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Do we have a Curriculum? Learning Trajectory Based Instruction – towards a theory for Teaching History

Questions and hypothesis about the education of History-teachers

1. Education of History-teachers: fragmentation or a coherent and progressive process?

The very idea of a Curriculum for Education of History-teachers seems to be remote. Working for twenty years in Education of Teachers I've so far never come across anything like a plan for developing the skills and knowledge of being a *History-teacher*. For the pupils in school we have been producing plans for learning the subject for more than a century. But what do the teachers of History need to know?

The research of Teaching and Learning History has made tremendous progress during the last decades. Many new concepts have given us a language describing the mental operations for *Historical thinking* and *Historical Literacy*. The “cognitive revolution” during the 80's and its' progressive forerunners during the 60's and 70's opened up new ways of understanding also the subject of History. The *general concepts* of teaching and learning since then have influenced *also* the specific area of teaching and learning *History*.¹

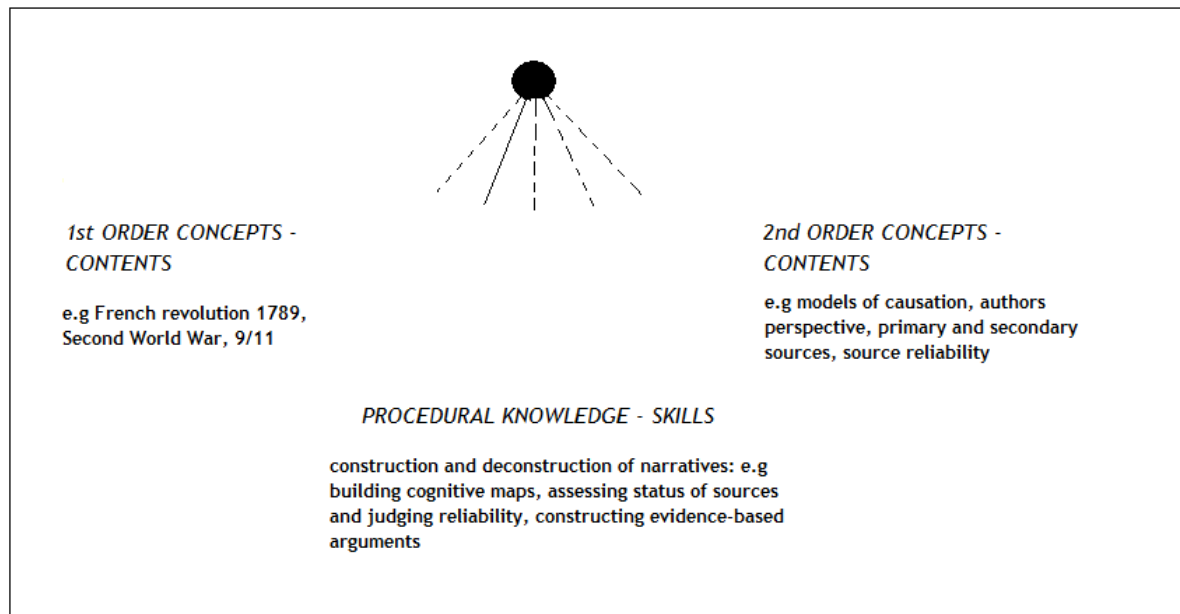
Some of these general concepts had a specific bearing upon the construction of a Curriculum. Concepts of *surface knowledge*, *deep understanding*, *scaffolding* and *zone of proximal development* involved a pedagogical trajectory to support children's movement into new territories. Knowledge and transparency of the cognitive activities became important for instruction and formative assessment. The steps in the learning process must be visible for both teachers and students.

Another concept from the 80's dealing with the conditions of teaching and learning was *frame of reference* and *alternative frame of reference*. This concept had also impact upon Teaching and Learning

¹ Shemilt, D (1980), *History 13–16 Evaluation study. Schools Council History 13–16 Project*. Edinburgh: Holmes McDougall. Dickinson, A K, Lee, P J, Rogers, P J (1984), *Learning History*, London: Heinemann Educational. Carretero, M and Voss, J, Ed., (1994), *Cognitive and Instructional Processes in History and Social Studies*, Lawrence Erlbaum Associates. Leinhardt, G, Beck, I, Stainton, C, Ed., (1994), *Teaching and Learning in History*, Lawrence Erlbaum Associates. Stearns, P, Seixas, P, Wineburg, S, Ed., (2000) *Knowing, Teaching & Learning History. National and International Perspectives*, New York University Press. Wineburg, S (2001), *Historical Thinking and other Unnatural acts*, Philadelphia: Temple University Press. Seixas, P, Ed., (2004), *Theorizing Historical Consciousness*, University of Toronto Press. VanSledright, B, Limón, M (2006), A Review of Cognitive Research in History and Geography, *Handbook of Educational Psychology* (Ed. Alexander, P, Winnie, P), Mahwah, N.J.: Erlbaum. Van Drie, J, Van Boxtel, C (2007), *Historical Reasoning: Towards a Framework for Analyzing Students' Reasoning about the Past*, Educational Psychology Review, VanSledright, B (2011), *The Challenge of Rethinking History Education*, Routledge.

