2008, Campbell 2018, Milyakina 2018, Tredinnick-Rowe 2018, Ojamaa *et al.* 2019 and Rickberg 2023.

There are seven articles with the word ‘learning’ (chronologically speaking, the first one dates back to 2018): Campbell 2018, Kull 2018, Olteanu, Stables 2018, Pikkarainen 2018, Campbell *et al.* 2019, Bazalgette 2020 and Krech 2020.

In addition, the titles of four articles include the words ‘knowing’ or ‘knowledge’: Ulvestad 2002, Thellefsen, Jantzen 2003, Rossolatos 2014, Campbell *et al.* 2019. And, eventually, there are three articles with the word ‘teaching’: Kull, I. 1965, Lotman 1971 and Campbell 2018. Only two articles were published already in the Lotmanian times: Ivar Kull’s “Semiotics and teaching” from 1965 (“Семiotика и обучение”, as it was called in the original Russian, was the very first article in this journal, after Lotman’s monograph which was considered as its opening volume)⁴ and an article by Juri Lotman from 1971 – “The problem of the ‘teaching of culture’ as its typological characterization” [“Проблема ‘обучения культуре’ как ее типологическая характеристика”].

Thus, education and learning have become an explicitly thematized topic in this journal mainly since the 2010s, yet the fact that already the journal’s opening article dealt with the semiotics of teaching (particularly as regards the role of metalanguage) still shows that an interest in learning, teaching and education was not entirely missing among Tartu scholars before the 2000s. Rather, both in the discussions within the School as well as the thoughts and reflections of scholars connected to Tartu semiotics give evidence of an interest in learning and education, which we illustrate in the next section.

2. ‘Education’, ‘learning’ and ‘teaching’ in conversations about semiotics

During almost fifteen years, we have been conducting a series of interviews with some leading semioticians of the late 20th and early 21st centuries who in one

⁴ An English translation of this article appears in the current volume (I. Kull 2026), accompanied by a commentary (Kull, Salupere 2026).

way or another have been connected with the Tartu School of Semiotics. To be more precise, we have interviewed some semioticians who, in addition to their relatedness to the Tartu semiotic tradition and the fact that they have all spent some time in Tartu (or at least briefly visited Tartu), have also played an important role in the development of semiotics. Among them are Umberto Eco, Winfried Nöth, Paolo Fabbri, Myrdene Anderson, Gunther Kress, Roland Posner, Stuart Kauffman, Jesper Hoffmeyer, Terrence Deacon, Jaan Valsiner and Paul Copley. In 2025 these interviews were published in a book form (Kull, Velmezova 2025). Among other things, some attention was paid in them to the problems of learning and education. Without trying to cover all forms of learning and education discussed, we are indicating below some important aspects of learning, teaching and education, which clearly emerged in our interviews. Conversations with the leading figures of the Tartu School seem to be particularly revealing in this aspect.

The first point to mention is that the problem of education, teaching and learning was explicitly present in the interviews. This fact seems important in itself: the interviewees were not necessarily asked any explicit questions about learning and education, and if they chose to speak about these, this means that they considered the topic important enough to bring it up during our conversations.

Here are some examples.

Gunther Kress (1940–2019), who was professor of semiotics and *education* at University College London, was interviewed in Tartu in November 2018, after his Juri Lotman lecture entitled “Social semiotics: An encompassing frame for accounts of meaning-making, learning, communication” delivered at the Department of Semiotics. Some aspects of this lecture concentrated, in particular, on the questions of learning, and were touched upon in his interview, too (Kull, Velmezova 2025: 242–257).

Learning and education were also mentioned in our talk with British semiotician and narratologist Paul Copley, who served as head of the International Association for Semiotic Studies in 2014–2024. The following is a fragment from the interview with him that appeared in a written form in early 2023:

It is probably no coincidence that when attending a later Summer School I met the Dutch scholar, Barend van Heusden. In the space of a few lunchtime conversations during the week, he completely enthused and enlightened me regarding how to organize the higher learning in arts and humanities with explicit reference to the action of modelling. (Kull, Velmezova 2025: 342)

Myrdene Anderson, American semiotician, ethnologist and anthropologist very well known in Tartu (which she has visited several times), in 2023 spoke about

the process of learning in Saami culture which she had studied from the point of view of anthropological semiotics. Besides, in the interview she mentioned a book on semiotic perspectives on mathematics education (Anderson *et al.* 2003), considering this as applying semiotics (Kull, Velmezova 2025: 158–187).

