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A critical search for the learning object across school and out-of-school contexts: A case of entrepreneurship education

Ritva Engeström and Leena Käyhkö

Faculty of Education, University of Helsinki

ABSTRACT

Background: Recent alternative concepts of school knowledge emphasize knowledge creation via networks of learning around real-world phenomena. We studied entrepreneurship education as an example of new epistemic activity which opens institutional boundaries for active engagement with society in learning.

Methods: We used a case-study strategy and a methodology informed by the cultural-historical activity theory for investigating an entrepreneurship course of a middle school. We focused on meaning making in object formation of learning of the groups involved in boundary crossing. Meaning making was studied in a context-sensitive way with an analytic tool designed in the study.

Findings: Lacking a knowledge system of a disciplinary school subject, the findings show that entrepreneurship becomes constructed in practice epistemologically as a value-free and politically neutral learning object. In light of these findings we discuss the theoretical link between conceptual learning and learning around real-world phenomena.

Contribution: In addition to economic activity, globalization and climate change are also presently forming the social realities of school learners. Our study shows that more theoretical and empirical research on intermediate epistemological practices is needed to avoid a risk that teachers are left on their own to sort out the complex epistemic interrelationships.

We examine in this paper teaching and learning a school subject which is not one of the structured disciplines of school knowledge but an out-of-school practice and political matter, namely, entrepreneurship. European and

CONTACT Leena Käyhkö   leena.kayhko@helsinki.fi   Faculty of Education, University of Helsinki, Siltavuorenpenger 10, Helsinki 00014, Finland.

national educational policies have started to give significant attention to entrepreneurship education not only in the vocational curriculum and training, but also in the comprehensive school system (European Commission, 2012). Entrepreneurship education is regarded as a new educational program which focuses on human agency entailing new problem solving, creativity, and other skills indicating innovative attitudes (Kyrö & Carrier, 2005; Moberg, 2014; Morselli, 2019; Rae & Wang, 2015; Skogen & Sjøvoll, 2009). Entrepreneurship education research has been mainly centered on the ideals and objectives of this new program (Dal et al., 2016; Fayolle, 2013; Heinonen & Poikkijoki, 2006; Higgins & Elliott, 2011; Hjorth & Johannisson, 2007; Kuratko, 2005; Obschonka et al., 2016; Rae, 2000, 2017; Wang & Chung, 2014). In their investigation on the reasons behind the rise of entrepreneurship education, Rae and Wang (2015) identified a growing interest since the late 1990s, in what they term "the human and social dynamics of entrepreneurship". This conception has challenged the previous dominance of economic-based thinking of the domain. According to these authors, another reason for the interest is the potential for an "entrepreneurial society" addressed by policy makers.

Instead of the harmonious impression given in policy texts about the ideals and objectives of entrepreneurship education, in their empirical study on entrepreneurship education projects Berglund and Holmgren (2013) found, "a considerably more ambiguous picture", which illustrates "a disagreement concerning whether entrepreneurship should, as well as how it could become part of the educational system" (p. 11). It has been also remarked that while connected to entrepreneurship, education may become increasingly assessed in terms of its ability to furnish the market and supply the needs of the economy (Säljö, 2009). Critical stances claim that policy makers have adopted a neoliberal view of economy that equates the view with creative human action and the desirable subjectivity of a person (Holborow, 2015; Holmgren & From, 2005; Komulainen et al., 2013; Mononen-Batista Costa & Brunila, 2016). Entrepreneurship takes education along into a contemporary political struggle to redefine what schooling should entail and look like in this century, and who children should become (Biesta, 2013).

The present study stems from our interest in knowledge practices that connect schooling to out-of-school contexts (Y. Engeström et al., 2002). Currently, the still-dominant epistemological paradigm of school education depends mostly on the assumption that knowledge exists as a clearly identifiable body of ideas that need to be acquired at school. By questioning "the encapsulating of school learning" (Y. Engeström, 1991), "textbook learning" (Miettinen, 1999), "scholastic learning" (Säljö, 2009) or "instructionism" (Sawyer, 2014), alternative concepts of school knowledge emphasize knowledge building, participating in cultural practices, knowledge creation via networks of learning around real-world phenomena, and so on (Bereiter, 2002;

Erstad et al., 2016; Hakkarainen et al., 2004; Tuomi-Gröhn & Engeström, 2003; Wells & Claxton, 2002). We consider in this paper entrepreneurship to be a new learning environment, which has the effect of opening institutional boundaries of the school. Being mainly oriented to how to investigate and promote entrepreneurship in schools at the individual level, entrepreneurship education research has focused less on the question of how this opening toward society relates to the epistemology of school knowledge and how it may add complexity to *the learning object*–the issues that are expected to be learned.

The paper is based on an empirical study of entrepreneurship education in a Finnish public school at which the learning environment was shaped by larger webs than exchanges between teacher and students in the classroom. The actors involved were students, teachers, local entrepreneurs, and municipal decision makers. The aim of the paper is not to assess the studied program in light of the announced or desired objectives of entrepreneurship education. Instead, we focus on how a learning object becomes constructed in circumstances when schools are opening themselves to society and entrepreneurial aspirations are influencing the school curriculum. In regarding learning object as a joint achievement of the participants who organize their understanding of an unfolding activity that takes place across school and out-of-school contexts, we approached the object through the meaning making of actors. In the paper, the study has been used as a window to the change of school knowledge for advancing discussion about new epistemic activities and how they may implicate a need to reconsider theories of learning and education.

The paper starts with a brief review of the definitions of entrepreneurship education, which is needed because of the variety of concepts used in research publications and political documents. Then we introduce the school and the entrepreneurship education course we investigated. Our research methodology required special attention to support studying school change as a creation in practice from the perspective of meaning making. The methodology is informed by the cultural-historical activity theory (e.g., Daniels, Cole, et al., 2007) in the context of which we specify how we define and use the notion of the learning object. The findings from the study led us to contest (from a theoretical point of view) the distinction suggested in entrepreneurship education research, between knowledge-based thinking and entrepreneurial (mindset-oriented) learning and discuss the relationships between thinking, doing and learning in the context of active engagement with society.

Definitions of entrepreneurship in education

Policy makers in Europe have defined entrepreneurship as one of the key objectives of educational systems (coming after North America) associating it

with the 21st century's vision of new skills in working life and employment challenges of young generations. In EU documents (Bacigalupo et al., 2016; The European Commission, 2015, 2016; The European Commission Thematic Working Group on Entrepreneurship Education, 2014) "a sense of initiative and entrepreneurship" is considered to be a critical competence which has been defined as being related to education in more detail as follows: "Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behavior, with or without a commercial objective" (European Commission, EACEA & Eurydice, 2016, p. 19). In terms of the position of entrepreneurship education in the curriculum, it can be a compulsory subject or an element integrated into other compulsory subjects, or an optional subject or an element integrated into other optional subjects. All these forms are present in national educational systems in Europe.