History. Teachers and pupils enter the learning situation already with knowledge – different knowledge. These different frames of references have great impact upon individual understanding of the subject. We use the frames when we perceive new information and create meaning. This is a mental operation which use the frame and new information in a swinging pendulum - an *oscillation* of repetitive variation. Frame and new information are used *simultaneously* when we are thinking and understanding History (figure 1).²

Figure 1. The pendulum/oscillation of Historical Thinking: “Contents and Skills”



How did these concepts influence the Curriculum of *History* in schools? This is of course a vast area to explore and I only want to give some reflections. There *are* some general trends in at least both Britain, the US – and in Sweden. The old conflict of “skills versus content” has – at least officially – been concluded in a peace-treaty where both are recognized as *mutually dependent* upon each other. Instead we have a new more sophisticated paradigm based upon the concepts above. The name of this peace-treaty is *historical thinking* or *historical consciousness* – the learning goal for pupils in school. The concepts are certainly a challenge for the Education of History-Teachers – they make it evident: Teaching and Learning History is a sophisticated process involving several steps. The result for Curricula and National Standards has, however, been that pupils and teachers are burdened with a very large amount of learning goals in History. The traditional image of an overloaded History-curriculum of 1st order concepts has been supplemented with a lot of 2nd order concepts.³

² Rogers, P J (1984), *Why Teach History?*, Learning History, (Dickinson, A K, Lee, P J, Rogers, P J, Ed.), Halldén, O (1994), *On the Paradox of Understanding History in an Educational Setting*, Teaching and Learning in History, (Leinhardt, G, Beck, I, Stainton, C, Ed.), Lawrence Erlbaum Associates.

³ Timmins, G, Vernon, K, Kinelay, C (2005), *Teaching and Learning History*, SAGE.

<http://www.nchs.ucla.edu/history-standards/historical-thinking-standards>. <http://www.skolverket.se/laroplaner-amnen-och-kurser/grundskoleutbildning/grundskola/historia>, <http://www.skolverket.se/laroplaner-amnen-och-kurser/gymnasieutbildning/gymnasieskola/historia>.

The progress in research of Teaching and Learning History has consequently produced a challenge for History-Teachers: to master the new 2nd order concepts and the expected procedural knowledge – and to teach accordingly.

What does this mean for the Education of History-Teachers? Do we have a Curriculum? Do we have an Education *combining* this mix of concepts into a coherent and progressive Education of History-Teachers? Or will the result be difficulties to bring all the concepts together into one framework - and fragmentation?

It has been observed that identifying central aspects of teaching is important to clarify the “pieces of the puzzle,” but also to understand of “how the pieces fit together” into an explanatory framework. The need for a descriptive framework has been emphasized – a theory that brings the pieces together.⁴ In this article I want to discuss some questions and hypothesis about the education of History Teachers. I propose that the concept of *Learning trajectories* may provide a tool and a framework for combining the concepts in History. The historical disciplinary perspective may be combined with a Teaching and Learning perspective – a step towards a *theory and a Curriculum for Teaching History*.

2. *The concept of Learning trajectories – definitions. A framework for sequences of conceptual progressions: logic of the learner and logic of the discipline*

The idea of *learning progressions* appears to have emerged first in the context of science education and is now virtually synonymous with learning trajectory *conceptual progressions* and sequences of conceptual progressions. The term “*learning trajectory*” appears to have been first used 1995 in Simon’s paper “Reconstructing Mathematics Pedagogy from a Constructivist Perspective.”⁵

Simon used the word “*hypothetical learning trajectory*” to suggest that it must be flexible – something a teacher assume as a way to make sense of where students are and where the teacher might take them. It is hypothetical because the “*actual learning trajectory*” is not knowable in advance. The parts of the trajectory are flexible, with teachers adapting aspects of planned activities in response to their perceptions of students understanding and their on-going evaluations of students’ performance of classroom tasks. A Learning trajectory is according to Simon made up of three components:

- 1) *the learning goal* (the desired direction of teaching and learning)
- 2) *activities* (to be undertaken by the teacher and students)
- 3) *a cognitive process* (hypothetical / actual)

The actual learning trajectories cannot be known in advance. The teacher must modify the activities that fails to activate certain schemes. There may be a task differentiation: the creation of *alternative learning trajectories* that are aimed at a common learning goal. The teacher may organize different sequenced activities that enable pupils to join the expected learning trajectory. These alternative activities can be used to enable all children to succeed.⁶

⁴ Schoenfeld cited in Sztajn, P, Confrey, J, Holt Wilson, P, Edgington, C (2012), *Learning Trajectory Based Instruction: Toward a Theory of Teaching*, Educational Researcher, Vol. 41, No. 5, pp. 147–156, 2012 AERA.

