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Title: Learner at the heart of curriculum : Theoretical analysis of core curriculum in Finland

Year: 2021

Version: Published version

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Please cite the original version:

Valli, P. (2021). Learner at the heart of curriculum : Theoretical analysis of core curriculum in Finland. *European journal of curriculum studies*, 7, 46-66.

<http://pages.ie.uminho.pt/ejcs/index.php/ejcs/article/view/232>

Learner at the heart of curriculum: Theoretical analysis of core curriculum in Finland

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Abstract

The curriculum is seen as a key steering document for teaching and learning. In Finland, its latest reform from 2014 highlights the importance of pupil's learning rather than teaching. This article describes the learner-centered approach of the Finnish National Core Curriculum for Basic Education. The theoretical frame of reference for the study is the points of focus in the curriculum's conception of learning and the definition of learner-centered approach based on them. The curriculum is examined from the perspective of learner-centered approach in the learning process. The research is a qualitative content analysis, which resulted in definitions of learner-centered approach and a description of the learner's role in the curriculum text. The results defined learner-centered approach into three main concepts: individuality, manageability, and participation. I conclude that, although the curriculum is based on learner-centered pedagogy, a shared discussion of the school community and teachers' understanding of learner-centered approach is necessary for the successful implementation of the curriculum.

Keywords: Curriculum; Learner-centered approach; Content analysis

Introduction

The reform of basic education has been under pressure for years both in Finland and elsewhere in the world. Globalization and societal changes contribute to the development of education, but essential reasons for the reform of basic education are also the change in the nature of knowledge and the emphasis on the importance of transversal competencies, as well as the development of technology (Halinen, Holappa & Jääskeläinen, 2013, 191-192). The core task of basic education can be considered to be the diversified support for the learner's growth and learning instead of teaching. In connection with school change, reference is often made to inclusive pedagogy (Kumpulainen, Krokfors, Lipponen, Tissari, Hilppö & Rajala, 2010; Krokfors, Kangas, Kopisto, Rikabi-Sukkari, Salo & Vesterinen, 2015) or learner-centered teaching (Weimer, 2013). The starting point for both is learner agency and active participation. One of the enablers of such a reform in Finland is the National Core Curriculum for Basic Education (FNCC) prepared by the National Board of Education (FNBE), which is a key document steering instruction and education (Vitikka, Krokfors & Rikabi, 2016). It is a norm whose regulations form the basis for the development and implementation of local

curricula. The principle of steering in the curriculum is reflected in clear and detailed guidelines (cf. Vitikka, 2009, 68). In Finland, the most recent national core curriculum was approved in 2014 and came into effect in autumn 2016 for grades 1-6.

The objective of the FNCC is to develop the well-being and growth of the pupil and to guarantee equal education for all, based on the respect for the diversity of individuals (FNBE, 2014, 15-16). Curricula always reflect the social emphasis and current educational policy solutions (Vitikka, 2009, 67). The latest curriculum reform seeks to change both the pedagogy and the operating culture of the school (Halinen et al., 2013, 193). It emphasizes the significance of the teaching-learning process and focuses on the learning of individuals rather than teaching (FNBE, 2014). An important question has therefore been how the teaching and learning are organized, thus strengthening the role of the learner (Vahtivuori-Hänninen, Halinen, Niemi, Lavonen & Lipponen, 2014).

In Finland, curricula have been renewed approximately every ten years. Their emphases and pedagogical steering have varied over time (Lappalainen, 1985; Halinen et al., 2013, 188). Curricula have changed over time from content-oriented to individual and communal learning (Uusikylä & Atjonen 2005, 58). At the same time, the shift from teacher-led teaching to learner-centered teaching has been perceived as slow (e.g. Krokfors, 2017; Rasku-Puttonen, Poikkeus & Lerkkanen, 2010, 308; Schweisfurth, 2015). In Finland, the curriculum is divided into two parts: the more general principles, and the subject-specific objectives and content. At the beginning of the FNCC, broader educational aims and pedagogical principles are stated, and the second part contains a description of the organization and support of the teaching-learning process, such as the construction of diverse learning environments and the choice of teaching methods. (Vahtivuori-Hänninen et al., 2014, 23-24.) The texts in the general part are based on the conception of learning, which leans on the principles of socio-constructivist learning and puts the learner's activity at the center of learning (Vitikka, Krokfors & Hurmerinta, 2012).