Entrepreneurship education research includes several conceptualizations, which have resulted from different understandings and interpretations of entrepreneurship as related to education and which seem partly to go back to a disciplinary background of the developers. *Entrepreneurship education* is often used as generic term to embed the other similar processes seeking to influence people's intentions, values, attitudes and behaviors toward entrepreneurship (Mwasalwiba, 2010). B. Jones and Iredale (2010) propose that there are differences between entrepreneurship education and *enterprise education*. The first consists of a functional view, such as venture creation, business start-ups and the entrepreneurial economy, and the latter (used especially in the UK) refers to a view of a mind-set encompassing a broad range of skills and attributes which make an individual enterprising. Kyrö (2006) and Gibb (2005) prefer to conceive entrepreneurship education as a link between venture creation and mind-set, whereas Morselli (2019) unifies entrepreneurship education and enterprise education with the concept of *entrepreneurial education.*

Focusing more on learning rather than education, a set of concepts has been used. Conceived as distinct from educational approach, *entrepreneurial learning* emphasizes experiential processes of learning, considering processes of "recognising and acting on opportunities as a natural process" of human life (Rae, 2015, p. 5). Having entrepreneurial intention and capability as key elements, the notion of *enterprise learning* has been defined as a vehicle for the development of the whole person, "someone who knows his or her own strengths and weaknesses and who takes control of, and makes the most of

his or her own life" (Horne, 2000, p. 24). Researchers in Nordic countries (Dal et al., 2016), noticing the lack of a common definition of entrepreneurship in education, have used the notion of *pedagogical entrepreneurship* to clarify the meaning of entrepreneurship in a pedagogical context. The concept includes competencies and qualities associated with having an entrepreneurial mind-set, such as creative problem solving, collaborative planning, ability to work in teams, among other things. The above conceptualizations share more or less similar methods of teaching and learning, such as "active learning, project-based learning, experiential learning, and activities outside the classroom/school which link students with the local community or businesses" highlighting often "learning by doing" principle, through hands-on and real-life experiences (European Commission, EACEA & Eurydice, 2016, p. 72).

Due to many conceptual definitions and proposals, it is recommended that any research should begin with a clarification of the terms used in the study. Our study uses two terms: entrepreneurship education and entrepreneurial learning, echoing the terminology commonly used in the Finnish discourse. Entrepreneurship education is used as a general name of the subject which has recently been added to the curriculum. Entrepreneurial learning has been used in our study as being associated with fostering an entrepreneurial mind-set with the meaning of creativity and innovative attitudes and representing an entrepreneur as an ideal of present-day agency who is creative in initiating new activities. The entrepreneurship education course investigated in this study, functions as "a single example" which does not attempt to be a representative sample of entrepreneurship education in Finland. However, it has been studied "in its own right" as an example of school activity which links students with the "real world" outside the school (Payne & Payne, 2004, p. 32). The case is studied with the interest of reconsidering learning and educational theory (see later on case study strategy). Therefore, it does not include an attempt to make comparisons between the range of alternatives in the practice of entrepreneurship education.

Context of the study

Finland has been among the first countries in Europe to adopt entrepreneurship education at all levels of education, partly as a mainstreaming theme (Hytti & O'Gorman, 2004; Kyrö & Hytti, 2014). Mainstreaming refers to the idea that entrepreneurship is embedded in other school subjects and pedagogy. Due to the ambiguity of both the objectives of entrepreneurship education and of mainstreaming in subject-based school practice, thus far schools in Finland differ considerably in the extent to which they included entrepreneurship in the public school program having an optional position

as a subject in the curriculum. Finland issued its specific strategy in 2009 ("Guidelines for Entrepreneurship Education"), which sought to support a more entrepreneurial culture, active citizenship and business start-ups.

The present study was carried out in a public middle school in a smaller populated community. Selection of the school for the investigation was based on its history of being one of the forerunners in starting entrepreneurship education in Finland (before national guidelines) and being nationally known as a school promoting entrepreneurship education. Local circumstances, particularly the interest of the adolescent population in moving away from the community to city areas and closer to broader educational supplies, formed an incentive of the county council to offer middle-level education in the region with a special interest in entrepreneurship education. With its orientation, the council's foresight was that transformations from a *"dying"* old fashioned, former industrial region into a more inviting community and modern small business area should be managed with education.

Ideas to devise a local curriculum that would take entrepreneurship into account were locally generated in discussions between educational practitioners, local policy makers and students during the first few years of the school, which established a profile of itself for having a special interest in entrepreneurship education.[1] The initial actions were to set up visits to the school by local entrepreneurs and conversely, visits of students to businesses and workplaces out of school. These actions included efforts to integrate school subjects (such as writing, mathematics, information and communication technology studies, and visual arts) around offering ICT services to local people and assisting in editing the local weekly newspaper. An added idea for entrepreneurship education was suggested by the municipal decision-makers. The idea comprised target to plan and put into practice a communal fair as an enterprise shared between the school and an association of entrepreneurs. The history of the fair was that it had been organized annually by the municipal group jointly with local entrepreneurs. In implementing the idea, teachers and students were oriented to *"openly encounter multi-level and multi-aged expertise"* inside and outside the school, for organizing the fair and associated activities in the community, as a senior teacher characterized the beginning of activity in her interview. The fair course is undertaken once in a year.

Data for the study were collected from the fair course. The course consisted of multi-faceted and multi-disciplinary tasks, as the event was expected to serve local entrepreneurs in businesses and be a paid-admission,

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[1]In Finland's decentralized public education system, schools are expected to interpret the goals and values of the national curriculum and are required to write down their own local curricula in line with the national guidelines.

entertainment event for the public. The latter part of the event included fashion shows, music and magicians' programs, panel discussions, café services as well as a market. Students had roles according to a project-based model, such as that of a project manager, a finance manager, a marketing manager, café service managers, a head of information tasks, a technical manager, and journalists. Besides planning the fair and implementing it, the course also included evaluation and tutoring. In this course, an evaluation meeting was held two months after the fair as part of the course. During that time, the students were asked to write reports in which they reflected on their experiences and learning. With respect to tutoring, the students were partly responsible for conveying their experiences and what they had learned to the next-year students. Evaluation and tutoring were part of the students' personal grading in carrying out the entrepreneurship education course at school.