⁵ Empson, S B (2011), *On the Idea of Learning Trajectories: Promises and Pitfalls*, TME, vol8, no.3, The Mathematics Enthusiast, Vol. 8, no.3, pp.571-596. The University of Montana & Information Age Publishing. Mousley, J, Sullivan, P, Zevenbergen, R (2004), *Alternative Learning Trajectories*, Mathematics Education Research Group of Australasia. Paper at Conference (27th : 2004 : Townsville, Qld.).

⁶ Ibid.

During the new century there has been an increase of research that explicitly identifies itself as concerned with learning trajectories or progressions in learning. The idea of learning trajectories has gained attention as a way to focus research on learning in service of instruction and assessment. The US National Research Council described 2007 learning progressions as “successively more sophisticated ways of thinking about a topic that can follow one another as children learn about and investigate a topic”. The idea has been influencing curriculum standards, assessment design and funding priorities.⁷

The definitions of the concept have developed – and been used especially in Mathematics. Clements and Sarama defined 2004 Learning Trajectories as “descriptions of children’s thinking and learning in a specific mathematical domain, and a related conjectured route through a set of instructional tasks designed to engender those mental processes or actions hypothesized *to move children through a developmental progression of levels of thinking*”.⁸

Confrey, Maloney, Nguyen, Mojica, and Myers specified 2009 that a Learning Trajectory is “a researcher-conjectured, empirically-supported *description of the ordered network* of constructs a student encounters through instruction (i.e., activities, tasks, tools, forms of interaction, and methods of evaluation), *in order to move from informal ideas, through successive refinements of representation, articulation, and reflection, towards increasingly complex concepts over time*”. Maloney and Confrey proposed 2010 that Learning trajectories represent “a progression of cognition that, though *not necessarily linear, is also not random designed to identify highly probable steps students follow*”.⁹

These definitions differ only in details. A main point in the idea of Learning trajectories is, it seems to me, expressed by Confrey: “*they distinguish the logic of the learner from the logic of the discipline*” – “the students’ voice and disciplinary perspectives, respectively”.¹⁰ This is an important distinction. When designing a learning goal, a task, a curriculum or a formative assessment we should have both these perspectives in mind: the perspective of the learner and the perspective of the discipline – at the same time! This is of course not simple. “Learning Trajectory Based Instruction” has been developed in order to create this complex synthesis. I will now describe this concept as it has emerged in some recent articles.

3. Learning Trajectory Based Instruction: Learning trajectories as a framework for tasks, tools and formative assessment

Researchers have long recognized the importance of using pupils’ thinking to guide instruction.

⁷ Epsom 2011.

⁸ Sztajn, P, Confrey, J, Holt Wilson, P, Edgington, C (2012), *Learning Trajectory Based Instruction: Toward a Theory of Teaching*, Educational Researcher, Vol. 41, No. 5, pp. 147–156, 2012 AERA.

⁸ Ibid.

⁹ Ibid.

Bransford proposed 2000 that classroom environments must be student-centered in such a way that teachers can “grasp the students’ perceptions, understand where the students are in the ‘developmental corridor’ from informal to formal thinking, and design instruction accordingly”.¹¹

This notion is also valid when Teacher-students learn. In social studies Barton, McCully and Marks used children’s understanding of history to engage beginning teachers in reflecting on their assumptions about learning and teaching. Their findings suggest that teachers’ attention to children’s knowledge of history led to an understanding of the importance of prior knowledge and the role of instruction in refining students’ ideas¹².