The curriculum has been studied relatively little in Finland compared to, for example, American research, although research has sometimes been lively. The development of curriculum theory has been studied especially from the perspective of administrative decision-making (e.g. Suortti, 1981; Malinen, 1985). Vitikka (2009) ja Rokka (2011), among others, have conducted research related to the contents of the curriculum, Holappa's (2007) research has related to curriculum processes and Atjonen (1993) and Syrjäläinen (1994), among others, have studied the curriculum as a tool for school development. Studies conducted during the current decade (i.e., Laine, 2010; Korkeakoski, 2010) have shown an increased teachers' commitment to the curriculum, although the curriculum still does not have a well-established role in everyday schoolwork. Examining the relationship between the teacher and the curriculum, it has been found (see Salminen & Annevirta, 2014, 12-17; Vitikka, 2010, 25) that the curriculum itself can provide precise guidance for the teacher, but the curriculum as a norm leaves much room for interpretation and freedom for teachers. The text of the general part of the

curriculum is mostly informative, educational and indirect (Salminen & Annevirta 2014, 344).

The purpose of the curriculum reform is to develop schools and instruction as well as the development of teachers' pedagogical skills (Pietarinen, Pyhältö & Soini, 2017, 22; Vitikka & Hurmerinta, 2011). The curriculum serves as a pedagogical steering tool and aims to inform each teacher about the latest conceptions of learning and instruction, and how to implement the instruction. In order to develop the school, a discussion is needed about the functioning of the curriculum, good teaching and teaching methods. The curriculum provides concrete answers to these questions. The curriculum can therefore be considered a significant guide for the instruction in practice. (Korkeakoski, 2008, 39). The objective of this study is to find out how the FNCC describes the role of the learner-centered approach and of the learner in the pedagogical texts at the beginning of the document. The research question consists of the following: What definitions is the learner-centered approach given in the curriculum text?

The examination can clarify the position of the learner and the support for learning-to-learn skills. The research provides information on what kind of learner-centered implementation the FNCC conception of learning guides the teachers. The prevailing learning theories are used as a frame of reference to demonstrate the essential importance of learner-centered approach in the context of the curriculum. Learning theories are useful because FNCC is based on them and in them; the role of the learner in the teaching-learning process is seen as active. Researching this subject shows the proportion of learner activity and participation in FNCC, which in turn, contributes to informing the practical everyday work of the teacher. The research also benefits basic and in-service teacher training in the interpretation and implementation of the curriculum.

1. FNCC conception of learning

FNCC is a plan for instruction and has both an informational and a pedagogical function. FNCC is a core element of the normative steering system for basic education, which also includes various laws and regulations that guide education, as well as local curricula. By reforming the components of the steering system, it is possible to respond to the changes in the world around the school and to strengthen the school's role in building a sustainable future. The curriculum shows the influences of two didactic models: the German Lehrplan model and American Curriculum theory. The Lehrplan concept is clearly visible as the subject division, while the Curriculum perspective brings out more strongly also the pedagogical guidelines and thinking that supports the pupils' broader development (Vitikka, 2009, 73-75). There are various emphases in the background of the curricula related to curriculum ideologies, determinants and models (see Lahdes, 1986, 37-38; 1997, 22; Schiro, 2013, 2-3; Vitikka, 2009, 84-85). There is hardly a curriculum that emphasizes one particular determinant, but learner-centered

approach has been strongly reflected in Finnish curricula in recent decades. The learner-centered curriculum takes into account the individual development perspective and allows for more flexibility in the curriculum (Uusikylä & Atjonen, 2005, 53).