The course consisted of 38 hours taking place in periods during the school year and was part of the students' general syllabus. During the year examined for this study, 11 students chose the fair course, comprising about half of the class. Two teachers were responsible for the teaching and were supported by the principal of the school and previous course students (tutors). Over 1000 people and 40 exhibitors gathered at the fair.

Conceptual framework

The study followed a case-study strategy, which is considered to be suitable for investigating a contemporary, longitudinal phenomenon within its real-life context and using qualitative, process-sensitive data (Yin, 2009). The strategy is particularly useful in challenging theory by addressing complexities the case may include (Stake, 1998). The case study requires two elements. The one is "a practical, historical unity" of the study, the other a "theoretical, scientific basis of the case"—that is the analytical frame through which the object of the study will be articulated (Thomas, 2011, 14; see also Yin, 2009). Our practical unity was an entrepreneurship course ("the fair course") the history of which was connected to a regional middle school with entrepreneurship education as part of its profile. Analytically, the course was examined as a case of teaching and learning a school subject of which content became constructed in practice at the boundary of inside and outside school. The focus of investigation was on meaning making in respect of the object formation of learning in the entrepreneurship course. The meaning making was investigated as a joint activity of the groups (students, teachers, entrepreneurs and municipal decision-makers) involved in boundary crossing. The theoretical basis of our study builds on cultural-historical activity theory with the notions of activity, boundary object, and dialogicality (see below).

Activity

Cultural-historical activity theory offers an approach which defines practice by understanding it through the system(s) of activity (Y. Engeström, 2015) and multi-voiced participation in joint activities (R. Engeström, 2009). The theoretical foundation of the activity system has been drawn from the original idea of *mediation*, which questions the direct connection between the external world (stimulus) and internal response of a subject (reaction) (Vygotsky, 1978). The theory guides us to focus on *intermediary artifacts* in object-oriented activities and leads to examine the role of culture in human functioning and object formation. In this framework, the object becomes increasingly complicated, in time ensuing changes of intermediary artifacts of a particular activity system and development of culture.[2]

A conceptual model of an activity system makes sense of the relational components of the system (being repeated) behind individuals and unique events of situations. In the present study, we conceptualized the studied unity (the fair course) analytically from two perspectives of the activity system. In the first ("macro"), the fair course is conceived as *a tool (a mediating artifact) of the activity system* having an object of teaching and learning entrepreneurship. The course is then part of everyday schooling shared with a range of school subjects and teaching strategies, division of labor with other teachers, following administrative rules, and so on. In the second perspective ("micro"), the tool (the fair course) itself turns out to be *an unfolding activity* having an object which is ill structured and becomes defined during the process of activity.[3] In using this latter perspective, we utilized the notion of the boundary object, which has been regarded as being helpful in studying activities which maintain continuity across a variety of social worlds without necessarily having a shared meaning of activity.

Boundary object

Leigh Star (1989, p. 46) has provided a well-known definition of a boundary object defining them as "objects that are both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across site." At the same time, a boundary object is something people act on and something that functions as communal tools and comprises a set of social arrangements. Although a boundary object exists as if "sitting" in the middle of groups of actors with

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[2]In activity theory, the object is internally related to the motive. This dialectic has been debated from several perspectives (as related to learning activity see, e.g., Hedegaard et al., 2012).

[3]Individual are inherently relating to the world and a nesessary "moment" within the unfolding activity. They are positioned so as being involved simultaneously in *multiple* activities; people link and connect creatively phenomena that surround them in time and space across activites (R. Engeström, 2014).

divergent viewpoints, it is not an object in the sense of prefabricated stuff or "thing-ness" but rather its materiality derives from and unfolds in action (Star, 2010, p. 603). Boundaries are conceived social constructions more than they are borders in poly-contextual settings (Y. Engeström et al., 1995) having the effect of defining who is included and excluded from interactions and which knowledge or meaning system is considered to be relevant (Edwards, 2010). Regarding the course we investigated, people act on making a fair into an enterprise and while undertaking these actions, they are involved in social and cognitive processes which are shaping and being shaped by their actions in unfolding activity of the course that is operating as a tool of teaching and learning entrepreneurship. Methodologically, focusing on this internal dynamic of a boundary object we can examine learning objects in the context of meaning making mediated with a means of meaning systems which are embedded in activities the participants bring to bear on and use for acting.

Dialogicality

In the analysis of the internal dynamics of a boundary object, meaning making needs to be extended in time and with encounters between the old and the new. In this sense, we integrated the notion with the theory of dialogicality, which addresses the framework of historical epistemology by dealing with knowing and how people ascribe meaning to the world (compared to the framework of dialogue which deals with interactions, see Markova, 2003). Focusing on the human mind to conceive and communicate about social realities, dialogicality underlines that "objects enter into the scope of human vision" in and through language, that is, "they become things only in so far as they undergo human activity, and it is then that they obtain their designation, their names" (Marková, 2012, pp. 209–210). Humans choose aspects of things that are relevant to them cognitively, emotionally, or otherwise. Dialogicality captures the heterogeneity of situations, with their "multi-layeredness" carried by other places and temporalities in order to see a "here-and-now" situation as crisscrossed by a "there-and-then" (Grossen, 2009; Marková, 2004). In these mediated processes, things become constructed into human products that originate from using cultural means and systematic practices for rendering something an intelligible "object" to work on. In entrepreneurship education, people enter a new area of school activity in which *prior meanings encounter new elements of meaning* that come into our social interest and that interrogate previous ones with tension (Bakhtin, 1981). In our study, *tensions were supposed to display a change of relevancies* inscribed in the activities and confronted by people in their practice of entrepreneurship education.

Data and method of the study

The data

The aim of the data gathering process was to capture the fair course as occurring naturally and as reported from different perspectives. It covered all course periods. The data included different types of materials: ethnographic materials, interviews, written reports of students, documents concerning the school and its history, and an intervention made by the researcher after the course had ended (see Table 1). Ethnographic material was gathered by video- and/or audio- recordings or making field notes. It included meetings between students, between students and teachers, and between course teachers, and the fair being video recorded. Making recordings by herself, the researcher occasionally posed questions to participants (on-line interviews). There were four interviews with people designated beforehand: the principal of the school, two entrepreneurs, and a senior teacher (who was involved in the design and at the start of the program and acted as a teacher until her retirement). The interviews followed an open form of discussion between interviewee and interviewer. The intervention, called "future forum," was a meeting in which research data and the researcher's preliminary analyses were used as a mirror for discussion (see more later). The audio- and video-recorded data were transcribed.