Various areas of education research highlight the importance of teacher learning about student thinking in promoting student-centered instruction. Skillful teaching involves learning about what students know and how students’ disciplinary knowledge develops, and “using this knowledge to orchestrate instruction”.¹³ The concept of “*Learning trajectory based instruction*” has been formulated in order to provide an integrated explanatory framework for teaching. It has been defined as “teaching that uses students’ LTs as the basis for instructional decisions...task analysis, discourse facilitation practices, and formative assessment”.¹⁴ A variant of this definition is “teaching that uses LTs as the basis for instructional decisions”.¹⁵

Some empirical research has been made of using this concept in Teaching and Learning Mathematics. Hypothetically the placing of a Learning Trajectory at the center of instruction may affect many facets of instructional practices. In what ways does knowledge of a Learning Trajectory support elementary grades teachers’ enactment of student-centered instructional practices?¹⁶

Analysis indicated a number of ways that a Learning Trajectory supported them. The Teachers were assisted in planning and specifying their learning goals. They selected open tasks that elicited and built on students’ thinking. The Learning Trajectory provided a research-based referent for teachers to consider the appropriateness of tasks from their curricular materials. Teachers use a Learning Trajectory to anticipate students’ strategies and by aligning their goals and tasks with their students’ understandings. Overall, the teachers were assisted in implementing a cohesive set of student-centered instructional practices that worked together to create richer learning environments in classrooms.¹⁷

Wilson, Sztajn, Edgington and Myers suggests that, “as a framework for students’ thinking, the LT can support teachers in thinking about a lesson as a whole, keeping the learning goals for the lesson at the forefront...Furthermore, as demonstrated in some of the teachers’ lessons, an understanding of the longer developmental path outlined by a trajectory may offer teachers a way to support students at different places in their conceptual development by pointing to a path beyond specific lesson objectives to a wider mathematical horizon”¹⁸.

¹¹ Bransford et al. (2000) cited in Wilson, P, Sztajn, P, Edgington, C, Myers, M (2015), *Teachers’ Uses of a Learning Trajectory in Student-Centered Instructional Practices*, Journal of Teacher Education 1–18, American Association of Colleges for Teacher Education.

¹² Ibid.

¹³ Darling- Hammond (2008) cited in Ibid.

¹⁴ Ibid.

¹⁵ Sztajn, P, Confrey, J, Holt Wilson, P, Edgington, C (2012).

¹⁶ Wilson, P, Sztajn, P, Edgington, C, Myers, M (2015).

¹⁷ Ibid.

¹⁸ Ibid.

The researchers suggest that the findings have implications for teacher education. When working with teachers to learn about student-centered instructional practices the results suggest that “having a framework for students’ thinking may support teachers in finding purpose and meaning for learning these practices in understanding the learning Progressions... frameworks for how students’ domain-specific understandings develop over time may assist teachers in interpreting students’ work and providing them with feedback”.¹⁹

The Learning Trajectory Based Instruction highlight the distinction between the *logic of the learner* and the *disciplinary perspectives*. This is an important distinction which should be in focus in every Teacher Education. We will now turn back and find out what this may imply for the Education of History Teachers.

4. *A Learning Trajectory in the subject of History – putting the pieces of the puzzle together*

The research of Teaching and Learning History has during the last decades been concerned with the *goals* of the subject in schools, the *activities* in classrooms and how pupils *understand* History. Many new concepts have been formulated and a language of Teaching and Learning History has developed. The Curricula for History in schools has since the 90’s and later expanded into long *lists* of learning goals and abilities to be mastered. As mentioned these lists are “peace-treaties” combining “Contents” and “Skills”. In both the US, Britain and Sweden we have had partly animated discussions about the content of these curricula and the result has been political compromises – and long lists of goals and abilities to be mastered by pupils – and Teachers.

The US standards are indeed an impressive catalogue. The Basic edition from 1996 describe five “interconnected dimensions of Historical Thinking”:

1. Chronological Thinking
2. Historical Comprehension
3. Historical Analysis and Interpretation
4. Historical Research Capabilities
5. Historical Issues-Analysis and Decision-Making

Each one of these five are further specified into a number of abilities – the first one for example, “Chronological Thinking”, specify what the pupil should be able to:

- a) Distinguish between past, present, and future time.
- b) Identify the temporal structure of a historical narrative or story.
- c) Establish temporal order in constructing their [students’] own historical narratives.
- d) Measure and calculate calendar time.
- e) Interpret data presented in time lines and create time lines.
- f) Reconstruct patterns of historical succession and explain historical continuity and change.
- g) Compare alternative models for periodization.

The five dimensions of Historical Thinking are in this way developed which results in a total of 38 different Historical Thinking abilities or “statements of the outcomes that students need to achieve”. It is however also emphasized that “these skills do not develop, nor can they be practiced, in a vacuum. Every one of these skills requires specific historical content in order to function”. This is made explicit in the following chapters for US History content standards – 9

¹⁹ Ibid.

“Eras” – and for World History content standards – 10 “Eras”. For each of these Eras the relationship to the the five dimensions of Historical Thinking and it’s 38 abilities are shown in very ambitious lists for grades 5-12. The students finishing High-School should be able to master 468 abilities in US History and 611 abilities in World History!