The emphasis on the learning perspective is reflected in the FNCC as a description of broader learning objectives and skills. In terms of pedagogy, instruction has shifted from *what* is learned to a question of *how* to learn. This is also an internationally focused perspective where the future skills are emphasized (OECD, 2005; Voogt & Roblin, 2010, 21, 2011). Curriculum developers' conceptions of learning and teaching are reflected in the nature of the curriculum. Since 1994, the curriculum in Finland has been based specifically on a socio-constructive concept of learning, in which learning is seen as an active and social activity. (Vitikka et al., 2012.) Awareness of the role of pupils in the teaching-learning process is essential, but increasing pupil participation and active role has been slow in everyday practice. They require both the teacher and the learner to take on new roles (Rasku-Puttonen et al., 2010, 308). At the level of language of FNCC, the learner-centered approach has been brought from the abstract level closer to practical descriptions.

The reformed FNCC emphasizes the conception of learning where the core elements are the active role of the learner, interactive way of learning, positive experiences, self-regulation and learning-to-learn (FNBE, 2014). These perspectives can be seen as conforming to a classification that takes into account the cognitive, affective and metacognitive aspects of learning (see Vermunt & Verloop, 1999). The learner's role as an active agency is evident at both the individual and community level. The conception of learning sees the learner as an active constructor of knowledge and the subject of his or her own learning. The position of the learner rises to a central part in the learning process. The learner's own activity is relevant to learning and the skills to be acquired. Learning takes place in interaction with others as learning-to-learn skills are emphasized (cf. Pruuksi, 2008; Rauste- von Wright, von Wright & Soini, 2003; Appelfield, Huber & Moallem, 2000/2001).

The conception of learning presented in FNCC creates a clear basis for the teaching-learning process in schools. A curriculum is a pedagogical document that takes a stand on the nature of teaching and learning within the framework defined by its conception of learning. At the heart of FNCC is a learner and the learner-centered approach, which I will define next. The learning perspectives emphasized in the curriculum's description of conception of learning have steered the definition of the learner-centered approach. The key learning theories and conceptions of learning have been chosen as the starting point for the definition.

2. Learner-centered approach

A key concept in this research is the learner-centered approach to learning. The concept of learner-centered learning and teaching is broad and includes

different perspectives depending on the determinant or context (O'Neill & McMahon, 2005, 30-32). There is a rationale in this study to use the concept of learner-centered because the learner is the one who learns and learning requires studying (Kansanen, 2004, 68). Being a learner means taking active and conscious action to promote one's own learning. I use the concepts of learner and pupil in parallel to mean the same, learning and studying individual in a teaching-learning event. Centered, in turn, refers to the pupil as a social agent in the school and as an object of their own learning, a subject. The learner-centered approach includes certain common factors related to learner status that are essential to address in the research framework. The learner-centered approach is not a theory or conception of learning, but is based on several learning theories. I define the learner-centered approach by examining different learning theories and conceptions of learning as well as the learner-centered principles in the APA (American Psychological Association 1997) and create a structured theoretical framework in which learner-centered approach is broadly understood and defined. The APA's learner-centered principles are useful in this context because they relate to the internal learning factors controlled by the learner and identify the impact of the external environment on them (APA, 1997).

The learner-centered approach is based on constructivist learning theory, in which the learner plays a significant role in constructing meanings based on new knowledge and previous experience. The influence of Dewey, Piaget and Vygotsky is behind the learner-centered teaching. Dewey's progressive view of education is reflected in learner-centered teaching as a consideration for the social and experiential process of learning. Piaget's theory of cognitive development emphasizes the role of experiences and ideas in creating meaning. Vygotsky, for his part, provided an insight into the social dimension of learning how socio-cultural learning has an effect.

Cognitive factors

APA's cognitive and metacognitive factors as well as a constructivist view of learning can be found underlying the cognitive factors. Constructivism is divided into different types and is not in itself a learning theory, but neither is it a teaching method (Tynjälä 1999, Rowe 2006). Constructivism is a conception of learning that has developed in recent decades. It has its roots deep in cognitive psychology and it is fundamentally about a person's ability to process information.