The question of learning and education was also touched upon from a humorous angle in our interviews: at the end of the interview conducted in Milan in 2012, a laughing Umberto Eco recognized, “There is nothing more contrary to the advancement of learning than universities.” In the interview itself, when asked about whether or not he was satisfied with the contemporary level of how teaching of semiotics was organized in Italy, Eco admitted that it depended on the particular universities (Kull, Velmezova 2025: 111–142).

Speaking less generally, the problems of teaching of *semiotics* were also touched upon in other interviews. For instance, semiotician and historian of semiotics Winfried Nöth insisted that “[t]eaching semiotics requires a theoretical and an applied component; both should be in equilibrium” (Kull, Velmezova 2025: 205).

These brief examples were given in order to show that, even when we did not ask any explicit questions, the problem of learning and education was in one way or another touched upon in conversations which concerned the attitudes of our interlocutors to the Tartu School of Semiotics.

Why so? One of the reasons could be that they partly reflected the problems related to learning, teaching and education that were of interest to the *members* of the School. In addition to the interviews with semioticians who were not members of the Tartu(–Moscow) School, we also published interviews with three outstanding scholars who were connected to the School since its very beginning: Juri Lotman, Vyacheslav Ivanov and Boris Uspenskij. And in these texts, the problem of learning, teaching and education was raised as well.

To begin with, Lotman spoke about the problem of learning in the animal world. The following is a fragment from an interview with him for the Estonian biology students’ small samizdat journal *Vita aeterna*. It was conducted at Lotman’s home in Tartu on 14 April 1990, by Toomas Tammaru (at present, professor of entomology at the University of Tartu). At the time, Lotman said:

The semiotics of animals – studies such aspects as, for instance, sexual communication, eating, learning; these constitute the traditional forms and animals acquire and transmit them. Such behaviour is a language, similar to our language of folklore. It is repeated as being the same, and every time it is recreated anew. Humans, however, consider the repeated forms of behaviour to be secondary, and promote unexpected behaviour. Apparently it was not by chance that man, when he appeared, resembled a mad animal, and I think that was the reason why this relatively weak creature, the ancestor of humans, was not only able to survive,

but could also ruin much stronger animals. They were not able to predict human behaviour. (Kull, Velmezova 2025: 27)

Lotman touched upon the question of learning in animal world in the last years of his life when he reflected about the possibility of including (or not) animal behaviour in general, or animal communication in particular, in semiotic descriptions.

According to the contemporary biosemiotic understanding, vertebrate animals can learn through imprinting, association, and imitation, acquiring correlations existing in their environment, while only hominids can acquire imaginary relationships which may not have anything to do with the surrounding world. That is the source of human alienation (Velmezova, Kull 2022).

Another leader of the Tartu(–Moscow) School, Ivanov, pinned great hopes in his interview on solving pressing educational problems, thus relying in particular on the work on neurosemiotics (supposing the use of knowledge of a semiotic nature in organizing the educational process) (Kull, Velmezova 2025: 47–68). Ivanov was well known for his work on neurosemiotics (in particular, on the functioning of human brain in the context of the asymmetry of the cerebral hemispheres) and in this way, learning and neurosemiotics were, for him, closely connected. Here is a fragment from his interview conducted by correspondence in August 2010:

K. Kull, E. Velmezova: We know that not only in your research, but also in your pedagogical activity, speaking of a new paradigm, your dream is to unite the achievements of humanities with discoveries in the field of natural and exact disciplines. As you have said, the idea of a new kind of education can (and even should) also be connected with the study of brain structure: children should begin to acquire knowledge rather early, but at the right time, that is, precisely at the moment when the predisposed parts of the brain “are switched on”, in order not to lose time and to give a stimulus for the development of human capacities. Are there many modern pedagogues-theoreticians who share your point of view?