The Swedish National Agency for Education has 2011 produced a similar Curriculum in History for Swedish students in the corresponding ages. The overarching aim are ”Historical Literacy” and “Historical Consciousness” – corresponding to “Historical Thinking”. There are ”*Central Content*” of 9 parts using both 1st and 2nd order concepts in 44 paragraphs (grades 4-9). The *statements of the outcomes* that students need to achieve is given in levels E-A. Each level specify which of *five abilities* the student should master in terms of a combination of 1st and 2nd order concepts. For the grades 10-12 is given a similar list of “Central contents” and learning outcomes. Corresponding to the US standards are “content” and “skills” mutually dependent on each other and the learning outcomes described as a number of “abilities”.

These National Standards of US and Curriculum of Sweden reflecting the progress of research in Teaching and Learning History during the last decades. The problem is however that these *long lists of outcomes to be achieved* are the results of political-ideological compromises from the logic of the Discipline. They *are not designed as cognitive tools* for Teachers and Students to be used for planning of lessons and formative assessments.

The US Standards explicitly *do not* “prescribe a particular teaching sequence to be followed. Teachers will draw upon all these Thinking Standards, *as appropriate*, to develop their teaching plans and to guide students”. In both the US Standards and in Swedish Curriculum 1st and 2nd order concepts are *interconnected* but there is *no progression* stated for the lists of learning goals – the procedural knowledge – to be achieved.

Obviously these plans are dealing with a “*hypothetical learning trajectory*” – but without making it visible. The *cognitive process* is assumed but not made visible neither are the *activities* to be undertaken in the learning process – only the long lists of Learning goals are visible! This is a challenge for History-Teachers and for Education of History-Teachers. The cognitive process and the activities to be undertaken must be made *explicit* for lesson planning and formative assessment. The logic of the Learner need to be combined with the logic of the Discipline – in a “Learning Trajectory” for History.

Which are the activities and the hypothetical cognitive process of the Learning Trajectory in History? The research of Teaching and Learning History has not primarily been concerned with establishing *sequences*. There is no theory of “the thresholds” from surface knowledge to deep understanding in History. Rösen described 1987 however “the integration” of a number of “operations” leading up to the “*synthesis of Historical Consciousness*”: These operations are:

1. Making specific historical experiences based upon empirical observations.
2. Skill to make interpretations and integration of these experiences.
3. Skill to use these interpretations for articulating an Historical Identity.

Rösen call the synthesis of this sequence “*Narrative Competence*”.²⁰

²⁰ Rösen, J (1988), Function of Historical Narration - Proposals for a Strategy of Legitimizing History in School, *Historiedidaktik i Norden* 3, Angvik, M, Castrén, M, Karlegård, C, Lorentsen, S, Nielsen, V O (red). Lärarhögskolan i Malmö.

This *sequence of steps* have been repeated later in some variants. Perfetti, Britt, Rouet, Georgi and Mason defined 1994 “Historical Literacy” in “two dimensions”: on the first – “basic dimension” the student understand “the story” – events in terms of temporal-caused structures. On the second “higher dimension” the student is able to reason about the sources and different evidences creating different perspectives and interpretations of the story.²¹ A similar description of a sequence in three dimensions is given by Drake and McBride 1997: 1. Knowledge of historical facts, themes, and ideas. 2. Historical reasoning—ability to analyze, synthesize, and evaluate historical evidence. 3. Communication of historical knowledge and reasoning to a wider audience.²²

Drie and Boxtel has 2007 constructed a “Framework for Historical Reasoning” and suggests that it may be *used to help Teachers planning classroom activities and provide a structure for the design of a curriculum and Learning Tasks*. This framework has six components (not in sequence): (a) asking historical questions, (b) using sources, (c) contextualization, (d) argumentation, (e) using substantive concepts, (f) using meta-concepts.²³ These components and the idea of using a framework for planning lessons and design of a curriculum are of course close to the idea of a “Learning Trajectory Based Instruction”.

In summary we have a lot of pieces in the puzzle of Teaching and Learning History but we need to create a sequence and “put the pieces together”. As mentioned I suggest the concept of a Learning Trajectory for this construction; a Learning goal, activities and a cognitive process.

4.1 *Learning Goal in History Education*

Drie and Boxtel has noticed that “different terms are used to describe the aim of history education; historical literacy, historical thinking, historical consciousness and historical reasoning”.²⁴ To this list I want to add the mostly forgotten term “Historical Mindedness” – perhaps the ancestor of all these; invented by American Historical Society in 1898.²⁵ All of these terms implies that Learning History is something more than learning facts about the past. “Narrative Competence” (Rüsen) – seems to me be the most proper description and synthesis of the assumed learning outcomes in all these terms.

There is further a general agreement – from 1898 until today – about the idea of History in school as an important part of civic education with a *two-fold purpose*: partly *Heritage/Identity* and partly *intellectual power/Emancipation* (or some similar terms).