The learner's active role is manifest in the cognitive conception of learning through processing of information. It highlights the significance of the learner's preconceptions and initial understanding, as they can enable learning to be meaningful and productive (Uusikylä & Atjonen, 2005, 143-144). Processing of information is steered by the learner's own choices and interests. While learning, the learner interprets the new information through structures constructed by previous experience (Dewey, 1957, 107). The learner's perceptions of problems and contradictions in information trigger learning (Pruuki, 2008, 18). In construction of knowledge, the key is to combine new information and concepts with existing

knowledge meaningfully (Rauste-von Wright, von Wright & Soini, 2003; Tynjälä, 1999). This allows the knowledge to be used in new contexts and situations. If previous knowledge and experiences are not taken into account, the new knowledge will remain unstructured. From a cognitive perspective, the learner is active, goal-oriented, self-regulating, and responsible. The learner receives, processes, produces and interprets information actively and purposefully. Such cognitive processes include, among others, sensation, perception, memory, thinking and reasoning (APA, 1997; Puolimatka, 2002, 85, 96).

The individual and the community itself always construct knowledge, therefore this process can be understood as either individual or communal. The individual trend was represented by Piaget, according to which the development of individual's knowledge structures takes place continuously and the cognitive processes are individual. In individual constructivism, the learner creates and pursues goals that are important to them in both the short and long term, solves problems and evaluates their own learning in relation to the goals, as well as regulates their own learning by modifying their thinking and actions. Setting goals helps learners to form useful knowledge structures and see the connections between the things over time. (Puolimatka, 2002, 96; Pruuki, 2008, 18.) Strategic thinking, in turn, is used in reasoning and problem solving. The learner uses different strategies to achieve the goals according to the situations. This principle also involves the reflection and observation of the strategies used (APA, 1997).

Cognitive factors also include learner's thinking skills, metacognitive knowledge and skills. Metacognitive knowledge refers to a learner's understanding of their own and others' thinking as well as knowledge of themselves as learners and their learning processes. Metacognitive skills are skills of self-assessment that are used to plan, steer, and evaluate one's own thinking and problem solving. The learner has the ability to reflect on their own thinking and evaluate their learning as well as find ways and alternative methods to achieve the goals. (Lonka, 2015, 18; APA, 1997). By assessing one's own progress, the learner's self-appraisal skills improve, which increases motivation and self-directed learning. Learners have individual ways of learning, their own kind of competence, and often narrow learning preferences that are useful to look at and expand on. In addition, the context of learning is a principle to consider. Learning, especially attitudes towards learning, is also influenced by environmental factors such as culture, technology, and teaching approaches (Puolimatka 2002, 85; Uusikylä & Atjonen, 2005, 143-144, 146; APA, 1997).

Social factors

Social factors include socio-constructivist conception of learning and social factors as defined by the APA. Social constructivism is mainly based on Vygotsky's ideas. It is largely sociological in nature and the reality is connected to constructions born in human relationships. The processing and conceptualization of real phenomena is influenced by the social context and the language used in it (Kauppila, 2007, 47-48). The dialogue in a community is used to construct

knowledge and create meanings. Language plays a significant role in learning new human knowledge (Dewey, 1957, 57-58).

Learning is seen as a social and cultural event (Bransford, Penttilä, Tanner, Cocking, Donovan, Pellegrino & Brown, 2004). The individual needs to be active, but learning still takes place in the interaction between the individual and the community (Lave & Wenger, 1991). People interpret and understand reality from their own point of view. Learning takes place in active operation, where an individual selects information that is relevant to them from their environment and uses it to form a vision of the world for themselves. Through interaction and collaboration, the learner can achieve a higher level of thinking and experience increased social ability. In safe interaction, the learner dares to share their thoughts, take an active part in the work and contribute to creating a learning community (APA, 1997). Learning is a dynamic and holistic process in which the individual is part of a community of agents, its culture, values, practices and tools. Indeed, the interaction between the individual and the community is seen as central and the individual's participation in community operation enables the management of communal thinking and action. Reciprocally, the community of agents develops with the participation of the individual as the individual actively changes things within the community. Thus, learning is a community process that is constantly evolving as the community operates in different environments and spaces. The operation is based on mutual agreements and shared responsibilities between the members of the community, which constantly creates equipment to support new operation, such as various tools, practices, concepts and language. These act as a bond between members in the community (Vygotsky, 1978; Lave & Wenger 1991, Wenger, 2010). This kind of constructivism, that emphasizes communality, sees the relationships between the people in the community and themselves as crucial to individuals' learning. The roles, interactions, rhetoric, and probable conflicts of people in the community reshape reality, allowing knowledge to be reconstructed, altered, and combined with new information (Tynjälä, 1999).