The present study is based on the transcripts (of meetings, interviews, and the intervention) and the students' written reports. The overall research project included a careful analysis of various socio-material actions by which the course was accomplished (Käyhkö, 2015). By capitalizing on the data in the form of "words", our aim with the present paper is to deepen the analysis of the meaning-making processes related to learning across inside and outside contexts of school.

Table 1. Study data.

Type of data	Content of data	Amount/Total
Documents	Written documents of school and its history	
Ethnography data: Video and audio recordings Field notes	The fair course actions and interactions	
Transcripts of video or audio recordings	Students' planning meetings	3 hours (4 meetings)
	Teacher meeting	30 minutes
	Evaluation meeting	3 hours
	Tutor meeting	2 hours
	Future forum	2 hours
Text documents	Student's report	11
Interview data	Principal's interview	1 hour
	Entrepreneurs' interviews	2 hours 30 min
	Teachers' interviews	(2 persons)
	Online interviews	2 hours

An analytic tool

In qualitative research, particularly research focusing on actual practice, the methods evolve typically in interaction between theory and data reading (e.g., Noffke, 2009). We began the analysis with several reading rounds of the entire dataset. The explicit accounts of the meanings and interests attached by the participants to the fair course, entrepreneurship and learning were marked and selected to form a data set for the analysis of meaning making. The pieces of talk were organized according to the groups of actors (see Esmonde, 2014): students, teachers, entrepreneurs, and municipal decision-makers (policy). In order to be able to investigate meaning making inter-twined with ongoing actions in *a context-sensitive way*, we constructed an analytic tool, the aim of which was to capture the internal dynamic of a boundary object (see above). The tool displayed a four-field matrix, which was comprised of two dimensions: the horizontal dimension depicting cooperation between groups and the vertical dimension depicting dialogi-cality (see Figure 1).[4]

The horizontal dimension of the matrix accounts for cooperation from the perspective of knowledge formation. In activity theoretical analyses, three types of epistemological relations have been suggested for combining the practical and the communicative aspects of a joint activity: coordination, cooperation, and communication (Raeithel, 1983; see also Y. Engeström, 2008). In coordination, traditions are inscribed in the modes of behavior
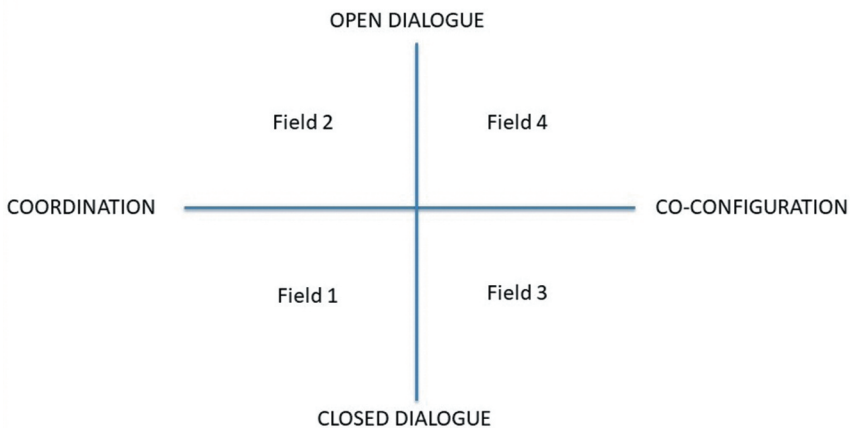

Figure 1. A tool for examining meaning making in a new area of activity.

[4]In data reading, we became aware of a rich variety of differences in the participants' meanings and interpretations of the unfolding activity they were jointly accomplishing. The idea of the matrix stemmed from these observations in interaction with the theory.

and meaning making and coordinate activity as if from behind the backs of actors. In cooperation the participants go beyond the confines of the given activity, yet they do this without explicitly questioning or re-conceptualizing it. In communication actors have a reflective relationship with their own traditions and ways of understanding ongoing activity and aim to transform it through collaboration. The type of "communication" has often been termed "co-configuration" in activity theoretical studies to emphasize encounters at the boundaries as new kinds of knowledge formation and learning resources (Y. Engeström et al., 2003). In our study, the horizontal dimension describes cooperation between people as forms moving between coordination and co-configuration.

The vertical dimension of the matrix draws from the insights of dialogicality regarding processes of meaning making while entering the newly constructed and experienced area of practice. Marková (2004) has discerned these processes into the groups of anchoring and objectification. Anchoring functions as a stabilizing process that orientates the mind toward remaining in the existing state of knowledge. It is basically an inner-directed process that relies primarily on an individual's experience and memory in classifying and naming experienced phenomena (marked as "closed dialogue" in the matrix from the standpoint of historical epistemology). Objectification is primarily a kind of meaning making in which the individual, on the basis of his or her interpretation of events, reconstructs the existing contents of representations, creates new ones, and gives meanings to these new contents. Objectification is another- and outer-directed process (marked as "open dialogue" in the matrix from the standpoint of historical epistemology). Marková (2004) remarks that we should conceive of anchoring and objectification as juxtaposed or parallel, because of the way they transpose themselves into the other during their operation (see R. Engeström, 2014).

We used the matrix as an analytic tool for organizing a diversity of meanings with a means of meaning systems. The systems were constructed in the analysis by tracing the meaning making of an unfolding activity in relation to object formation. In this way, meaning making was examined as an activity which reconciles meanings (there and then) drawn from different activities (in which the participants have been involved) and which, at the same time, negotiates or generates tensions with new (here and now) elements of meaning. A quality of the tool builds upon its capacity through meaning systems to make visible the meanings of the participants within socially integrating or disintegrating boundaries (R. Engeström, 1995).

Findings of the analysis

We report the findings first as separate in each field of the matrix (Figure 1) and illustrate them with data excerpts. At the end, the findings will be

synthesized from the point of view of tensions in the learning object. Before going into the analysis, we must acknowledge and consider that there are certain meaningful practices (contextual issues) that were created locally in the fair course activity and were repeated during its history.

First, the school's fair course program was designed pedagogically to follow the ideas of student-centered pedagogy building up an arena in which the participants' meaning making was taking place. This approach was also confirmed in the study by the principal, who described the course by saying in his interview that "*the pedagogical task of the course is pushing students to grow up by giving them the tools to go with.*" The course teachers were oriented to afford students' self-imposed activity, allowing them responsibility while making up a fair. Nevertheless, these pedagogical ideas implied that every new course could start with a "tabula rasa" and students were allowed to decide with whom to collaborate, what the principles and content should be, and how a fair would be organized. Second, during the first few years of implementing the entrepreneurship education program at the the school, the teachers had faced difficulties of "*talking about money*" because it has not traditionally been included in pedagogy, as was recounted by the teachers. Combining entrepreneurial phenomena with pedagogy became easier when voluntary international fieldtrips were added to the school's program. Because the local council did not sponsor students in these trips, the economically productive fair course activity became integrated with collecting funds for the trip. Students whose target was to go on the trip were also motivated to undertake the fair course. In this context, the sharing principle of the partnership (agreed from the very beginning) according to which the partners (the school and the local association of entrepreneurs) share the economic profit of a joint enterprise, became an annual object of negotiations.