²¹ Perfetti, C, Britt, A, Rouet, J-F, Georgi, M, Mason, R (1994), *How Students use Texts to Learn and Reason About Historical Uncertainty*, Cognitive and Instructional Processes in History and the Social Sciences, (Carretro, M and Voss, J, Ed).

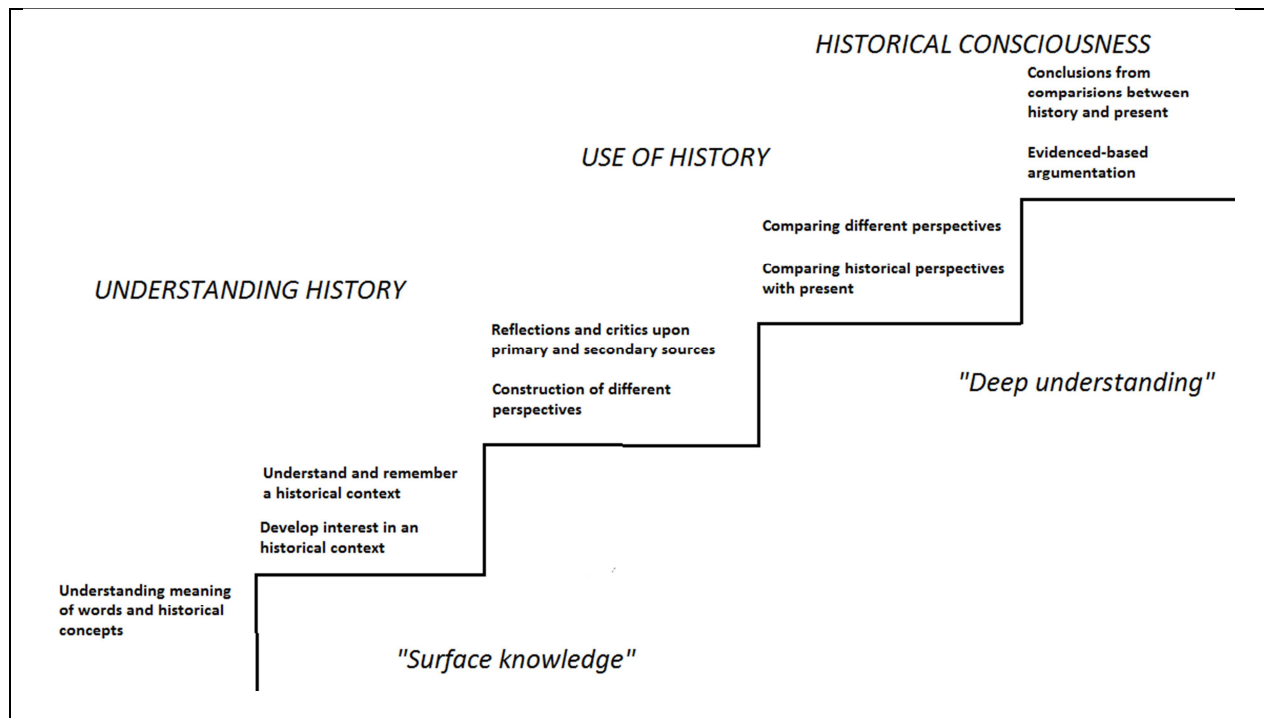
²² Cited in Edmunds, J, Nalley, D, Hamilton, T, Houle, J (2006), *How to Assess Student Performance in History: Going Beyond Multiple-Choice Tests*, Serve Center Associated with the School of Education, University of North Carolina at Greensboro.

²³ Van Drie, J, Van Boxtel, C (2007).

²⁴ Ibid.

²⁵ The Study of History in Schools (1898). A Report to the American Historical Association by the Committee of Seven. <http://www.historians.org/pubs/archives/CommitteeofSeven/index.cfm>. 2013.08.21.

Figure 2. The Learning Trajectory in History – hypothetical



4.2 Activities to be undertaken by Teacher and Students

The basic concept and mediating tool in the activities by Teachers and Students in school is – quite logically in the subject of History – the *Narrative*. Historical Narration is part of all the different activities/operations leading to Historical Consciousness. It may be regarded as *the* representation of human effort to understand and create meaning in the complex environment of society. The Human being is “a story-telling animal”. The concept has been described both as a *cultural tool* for understanding a specific culture and (a contextual specific story) *and* a cognitive tool for constructing stories (a conceptual general structure) (Wertsch). This notion of the Narrative *both* as a cultural *and* a cognitive tool develops the meaning of stories: they are both tools which we use for construction of understanding a specific historical process (a content which enables identity) and a conceptual tool which we use for constructing new, alternative, stories (a skill which enables emancipation).²⁶