Emotional factors

The definition of emotional factors is based on both humanism and the motivational and emotional factors of APA. According to the core idea of humanistic learning theory, the learner is an active and self-regulating agent. The learners are responsible for their own learning and the learner's individual learning process is central. In addition, the learner's own experiences are significant for learning (Pruuki, 2008, 13). The principles of the humanistic conception of learning can be considered including the notion of meaningful learning. The meaningfulness of learning is closely influenced by interaction, social and physical environment, as well as emotions and motivation (Lonka, 2015, 72, 163). The learner's beliefs about himself or herself as a learner are relevant to motivation and affect the quality of thinking and processing of information. Positive emotions improve motivation and performance. Intrinsic motivation is a key factor in meaningful learning. Its emergence is influenced by the learner's ability to operate creatively and curiously

(APA, 1997). The learner is motivated to learn by three need: a sense of autonomy, a sense of competence and a sense of relatedness. The learner's ability to participate, influence, and experience the ownership of their learning leads to a sense of autonomy. The feeling of self-efficacy is experienced in tasks that are meaningful, of an optimal level and challenging, but that are nonetheless possible to accomplish. Assignments should also be related to real life situations and the learner has the opportunity to choose and influence them. Purposeful assignments promote positive emotional experiences and learners find them interesting and important to themselves. Taking responsibility for one's own learning, but also for the operation of the whole school, increases the learner's sense of competence. Long-term collaboration with other learners increases the sense of belonging. (Deci & Ryan 2008; APA ,1997).

3. Methodology

In this article, I examine the learner-centered approach conveyed by the written curriculum and the role assigned to the learner in learning. The analysis focuses on the occurrence of learner-centered factors in an effort to find similarities between different areas of FNCC. This also makes it possible to view the presence of the prevailing conception of learning in the FNCC text. The material of the study consisted of five areas of the general part of the 2014 FNCC. These areas describe the various factors related to the pupils' learning experiences, learning environments, and learning assessment that steer a teacher's pedagogical operation. From the texts in the first part of the document, the operating culture, learning environment, working methods, transversal competence and general principles of assessment were included in the examination. I omitted chapters where the text deals with specific areas or guidelines for developing local curricula, from the material in this article.

The description of the operating culture of basic education determines the principles that steer the operation of schools. The text on the operation culture aims to steer the development of an operation culture of schools in a way that promotes learning, participation, well-being and a sustainable lifestyle. The school operates as a learning community and encourages all of its members to learn (FNBE 2014, 26-27). In the descriptions of the curriculum, a learning environment refers to the spaces and places as well as the communities and practices in which study and learning take place. It also covers equipment, materials and services. The significance of the learning environment for the growth, learning and interaction between the individual and the community is essential (FNBE, 2014, 29). The working methods are described in detail in FNCC, opening up the starting points for their selection and the importance of versatility. The versatility and functionality of the working methods are seen as supporting the learning of individuals and the whole teaching group (FNBE, 2014, 30). Descriptions of transversal competencies have been drawn to support the achievement of competencies needed in the future across subject boundaries (see OECD, 2005). Descriptions of transversal

competencies include both knowledge and skills, as well as a willingness to apply them in different situations. The emphasized and specific descriptions of seven competence areas are separate for grades 1-2 and 3-6. The competence areas are interrelated in many ways and are also included in the subject-specific definitions of objectives and contents (FNBE, 2014, 20). The purpose of the text is to guide the school and the teacher in supporting the pupils' transversal competence, not so much to describe the requirements set for the pupils (Halinen et al., 2013, 193). The general principles of assessment emphasize the diversity of assessment, daily feedback, the consideration of pupils' individualities and the importance of self-assessment (FNBE, 2014, 49-50).