Vyachesav Ivanov: I discussed similar ideas many times with the mathematician Kolmogorov: during his life, he worked a lot on the problem of teaching mathematics at school. I tried to put my ideas into practice by running a group on decryption of ancient scripts for schoolchildren. In 2008, I revealed these ideas in a talk given at the International Conference on Cognitive Sciences in Moscow, but I cannot say that I had the support of the majority of the audience. A practical realisation of pedagogical ideas which are close to mine can be found in British primary schools: they begin to educate children at the age of five and teach them modern knowledge extensively, including disciplines which are absent from Russian non-specialised (non-mathematical) school education, such as probability

theory and combinatorial analysis (I taught my group specifically these subjects). (Kull, Velmezova 2025: 56–57)

Besides, in Ivanov's opinion, semiotics could – and even should – be useful in the organization of the teaching process:

K. Kull, E. Velmezova: What are, in your opinion, the role of semiotics and its importance for the other disciplines?

Vyacheslav Ivanov: [...] As the conclusions of this science are becoming more and more precise, the role of semiotics should become apparent with regard to society as a whole and to the understanding of such of its aspects as popular culture, initial teaching of arithmetics, of mother tongue, of writing to children; with regard to the science in its comparison with traditional systems of signs etc., to the solution of such problems of defectology as the elaboration of means of communication for deafblind, and other handicapped children. (Kull, Velmezova 2025: 67)

In the same interview, Ivanov emphasized the situation of crisis in modern education as part of a more general crisis which concerned sciences and research as well:

At present, science has many difficulties mainly because of the unsteady nature of its financing by society (and such financing is necessary). In developed countries, this financing is ensured by the state. However, corrupt and poorly educated as governments are today, it leads to various mistakes and unreasonable waste of money. The system of grants and large bureaucratic organisations supervising sciences by means of half-educated or corrupt functionaries results everywhere in a decline of experimental science, of education and of the valuation of discoveries. In the very near future, I foresee a crucial necessity of finding a way out of the crisis science is going through; any further delay will threaten the existence of humanity as a biological species because biological and geological factors can intervene. (Kull, Velmezova 2025: 64)

Another well-known member of the School, Boris Uspenskij, also discussed the problems of teaching in his interview which was organized in August 2011 in Palmse (Estonia) on the occasion of the Tartu Summer School in Semiotics in which he participated. Boris Uspenskij is known to have been interested in the problems of language acquisition. According to him, in order to have the child learn to speak properly, his parents (first of all, his mother) should behave with him rather “irrationally”. The following is what he said:

When a child is born, his mother begins to talk to him as to an adult. Her behaviour contradicts common sense and at the same time it is quite natural. Something very strange happens: the mother speaks to her baby, though the latter is evidently not capable of understanding what she says to him, because he does not know language and, of course, he cannot adequately understand the content of what is said. The mother's behaviour is absolutely irrational and, at the same time, it can be justified pragmatically: it is clear that if mothers did not behave in this way, if they did not act like this and if they took into account what their children understood and what they did not, children would never begin to speak. In this way, a language is taught and when a child finally masters it, the child finds himself to be separated from his mother, this time semiotically. This way, during the process of semiotic activity, relations between the participants in communication are established [...]. Of course, communication between a mother and her child takes place not only by means of language: facial expression and various sounds (emotional, imitational, etc.) play an important role, too. But even signs of this kind can become independent communicational signs, that is, conventional, arbitrary, controllable signs. For instance, the mother makes a smacking sound with her lips in order for her child to take her breast, but in another situation she can do the same thing in order to make the child turn his face towards her. In the latter situation, the sign is separated from its initial content, being transformed into a manageable instrument. Practically speaking, it becomes a linguistic sign. This way, children assimilate linguistic behaviour. (Kull, Velmezova 2025: 72–73)

Once again, it appears that it was not the problem of teaching as such that interested Uspenskij, but his curiosity arose in connection with his interest in sign typology and in the possibility of distinguishing linguistic signs as a particular kind of signs, among other things during language acquisition. The learning process itself as studied, for instance, by Lev Vygotsky, was virtually absent from the focus of the Tartu School of the 1960s–1980s (however, see Tulviste 1977). This is how this was viewed by Jaan Valsiner (Kull, Velmezova 2025: 352):

K. Kull, E. Velmezova: What, for you, is the relationship between Vygotsky's and Lotman's roots of semiotics?

Jaan Valsiner: There is none. The only link is their deep starting point in literary scholarship. Then they part their ways.

Conclusions

Despite the fact that it has been only relatively recently that semioticians have started to show an interest in the problems of teaching and learning, the history of the Tartu School also provides some evidence of an earlier interest. At the same time, problems of education, teaching and learning have been interesting for some

scholars of the Tartu School of Semiotics not as such, but in connection with their other foci of interest. For example, this was so in the cases of the neurosemiotic research led by Ivanov, of the semiotic (or not) behaviour of animals Lotman wrote about in his later works, and of the typology of signs appearing in the works of Uspenskij.