The activities/operations undertaken by teacher and students in the learning process involve hypothetically a number of steps. On the basic level it may be described as a construction process involving creating meaning of words and concepts of the historical subject. For the novice it’s a demanding challenge: it demands knowledge of a language of a foreign world: people, places and phenomena which we have never seen or had any personal knowledge of. The “narrative framework”(Shemilt) or a “situation model”(Wineburg) may be described as essential tools for understanding this world. These tools create meaning of words.²⁷

²⁶ Wertsch, J (1994), Struggling with the past: Some Dynamics of Historical Representation, *Cognitive and Instructional Processes in History and the Social Sciences*, (Carretro, M and Voss, J, Ed), Lawrence Erlbaum Associates. Wertsch, J (1998), *Mind as Action*, Oxford University Press. Rösen, J (1988)

²⁷ Shemilt, D (2000), The Caliph’s Coin: The Currency of Narrative Frameworks in History Teaching, *Knowing, Teaching & Learning History. National and International Perspectives*, (Ed. Stearns, P, Seixas, P, Wineburg, S), New York University Press,

This basic understanding enables a further construction of “a story” – one perspective of a context. People, situations and actions combined into one construction resulting in a specific result and meaning. The narrative structure of a story can be understood even by the small child and it is an efficient mental schema for creating meaning, memory and interest. The student need Narrative tools of different kind for these activities.²⁸

The next steps in the trajectory involve activities of constructing alternative narratives with different perspectives upon the narrative framework. This work include critical use of different primary and secondary sources. The tools for evaluating and assess the use of sources are most important in these activities.

Comparative activities using the different narratives are the next steps. They involve comparing different historical narratives as well as comparing historical narratives with present. Systematic comparative work is probable one of the most important aspects of Historical thinking.²⁹

In the final steps of the trajectory the student will use the results from these comparative activities and construct evidenced based synthesis of relevance for present and future. The student may use this synthesis for argumentation and communication.

It is important the different activities is made *visible*. The student must be aware of the different steps and the tools making the learning process *systematic and not random*. The student must develop a systematic strategy for the expected learning outcome: *Narrative competence*.

4.3 *Hypothetical cognitive process*

These activities enable a hypothetical cognitive process which in short may be described as a learning process from surface knowledge to deep understanding in History. It is a coherent and progressive process from “Historical understanding” to “Historical consciousness”.

5. *From novice to professional History Teacher – Learning Trajectory based instruction? A curriculum for education of History Teachers?*

The History Teacher need to combine the logic of the Discipline with the logic of the Learner – “the students’ voice and disciplinary perspectives respectively”. The History Teacher must basically master all the concepts of the Learning Trajectory in History and make lesson-planning, instructions and formative assessments accordingly. For the Education of History Teachers this is certainly a challenge. The process from novice at University to professional Teacher has undoubtedly its ‘thresholds’.³⁰

²⁸ Game-simulations are an example of a narrative tool which has been emphasized by Squire, K (2004), *Replaying History: Learning World History through playing Civilization III*, dissertation. See also Schrier, K (2005), *Revolutionizing History Education: Using Augmented Reality Games to Teach Histories*, Massachusetts Institute of Technology.

²⁹ See for example Dunn, R (2000), *Constructing World History in the Classroom* and Stearns, P (2000), *Getting Specific about Training in Historical Analysis, Knowing, Teaching & Learning History*. National and International Perspectives, (Ed. Stearns, P, Seixas, P, Wineburg, S), New York University Press.

³⁰ For the concept of thresholds: *Threshold Concepts and Transformational Learning* (2010). (Ed. J H. F. Meyer, Land, R and Baillie, C), Sense Publishers, Rotterdam. [Educational Futures: Rethinking Theory and Practice, Peters, M.A. (Ed), Volume 42]

Which are the thresholds of this process? The History department of Indiana University has made a very ambitious project trying to “decode” its’ Students in order to define “the bottlenecks” of Learning History at the University. Initially 17 members of the department were asked to identify difficulties for their students in learning History. History professors and educational developer have worked together with other members of the History Department for making explicit the bottlenecks. The next phase of the process included creation and assessment of specific teaching strategies to show students the steps they will need to succeed at each task. The Department identified seven bottlenecks:

1. Misunderstanding the role of facts
2. Interpreting primary sources
3. Maintaining appropriate emotional distance
4. Understanding the limits of knowledge of historical actors
5. Identifying with people in another time/place
6. Constructing and evaluating arguments
7. Linking specific details to a broader context³¹