As a research method, I use abductive content analysis, which has theoretical connections, but the analysis is not directly based on theory. Abductive content analysis lies between inductive and deductive content analysis, where the two forms of analysis are combined. The units of analysis are selected from the data, but previous information guides the analysis. (Tuomi & Sarajärvi 2018.) Research material is linguistic material and content analysis can be used to systematically analyze these contents and structures related to the phenomenon under study (Chi, 1997, 272) and organize material meaningfully for interpretations and conclusions (Grönfors & Vilkkä 2011). Content analysis can be both a qualitative analysis of the material and its quantitative breakdown. The aim of the content analysis is to describe the phenomenon in a conceptual form and to elicit the essential meanings from the text guided by research questions (Krippendorf, 2013, 35-37). In content analysis, the text is never objective, but the context and purpose of the text must be taken into account in the interpretation (Krippendorf, 2013, 38-39). In this study, the context is related to the analysis of the significance of the written curriculum from the perspective of the learner's position, and the study seeks to answer the question: What definitions is the learner-centered approach given in the curriculum text?

The research data describes the phenomenon under study and, with the help of analysis, the aim is to organize it in a concise and clear form, preserving the information, it contains (Patton, 2002, 453). Reliable conclusions can then be drawn from the data. The text of the general part of the curriculum is a narrative text that is in accordance with curriculum theory, emphasizing the learning and learner perspective. In the text of the curriculum, each sentence is significant, in which case it is essential to find certain manifestations, not so much to look at the number of their occurrence. Therefore, my analysis is qualitative and there is more relevant to elicit the examples of analysis categories (learner-centered) than to calculate their number, in terms of understanding the learner-centered approach.

First, I became acquainted with the whole by reading the text of the general part of the curriculum for five selected areas. For my analysis, I extracted from the curriculum such expressions that embody a theoretical perspective, i.e. expressions that describe the learner's actions or their learning. Irrelevant expressions that did not refer to the learner or their contribution were excluded from the analysis. After that, I got acquainted with the material as a whole by

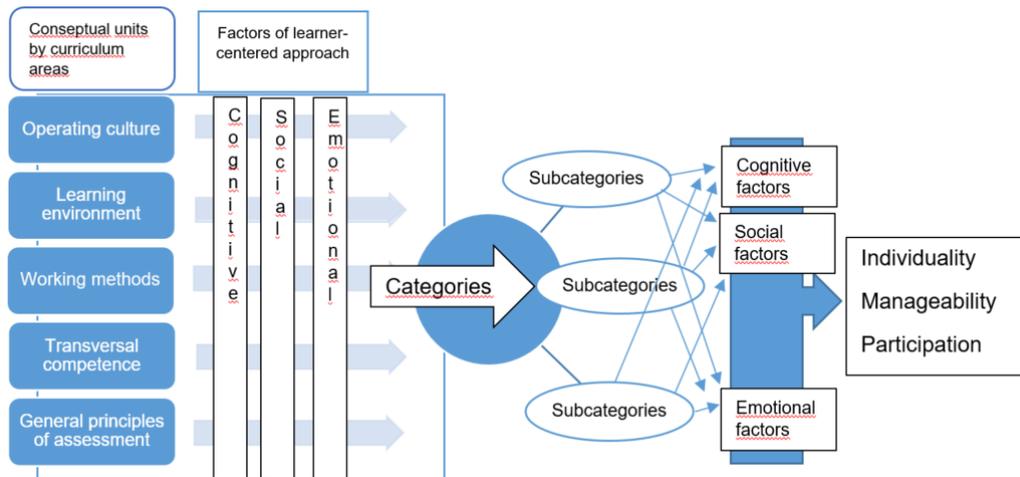
reading the material, which totaled 17 pages. The unit of analysis is a conceptual unit, which can consist of one or more sentences. The subject of the analysis was 163 of these conceptual units. I have coded five curriculum areas in accordance with these units of analysis and classified them by means of a theoretically structured framework of analysis to form a table, separately for each curriculum area. In the framework of analysis, I used three key concepts of learner-centered teaching as themes: cognitive, social and emotional factors that arise from learning theories and the definition of learner-centered teaching in APA (Table 1).