Although the above local history contributed to the meaning making, the actions were open to reinterpretations in the unfolding activity. The data excerpts illustrating the findings (below) are selected on the grounds of *the words*, which were repeated in the data being used by the participants for conceiving and communicating. In the analysis of meanings, these accounts were interpreted through specific meaning systems, which seemed to take a dominant position while being embedded in actual processes of shaping and being shaped by actions and interactions of the participants. Each field of the matrix plays a role of a meaning system, which is named in the present text according to the words found as being repeated in the data.

Field 1: Meaning system of money-making

In producing a fair, the students accomplished a variety of tasks, which included much interaction with people outside the school, such as making

phone calls to sell advertisements, getting exhibitors to participate in the fair, negotiating and looking for clothes and shoes for the fashion exhibition, arranging the technical details of internet connections for the exhibitors, inviting guests and speakers and interviewing them on the stage and for the local newspaper, and handling a number of other practicalities such as actions of planning, setting prices and accounting. The tasks were performed within the broader framework of the course, which was introduced by the teacher at a meeting between the students and course teachers. The teacher referred to the content of the course as an enterprise producing profit.

> Our purpose is to make as much profit as possible from the fair event . . . to set up an enterprise, which is running this fair thing . . . In this way we can form a shared project. (Teacher in starting/tutor meeting)

The students adopted this purpose and affirmed that the motive for their practice is "*of course collecting money for our study trip.*" This meaning was interpreted in practice when the students were making decisions. They decided to prioritize money and work by themselves without sharing the profit with people outside and inside (i.e., classmate volunteers) of the school. This way of thinking was also transferred between the students in a tutoring meeting.

> if looking at money and there is some entrepreneur or someone from outside the course then, of course, they will take a portion of your profit. (Student in starting/tutor meeting)

Many actions and interactions of planning and making the fair required issues of money to be considered. Students had to get acquainted with risk taking and choosing between alternatives, e.g., in organizing the entertainment program of the fair.

> Student 1: Well, we could keep the program cheaper and save money. But I don't know which one is better. If we invite a more expensive performer, so would it bring more money?
>
> Student 2: Who will take that kind of risk? It would be easier to do in the same way as before.
>
> Student 3: Yes, I agree
>
> Student 2: Then we are sure that we will get money
>
> Student 3: The limits of budget have to be taken into account also
>
> Student 2: That's it. But if we think that we have to make profit, one way is to save on everything in which we find it possible to do so.
>   (Students' meeting)

For their part, entrepreneurs positioned themselves in an unfolding activity by referring to their past experiences and also being repeated in the present course, which indicated that the students "*wanted to take all [money]*" and "*did not miss any partners*". Entrepreneurs looked at money from the point of view of a fair customer who experiences the prices as being too high.

> . . .if the price of a rented table [which the entrepreneur had to pay] and if the ticket to come in are as high as that, and if this is how the students understand entrepreneurship, that it means taking money from people, they will not have success in the long run" (Entrepreneur in interview)

Entrepreneurs were then asked in their interviews about the role of money in entrepreneurship. They put the emphasis on its meaning "*as a factor of motivation*" and "*livelihood*". As a "*profession*", entrepreneurship was considered to be a more manifold undertaking in which you have skill to take another's view.

In the evaluation meeting supplied with the data informing students' position of "not to share" the profit, teachers were asked about the meaning of the fair course, such as that of collaborating with people outside the school. The teachers reflected on the course against a backdrop of their pedagogical strategy.

> These fair projects are delicate in the sense that now and then young people are very sensitive and may experience any acting and saying of a teacher as their negative judging although there would be nothing like that. (Teacher in evaluation meeting)

Municipal decision makers emphasized the division of labor when they were looking at collaboration between partners.

> We were tutoring perhaps during two, three or four years at the beginning. We were a kind of team in the background until the school learned to take care of the enterprise so that the previous class of students could transfer the knowledge to the next class of students. And now everything is managed really well. (Public officer in interview)

In field 1, the accounts of meaning making indicate social processes, which led to a mode of coordination in which each group of expertise maintained its own understanding of unfolding activity: teachers proceeded with the pedagogy after giving a start to economic thinking, students with making money for their trip, entrepreneurs maintained the status of fair exhibitor (being withdrawn from partnership), and the municipality wanted to delegate community members to carry out specific activities. The participants inside the school were oriented toward holding onto the known and familiar meanings and patterns of behavior attached to the fair course activity in the previous years. When the students evaluated their course at

the meeting, they discussed whether something should or could have been done in another way. Their conclusion was that there was no need to rethink activities; instead "*it is easier to use the old pattern*" because "*everything has functioned quite well year after year*" and "*produced money*".

Field 2: Meaning system of students "own thing" (the project)

The fair course activity was not constructed only with the meanings shown in field 1 but rather induced to reconcile meanings of several activities. When shifting their perspective to learning, the students appreciated most that they had learned to form a team with other students and had learned to work as a team. By focusing on their teamwork, the students negotiated their student's role in teaching and learning and wanted to do their own thing.

> Well, this is, however, the students' project. That's the point and if anyone wants to ask advice from a teacher that's fine, but not in the way that we have to allow any teacher to join us. (Student in evaluation meeting)

The students connected the meaning of their teamwork with their own task-related responsibility in the division of labor and peer-to-peer helping. Especially in their written reports on experiences in the course, students took up the meaning that they had learned to know more about themselves while being in contact with other team members, people outside the school and the "real" world.

> All this was framed by a feeling that we are doing something real like the fair. At school, this feeling is rare. Only what you achieve is a mark that you have passed the course and can go forward. (Student in report)

A new teacher-student relationship was supported by the course teachers who also pointed to other meanings along with business thinking. They underlined the students' experiences of "*goal-oriented work*" that could be transferred to further life in education and the future work of the students.

Outside the school community, the actors of entrepreneurship interpreted school learning in a way that conflicted with that of the course teachers and students. The entrepreneurs challenged the pedagogical approach of the teachers expressing their concerns that "*the children were left to run the fair*" without any responsible adult person who is supervising or looking after them.