In the conversations with these scholars, the discussion was often concerned with some non-standard teaching – that is, teaching which did not correspond to the official canon accepted at the time (this is particularly clear in what Ivanov has said). This is something that can also be said about the Tartu(–Moscow) School of Semiotics, which did not fit into an official framework. In this sense, the discussions of the School's members about education and pedagogy were quite consistent with the spirit of the School itself. The interest of the leaders of the Tartu School in the problems of learning and education helps to clarify the history of semiotic research connected with the problems of teaching and learning.

The relatively low interest in the semiotics of learning that was displayed from the 1960s to 1980s on the basis of our brief overview of the article titles in *Sign Systems Studies*, corresponds to the period of structuralist approaches in semiotics, which did not pay much attention to processual aspects that learning certainly is. The rise of interest in the semiotics of learning after the 1990s seems to be a result of an interdisciplinary change observable not only in semiotics, but also in biology and social sciences. In biology, it meant the rediscovery of the Baldwin effect, emphasizing the role of learning in evolution, as related to the epigenetic turn (Weber, Depew 2003). In semiotics, it meant focusing on the processual aspects of meaning-making, together with a growth of interest in Peircean theory and the development of cognitive semiotics since the 1990s (Daddesio 1995; Violi 1996; Hougaard *et al.* 2022). This occurred in parallel with major technological and organizational changes in education, together with a socio-cultural (semiotic) turn in education theory (Stables, Olteanu 2022).

A postscript.

Finally, as a postscript to what has been said above, we add a little comment about some personal experiences associated with one of the key figures of the Tartu–Moscow School of Semiotics, Tatyana Nikolaeva. It was under her supervision that Ekaterina Velmezova defended her first PhD thesis in Moscow in 2000.⁵ Surprised, at first, by seemingly very scarce feedback from her supervisor, later

⁵ About Tatyana Nikolaeva's pedagogical interest in developing semiotics see Velmezova 2025.

on she found an explanation to this style of supervising (teaching) in one of her supervisor's works. It can not be excluded that this way of teaching was that of the majority of the Tartu(-Moscow) School of Semiotics protagonists in general:

[...] it is necessary to say a few words about the research method of this school. Of course, all the accumulated methods of linguistics are used here. Structural methods are also used; it is not for nothing that our department was initially called the department of “structural typology”. However, it is necessary to say a few words about the “insight” method, which has been fully recognized in the world science and philosophy in recent decades. Insight, in turn, leads us to a contrast between two methods of “learning”. According to one of them, learning or training is a message about successive steps that each apprentice can go through; these steps can be recorded and repeated at any stage. That is: *Do this, then that, then that...* Another way is for the master to teach the journeyman (apprentice) to closely monitor his, the master's, work and gradually comprehend the secrets of the craft. That is: *Do as I do*. Without in any way striving for any axiology, we can only say that Salieri's claims to Mozart were also in this – in the impossibility of positivist learning from him, from Mozart. After all, Salieri was ready to learn “according to the rules”: *When the great Gluck / Appeared and revealed us some new secrets / (Deep, captivating secrets), / Didn't I give up everything I knew before...* [Когда великий Глюк / Явился и открыл нам новые тайны / (Глубокие, пленительные тайны), / Не бросил ли я все, что прежде знал...] But having met Mozart, he – Salieri – now waits in vain: *... perhaps my life / will bring me unexpected gifts; / Perhaps delight will visit me / And a creative night and inspiration...* [...*быть может, жизнь / Мне принесет незапные дары; / Быть может, посетит меня восторг / И творческая ночь и вдохновенье...*] (Nikolaeva 1997: xlvii; trans. by E.V.).

These lines from Pushkin's “little tragedy” of 1830, “Mozart and Salieri”, conclude the introduction to the book about the works of the “Moscow semiotic circle”.

Acknowledgements. The article is based on the talk presented at the XV Tartu Semiotics Summer School “Learning in Transformation”, held in Viljandi, Estonia, 28–31 August 2024 and marking the 60th anniversary of the first Tartu Semiotics Summer School at Kääriku in 1964. We thank Ott Puumeister and Ene-Reet Soovik for valuable comments.

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