Table 1. Features of learner-centered approach as a frame of reference for analysis

Cognitive factors	Social factors	Emotional factors
processing knowledge	learning in interaction and collaboration, participation	own experiences and feelings
own choices and interests	language as a tool for interaction and thinking	the joy of learning, meaningful learning
setting objectives and evaluation	community process	supportive and encouraging feedback
own way of learning, learning strategies, reflection	cooperation with other agencies	responsibility and self-regulation
planning the learning		own will, self-efficacy and motivation

The objective was to look for conceptual similarities and differences. The process of analysis progressed from categorizing the concepts into themes to typification of these concepts. I have searched each area of curriculum for the expressions that describe the concept of learner-centered. I have been looking for common characteristics in these expressions and I have grouped them into subcategories. Finally, I combined the subcategories belonging to the same theme from all five different curriculum areas into one whole, so that I was able to look at the theme as a whole across the different areas and form sub-categories into higher categories. The higher categories were formed as individuality, manageability, and participation. The analysis thus took place in three rounds. The results illustrate how the cognitive, social and emotional factors of learner-centered approach manifest themselves in five areas of the curriculum.

Table 2. The procedures and phases of the content analysis process.



4. Results

The learner-centered approach is reflected in FNCC as consistent and clear. It is reflected above all in detailed descriptions of the role of the learner and in emphasizing the active role of the learner at both the individual and community level. The emphasis on the learning perspective can be seen in the text of the FNCC, and consequently the descriptions of the learner's skills show connections with the factors of the learner-centered approach. The learner-centered approach is described in a language closely related to practice. The categories of learner-centered approach were formed as

- individuality
- manageability
- participation

Individuality

In FNCC, the learner-centered approach is strongly manifested as an aspect related to the learner's personal experience. It emphasizes taking into account the learner's own starting points and taking responsibility for learning and matters related to school and society in general. Individuality in curriculum texts is reflected in the learner being an active, participating subject. The learner's own choices and actions have implications for learning and action.

The learner's personal learning and growth is supported at the learning community level. The learning community creates the conditions for experiences of success and encourages learning from mistakes. "As members of a community, the pupils may build a positive and realistic self-image and develop their natural desire to experiment and explore" (FNBE, 2014, 27). The learning community

inspires, encourages, and supports the learner to strive for learning. The learners' self-knowledge develops by identifying their own roots, and they are supported to construct their own cultural identity. Through working life skills and entrepreneurial skills, the learners' understanding about their own responsibility for their learning and as a member of the community and society grows as well. Guiding and encouraging feedback helps learners to understand their own progress and skills. In the learning community and through assessment, the learners can develop their skills related to emotional factors in particular (see Table 1).

The curriculum describes the importance of learning environments in supporting the learners in their own creative solutions and in studying the matters. Information and communication technologies are part of the learning environment and support the learner's personal learning path. In addition, the importance of the learning environment is manifested in that *"Feeling successful and experiences gathered in various environments and learning situations inspire pupils to develop their personal competence"* (FNBE, 2014, 30). Every learner has a role to play in planning the learning environment. *"The pupils' individual needs are taken into account in the planning of learning environments"* (FNBE, 2014, 30). The learners' needs also guide the choice of working methods. By varying the working methods, the learning of each learner can be supported. Individuality is expressed by taking into account the learner's interests, which is strongly related to the cognitive factors of learner-centered approach (see Table 1). The learners are able to take their interests and needs into account when choosing the working methods when they participate in the process. The variety of working methods gives the learners the joy of learning and experiences of success, but also the support for the development of self-regulation. Working methods that support self-regulation are motivating for the learners. In addition to working methods, the learners' interests are taken into account in transversal competences, so that the learner views texts relevant to them, makes their own ideas and thoughts visible through ICT, identifies their own professional interests and notices the importance of one's own choices for the local community, society and nature.