> ...there should be someone more responsible person, like one of the teachers, who is responsible and continuous and with whom entrepreneurs can feel trust. Children at this age do not have the capability to take the perspective of entrepreneurs and think in another way. (Entrepreneur in interview)

The accounts in field 2 indicate that the course students and their teachers shared the meaning of students' role in the course, whereas the practitioners

of entrepreneurship were left outside collaborative learning. The meaning making (in field 2) also shows the complex dynamic of boundary object in a joint activity which is unfolding: participants, who represent an expert knowledge (based on their education or acquired experiences) in a certain area, have to confer their everyday knowledge in other (professional) areas and be "to some significant extent therefore unqualified" while contributing to a joint activity in which they participate (Suchman, 1994, p. 25; on "open-context" expertise, Eräsaari, 2003). In pointing out the relevance of teachers' authority in learning, the entrepreneurs were obviously voicing their own school-time experiences as a student.

Field 3: Meaning system of "once invented" idea (the course)

Field 3 recognizes that the fair course is originally a local product of a joint undertaking of regional groups, which participated in creating teaching and learning with the focus on entrepreneurship. Thus, the people of the present study were acting within a *"once invented"* setting. In this historical context of our case, we attempted to capture meanings referring to the continuity of developmental actions and collaborative learning. We searched for accounts of change efforts, development, or future visions of schooling, first, from the data that did not include the researcher's intervening questions. Without findings of this kind, we continued by looking at responses to these topics being initiated by the researcher in meetings and interviews. In their answers, the course teachers and students examined developmental challenges within the context of practical issues related to the school curriculum and their role in the here-and-now concerning "the practical-evaluative dimension of agency" (Biesta et al., 2015, p. 637).

> This is only one course in the students' program and already now it would be quite extensive if it becomes bigger . . . This does not mean that the fair cannot be developed, it can and should be developed, but I think that the risk is that the course becomes even more massive. (Teacher's response to the researcher's question in course teacher meeting)

Students also referred to the volume of work in the course as the main issue of development. At the evaluation meeting, they judged the course to be more demanding than other courses in their schedules.

> Student 1: This is worthy of more course credit, even that for two courses if compared to the work, which is horrible, much more than is required for other courses.
>
> Student 2: Yeah surely you learn the most compared to other courses
>
> Student 1: Yeah in practice and in principle.
>   (Students' conversation in evaluation meeting)

Outside the school, the accounts focused more on change efforts and expressed constraints in the present and threats in the future. Entrepreneurs pointed to problems, due to the way the fair course activity was organized at the school.

> . . . the fair has gone backwards, because I see inexperience there. New students come every year and responsible leaders change every year. It means that the fair is never developing but students make the same mistakes every year. (Entrepreneur in online interview)

The municipal agency looked at the development of the school with concern, viewing the development in the broader context of schools in the region.

> And indeed, we all were disappointed that the number of newcomers was so small in this year. We should be able to do something together as a group of political decision makers and actors in the school . . . or we lose allowances coming from state. Or would it be so that there is now a too-tight net of secondary schools in the region? (Municipal person in online interview)

Besides the critical voice of the entrepreneurs in their interviews, the fair event received mainly positive feedback from fair visitors and met the expectations of the school. Therefore, in terms of project-based teaching and learning, the objectives of the course were achieved. On the other hand, to maintain a reflective relationship with an unfolding activity it is essential to examine the activity in the frame of time, i.e., continuity and discontinuity. Our case seemed to manifest "mundane discontinuity" in which there is an interruption of developmental actions and interactions. This interruption is seldom actively reflected on, because it manifests itself as an absence of actions—things just do not happen anymore (Streeck & Thelen, 2005).[5]

Field 4: Meaning system of "internal entrepreneurship"

An intervention called "future forum" enabled us to analyze meaning making which was produced in a context where actors of a heterogeneous meaning community were provoked to communication ("open dialogue") and have a reflective relationship to their ways of understanding the fair course and entrepreneurship education. The researcher carried out the intervention after the course, adopting some ideas of co-configuration from the tradition of developmental work research (Y. Engeström, 2015). The intervention was a meeting, lasting for two hours, at which the researcher used research data as a mirror and presented her preliminary analyses of the fair course activity.

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[5]Missing actions and initiatives were on display to the researchers in documented presentations and publications produced by the personnel of the school (e.g., further education study by two teachers) when the school was entering and further designing a new area of school activity.

Participants of "future forum" covered the groups inside and outside the school: teachers including the principal (4), municipality decision makers (2), entrepreneur (1), student (1), parents (2), public officers (2) and a person from the third sector (1): 13 people and the researcher.

To investigate meaning making in the purposefully constructed setting, we used the whole transcript of the meeting (1885 text lines). The transcript included a rich and diverse discussion. For the purposes of the present analysis, we examined the topic dealing with understanding entrepreneurship education. The researcher started the forum with her presentation after which a member of the municipal group took the floor as a response to the presentation.

> Policy[6]: Alarm bells started to ring in listening to your talk when you asked "is the goal of the fair course economic or pedagogic?" In my opinion, the main thing was missing.
>
> Researcher: What is it?
>
> Policy: It is a kind of internal entrepreneurship that is the purpose and reason why we want to keep the program here. The fair and journal are only visible tools for reaching this goal.

Joining with the opinion of the policy speaker, other speakers recalled difficulties in communicating the content of entrepreneurship education because people in the region were inclined to think that the aim was "*making all children become entrepreneurs*"; this being the case (in their perception), people were inclined "*to oppose it*".

Ideas for rethinking the concept of entrepreneurship were discussed. Among these were ideas such as taking an international perspective to the business world in order to make a connection between language studies and entrepreneurship education; making the border between vocational and general education more flexible in order to combine practical and theoretical studies in a better way; and searching for networking opportunities with other schools in neighborhood regions as a response to the decline in the number of new students. Toward the end, one idea started to inspire the participants more and more and be established as an outcome of the "future forum". The idea concerned how to advertise the school better so that misunderstandings about entrepreneurship education are corrected. In turn, a student formulated a meaning which she based on her learning experiences.

> Student: I think that the emphasis has been on taking responsibility for your actions. Although we would not learn how to become an entrepreneur, or we

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[6]In the transcript, we use "policy" as a mark of the speaker who belongs to municipal decision makers and public officers.

are not becoming entrepreneurs we learn self-capability and learn to be ourselves.

The meeting culminated in defining the next steps for advertising the school to potential newcomers.

Policy 1: It could even be instead of the fair event, a kind of marketing event or something like that. It could be a kind of inquiry project that you make investigations with other students. As has been said, the most effective issue is the image, which is given by the buddies.

Parent: You could set up an "Enterprising Young People" company which . . .