The result of these interviews were later supplemented with a survey of 842 students in 13 history courses in Indiana University. The results confirmed the earlier results and brought new perspectives from which to understand the students. This collaborative work within the department has slowly developed into a kind of “community of Teaching” through round tables and presentations of classroom experiences. The work became a bridge to collaboration and the collective energy made possible the first steps toward the creation of a “*developmental curriculum in history*”. In this the teachers try to show step by step how the students may overcome the bottlenecks of learning skills of Historical Thinking.³²

It seems to me this ambitious project of “decoding the students” and the creation of a “developmental curriculum in history” has a lot in common with the ideas of “Learning Trajectory Based Instruction”. The basic theory is similar: the cognitive process and the activities to be undertaken must be made *explicit* for lesson planning and formative assessment. The logic of the Learner need to be combined with the logic of the Discipline – in a “developmental curriculum in history” or a “Learning Trajectory in History”.

The Education of History Teachers has however a further complication: the students will leave the Historical department and meet supervisors in their training placement in schools. The “*codified knowledge*” of the university will meet the “*cultural knowledge*” of the professional History teachers in school. The codified knowledge is the knowledge formulated in programs, courses and examinations at the university. The cultural knowledge is acquired informally at a working place through participation in professional and social activities. It is knowledge taken for granted through unaware socialization. It is situational understanding, practical wisdom and tacit knowledge.³³

As Eraut has shown in research in studies of students learning from professionals in health, engineering and business sectors the learning affordances will vary considerably according to the local context. The learning trajectories show variations over time and will depend on a set of

³¹ Middendorf, J, Pace, D, Shopkov, L (2007), *Making Thinking Explicit: Decoding History Teaching*, The National Teaching & Learning Forum, Indiana University Vol 16, No 2 2007.

³² Diaz, A, Middendorf, J, Pace, D, Shopkov, L (2008), *The History Learning Project: A Department “Decodes” Its Students*, The Journal of American History, March 2008.

³³ Eraut, M (2007), *Early career learning at work and its implications for universities*, Student learning and university teaching, Entwistle, N, Tomlinson, P (Ed.), British Journal of Educational Psychology, Monograph Series II: Current Trends, no 4.

different local factors. One result of this research is that trainees developed stronger commitment to their work teams and colleagues than to their employing organization. Eraut emphasize: “one of the most striking features is the wide range of people from whom those working in supportive environments are able to learn”. Students receive many different experiences from meeting many different professionals in their working places.³⁴ For the Education of History Teachers this is as mentioned a further challenge – the meeting of codified knowledge and cultural knowledge creates more pieces to the puzzle!

In the education of History-teachers at Stockholm University I have started a project with the ambition of “putting the pieces of the puzzle together” and designing a curriculum for the education of History Teachers. I emphasize “started” since this kind of project is complex and collaborative by nature. It incorporates several organizations and many professionals – and all of them are independent by law and tradition. The education involve the Department of History, The Centre for Teaching and Learning in the Humanities and the many training placement schools in greater Stockholm.

The aim of this project is to find out the perspectives of the students, “the logic of the learner” and combine them with “the logic of the discipline”. The hypothetical Learning Trajectory in History is a common framework and a cognitive tool for designing a curriculum.

The research questions will continuously investigate the development of learning and attitudes during the education. A first survey has been done in a class with 31 students after finishing the first semester in the Historical department. The image of the subject and the expectations of the profession in this group of “novices” is quite “traditional”: the discipline consists of “facts” and “method” and the students look forward ”applying” this in school. The courses from University shall be “applied” in the schools. The basic concepts of the curriculum in swedish schools – “use of History”, ”Historical literacy” or “Historical Consciousness” – are still not used by any of the students. Some find “Historical method” is unnecessary for Teachers but none find any of “the facts of History” to be without relevance for teaching in school.

These studies of the perspectives of the students will continue during and after the training placements in schools and one focus will be about the results of this meeting between “codified knowledge” and “cultural knowledge”. What kind of “personal knowledge” will the Teacher-student acquire? Will the ”hypothetical Learning Trajectory in History” be a useful tool?

6. *Summary. Towards a theory of Teaching History and a Curriculum for History-Teachers?*

In this article I have discussed some questions and hypothesis about the education of History-Teachers. The progress of research in teaching and learning History and the National standards and curricula have produced a big puzzle with many pieces. The image of an overloaded curriculum of 1st order concepts have been supplemented with many new 2nd order concepts and Learning outcomes in terms of procedural knowledge. I propose the concept of a *Learning trajectory* providing a tool and a framework for combining the mix of concepts. The framework is also needed when codified knowledge meet cultural knowledge in the training placements in schools. The historical disciplinary perspective may be combined with a Teaching and Learning perspective – a step towards a *theory and a systematic Curriculum for Teaching History*.

³⁴ Ibid.