Policy 2: Definitely

Parent: . . . has a plan of action to go to other schools for telling how wonderful thing this school is

Student: Let's set up a meeting.

Policy 3: This is agreed.

Policy 1: Well, you [speaking to the student] take this challenge

Student: Of course, we take. And was there a parental meeting next Tuesday?

Entrepreneur: Yes, that`s a good starting point.
   (Discussion continues with them supporting each other)

The intervention turned the focus to the concept of "internal entrepreneurship" implying the distinction between "external" and "internal" in entrepreneurship. The outcome of intervention offered a practical solution for clarifying to people outside the school the objectives of the school's entrepreneurship education program.

Summing up the findings

The findings of the analysis show that different meaning systems were emerging and unfolding as intertwined with actions when the students were engaged in practices of organizing a regionally meaningful activity outside the school and positioned themselves into the processes of learning. In summarizing the findings, we present four tensions of the learning object which we have constructed by examining the internal dynamic of an unfolding activity at the intersections of the meaning systems and how meanings encountered and confronted each other. These tensions have been turned into the features of the learning object which comprises new epistemic complexities while connecting teaching and learning to out-of-school activities.

First, our findings show a tension which is located in relation to the meanings of the system being revealed in the context of project activity. The project of setting up a fair offered a learning space for the students to work as a team to carry out the project's objectives. The student team relied on the practices of previous courses which had proven to be effective in achieving the purpose of the project. This meaning making is in line with the findings of educational scholars who have claimed that within a school institution, the project's functionality leads to an easy reliance on already used patterns, conceptualizations, and solutions (Bereiter, 2002; Daniels, Leadbetter, et al., 2007). In relation to entrepreneurship education, these meanings expose a tension at the intersection between promoting a *creative* learning environment (ideal of policy) and actions of the participants (meaning making in practice).

Second, a tension can be found as associated with student-centered pedagogy adopted by the school. The pedagogy had relevance with respect to the objectives of turning students into self-imposed learners who position themselves as active subjects of organizing a regionally meaningful activity. On the other hand, the meanings were in tension with partnership, i.e., actions and interactions of a strategy, which aims to recognize other people as partners and resources of learning in the context of boundary crossing (e.g., Akkerman & Bakker, 2011). Although being acknowledged at the beginning of the fair course history and being emphasized in new learning theories, partnership remained a marginal learning resource in this case study.

Third, the fair course as a tool for teaching and learning entrepreneurship was associated with action- and doing-based strategy which is considered suitable not only for seeing learners as active subjects but also for integrating learning with out-of-school practice. In learning sciences research, "learning by doing" has mainly been investigated and reported in relation to science studies and then being examined as a pedagogical strategy of learning "the disciplinary content" of subject (Krajcik & Shin, 2014, p. 275). When the disciplinary content is set aside, like in entrepreneurship education, a tension can be found while aiming to define how the content to be learned becomes constructed in the context of doing. Entrepreneurship education research points here to a change in education from having traditional aims of "transferring knowledge and fostering thinking" to education which has "personality-developing educational objectives" (see Berglund & Holmgren, 2013, p. 10; Holmgren & From, 2005, p. 385). In this framework, the disciplinary content of entrepreneurship (coming from economics and management) is replaced with the content of "fostering and changing attitudes and motives" of students (Berglund & Holmgren, 2013, p. 10) and teachers as well.

Fourth, a tension already being partly implied in the above tensions and being indirectly expressed by the participants themselves at the future forum,

concerns the way of thinking about entrepreneurship. In *doing* entrepreneur-ship, the students were thinking and communicating in economic terms using the meaning system, which led to prioritize actions related to making an economic profit. This economic-based view was questioned at the future forum and was replaced with issues of personal development. This tension is a topic which has been discussed increasingly in literature for tackling problems of how to conceptualize entrepreneurship (e.g., Houtbeckers, 2016) and entrepreneurship as related to education (see more, e.g., C. Jones & Spicer, 2009). The tension reflects the conflicting relation of "external" and "internal" entrepreneurship. In our study, the tension between the concepts used in doing entrepreneurship and used in thinking about entrepreneurship raises a question on a missing theoretical link in research between doing and thinking.

By taking into account that entrepreneurship education research is for the most part made public and discussed in the journals associated with business and management research interests and theories, we propose that the above tensions found in practice are a sign of a lack of learning theories concerned with human development for understanding learning. To search for deeper insights into the learning object with a special interest in school knowledge, not only in relation to entrepreneurship education but also more generally to opening schools toward society with a means of participating in activities having their meaning in practice, we consider it important to reflect on the issue of epistemology. Our discussion focuses on a need to examine episte-mology in the context of the relationships between thinking, personal devel-opment and out-of-school practice.

Discussion

The research connecting learning with a socio-cognitive means of the out-of-school context has expanded the theoretical view of learning toward different ways of thinking and heteroglossia in learning. Knowledge has been con-ceived as situated, practical, and collaboratively generated, allowing for children to bring their prior knowledge and knowledge structures to the classroom (e.g., Knight & Littleton, 2017; Rosenberg et al., 2006; Sawyer, 2014). Yet, with regard to cooperation between education and other activi-ties, Säljö (2003) underlines that contextualizing knowledge, skills and attitudes for preparing students for the "real world" is not identical with performing a "real-world" action. Rather, education is a valuable and rewarding activity in its own right in constructing a link between teaching and learning and development of a learner's consciousness (thinking). In most contemporary learning sciences research, conceptual learning is con-sidered to be foundational for in-depth learning of any domain (Greeno & Engeström, 2014). The qualities of acquired concepts are seen to have a role

of "integral and theoretical thinking tools" which mediate learning and reflect the essential characteristics of the studied domain in education (Arievitch & Stetsenko, 2000, p. 71, see also; Cole, 1996; Davydov, 1990; Vygotsky, 1978). In light of the findings of the present study, we focused our discussion on the relationship between conceptual learning and entrepreneurial learning in the framework of change in epistemic activity of school.

The approaches seeking to give more relevance and space to social practices coming from outside school have challenged the traditional notion of *concept* in education by suggesting the distinction between formal and functional concepts (Greeno, 2012; Hall & Greeno, 2008). In this distinction, formal concepts are given formulations or definitions, whereas functional concepts provide more understanding of the situated nature of concepts.[7] In particular, functional concepts are shaped and used as integral resources in daily practices and distributed across people as well as tools and artifacts that are used in the activity. This functional reasoning "contributes to the way participants organize their understanding of what they are doing" (Greeno, 2012, p. 311). Our study showed that the use of concepts such as money and profit and related to making money (obviously integrated with the experiences of using them outside school) provided the students with a common ground for understanding entrepreneurship in and for doing it. Therefore, instead of distancing entrepreneurship from using economy-based concepts, as it is becoming part of the educational system, it looks *theoretically* reasonable to examine thinking with these concepts as a means of making the activity meaningful for the students who are engaged in acting. Learning, in turn, becomes connected with development of one's consciousness in a joint activity, which builds on these conceptual and social resources. This bidirectional and non-dualist approach to processes of doing and learning helps the learning theory to avoid the de-contextualization of the mind in education (e.g., Stetsenko, 2017).

In the non-dualist approach to mind, the entrepreneurial learning challenges are to examine conceptual tools as a means related not only to thinking for doing entrepreneurship but also for integrating this doing with the learner's unfolding relation of the world. The relation links learning to the development of a learner's consciousness in the context of actualizing a social reality of doing.[8] This relationship between thinking and engagement with society, being in research and policy faded out in entrepreneurship education, is seen by critical scholars as the reason for dissociating the

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[7]In Vygotskian tradition, formal or "scientific" concepts, compared to "everyday" or "spontaneous" concepts, refer to *relations of concepts* (their systemic relation with one another) to the world (Derry, 2008).

[8]In the present study, the students were acting in the reality that was confined to institutional activity of school in the way, which allowed *the school* to decide how a profit of enterprising (money) shall be used (i.e., for students' overseas trip).

economics (money-making drive) from entrepreneurial ideals (e.g., Holmgren & From, 2005; Komulainen et al., 2013; Mononen-Batista Costa & Brunila, 2016). In critical studies, the ideals are claimed to be coming from the (neoliberal) political view in which the individual ("internal") is "at the center of social life and economic activity" and which makes her "responsible for the economic conditions of her existence in society" (Holborow, 2015, p. 94, see also Foucault, 2008). The ideals underlying a worldview of market-driven reality sustain tensions between the relationship of the individual to communities, public values, and the public good (on the neoliberal criticism addressed to science studies, see McKinney de Royston & Sengupta-Irving, 2019; Rahm & Brandt, 2016; Smith, 2011).

Thus far, pedagogical approaches that include efforts to connect learning with out-of-school activities have not clearly encompassed the boundary in which "the epistemic" and "the political" meet in education (cf. Van Bouwel, 2009). It is important, however, that in their review study on crossing school and out-of-school contexts Rajala et al. (2016) found that a predominant pedagogical rationale for "incorporating student's out-of-school learning into instruction" was the promotion of educational equity and inclusiveness while having a concern for social justice and cultural sensitivity. This political concern and interest is notable, particularly in education of children from non-dominant communities (e.g., Gutiérrez, 2016). On the other hand, in their study of ideological convergence in classroom discussion the investigators (Philip et al., 2018) found that epistemologically prevalent practices led to obviate socio-politically non-dominant perspectives. They claim that the hardiest part about ideology is its taken-for-granted nature and difficulty in simultaneously seeing things through diverse ideological lenses (see also, Holborow, 2015). The case of entrepreneurship education raises a concern for values in education when the learning object becomes defined in the context of an ideology of "economization" and "marketization". This object runs into the risk that its socio-political content represents outside world as "objective" in terms of economics and justifies its rationale for setting economic values as primary in relation to other values. Leaving political and value aspects outside new forms of epistemic activity, the learning object ("enterprising mind-set") looks "neutral" and politically "free" in the context of historically constituted epistemological and evaluative practices of education.

Our study of entrepreneurship education from the perspective of opening institutional boundaries of school sheds light on the change of epistemic activity which reflects the cultural change, not only of a historical development of knowledge and theories, but of *cognitive acquisition itself*, and how we construct processes of knowing (Wartofsky, 1979, p. xiii). Therefore, rather than to raise for discussion the move from "external" (such as knowledge) to "internal" (such as a mind-set, attitudes or personal development),

our findings address the change that is related to mediating means of learning in school institution. These new means require *intermediate episte-mological practices* that deal with conceptual multiplicities, perspective diversities and varieties of social meanings and are thus restructuring epistemic activities in school.[9]

To enhance the ability to confront the socio-political content of education, educational practitioners and researchers need to acknowledge that values and points of view are related to political questions of what is desirable in education (Biesta, 2013). At the boundary between the epistemic and the political we need more theoretical and empirical research on issues, such as, whether education should be committed to recognize the diversity of social realities and their value-laden content in the context of the epistemic justification, and how it could be done so. In addition, this leads further to examine whether education itself should be committed to values and how it could be so (e.g., see on philosophy of science and education, Derry, 2008; on feminist economics and standpoint epistemology; Rolin, 2009). Research and discussion on an epistemic justification of knowledge in the school institution is required to avoid a risk that teachers will be left on their own to sort out the complex interrelations between the meanings of knowledge and points of view that do the political "work" through the educational system.

Conclusion

Our study raised for discussion the issue of epistemology in relation to school knowledge when schools are opening themselves to society with new peda-gogical practices. We used entrepreneurship education as a window to this opening by using case study strategy, which has a quality of challenging orderliness and generating new insights for reconsidering theory (Payne & Payne, 2004). Obviously, our particular case has shortcomings because contemporary school life includes a rich variety of examples of entrepreneurship education, even raising a question about whether this one is a "real" case of entrepreneurship. In addition, curriculum research, which examines curriculum as related to society and its change, will contribute further in extending a view about education. Regarding our case, we have relied on the school's own understanding and definition of entrepreneurship education. Although seeing the school's regional location and local circumstances as constraints for making generalizations about entrepreneurship education, we have used the complex constellation of social practices of the school offered by our case, as an opportunity to pay empirical and theoretical attention to

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[9]The use of digital technology has also added pressure into designing intermediate practices which deal with restructuring epistemic activities in learning and with transformative potential of education, though in this case with instructional emphasis and interest (e.g., Paavola et al., 2012; Säljö, 2010).

the learning object being constructed with a means of linking students learning with the "real world".

Further investigations are needed to improve understanding of the conflicts in views, which are dividing educational communities into two camps: those that advocate and those that resist entrepreneurship education. In the policy context of entrepreneurship education, it is not easy for critical voices to be heard (Mononen-Batista Costa & Brunila, 2016). However, such programs are not only one major theme in current educational policy but are also becoming integrated with educational systems as a taken-for-granted content of learning and knowledge. Besides our example, globalization and climate change are presently forming social realities of new learners in the school institution. Therefore, more research on new epistemic activities is needed to understand personal and social epistemologies but also for rethinking the role of institutional schooling as a powerful agency of linking learning to identity development through students' active engagement with society, i.e., with the practices constituting future social realities.

Acknowledgments

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