Assessing the learner's personal objectives and learning also contribute to individuality. These have a clear link to cognitive factors of learner-centered approach (see Table 1). The curriculum is based on assessment culture in which the learners understand their own learning process, reflects on their objectives and views the progress of their own learning. *"Both as individuals and as a group, the pupils are guided in observing their learning and its progress and taking note of factors that affect them. The idea is that the teachers help the pupils to understand the objectives and find the best methods for achieving them"* (FNBE, 2014, 48). Learning is therefore a personal path to each learner and a process in which individuality is taken into account. Assessment takes into account the different ways learners learn and work. By identifying their successes and strengths, the learners' self-assessment skills develop and gradually the analysis of their own learning becomes more accurate.

The learner's activity and personal way of learning are reflected through processing knowledge. The curriculum recognizes that a learners' perception of themselves as a learner, as well as their way of making observations and processing information affect their thinking and learning. The learner is supported in the development of knowledge processing skills and is guided through the construction of knowledge to reconsider their own ways of thinking. Space is provided for the learner's own questions and solutions. The learner analyzes things, looks at them from different perspectives, reflects on the relationships between things and perceives wholes, thus developing thinking skills.

Manageability

In the core curriculum, the learners' ways to manage their learning come to the fore through participation and influence. Manageability is seen as the learners' ability to manage their own learning and learning environments, the provision of alternatives, and the opportunity to regulate learning. From a management perspective, the meta-skills and self-regulation of learning are emphasized.

The learner participates in both their own learning and the growth of the community, and their awareness of different ways of influencing also increases outside school. The social factors of learner-centered approach, such as participation and community, are clearly highlighted (see Table 1). Firstly, the learner has the opportunity to participate in a dialogue of operating culture and to be involved in community development. "*The basic precondition for developing the school culture is open and interactive discussion that is characterized by respect for others, ensures the participation of all members of the community, and inspires trust*" (FNBE 2014, 24). Learners are involved in creating operating practices. The learners' opportunities to give their opinions at community level are expressed as follows: "*The pupils participate in the planning, development and evaluation of the activities in accordance with their developmental stage. They get experiences of being heard and appreciated as community members. The community encourages democratic dialogue and participation and devises operating methods and structures for them*" (FNBE, 2014, 26). More broadly, the management perspective emerges as a skill in managing one's own life. "*The pupils are encouraged to take care of themselves and others, to practice skills that are important for managing their daily lives and to work for the well-being of their environment*" (FNBE, 2014, 20).

Secondly, learners are strongly involved in managing their own learning. It enables the development of cognitive factors of learner-centered approach (see Table 1). The learners' ability to choose working methods to support their learning helps them to demonstrate their learning in different ways and develop skills in processing information. The nature of the subjects contributes partly to the suitability of the working methods for studying, and taking this into account, the chosen working methods enable the learners to best acquire the skills and knowledge structures. Thus, by choosing working methods, learners can develop

their information processing skills. *“Skills in finding, processing, analyzing, presenting, applying, combining, evaluating and creating information are important for learning”* (FNBE, 2014, 29). The learners manage their learning with their information processing skills and *“they are inspired to formulate new information and views”* (FNBE, 2014, 18). Managing one’s own learning is also firmly linked to learning-to-learn skills. The learners set objective, plans their work, and evaluate their progress. *“The pupils take part in planning, implementing, assessing and evaluating their own learning, joint school work and the learning environment.”* (FNBE, 2014, 23). Thus, the learners themselves plan and evaluate their working methods so that their learning skills can best develop. Through guiding feedback, the learners influence their learning by using work methods that promote learning and by assessing the success of the work. Feedback also guides the learners to review and develop their own learning strategies. Using information and communication technology, the learners can also find suitable working methods and learning paths. The learners’ self-regulation skills gradually develop through the analysis of their own learning.

Participation

The curriculum describes participation as an opportunity for interaction and social relations. It is seen widely in all areas of the curriculum, emphasizing different perspectives. Participation helps the learner both on an individual level and in collaborative learning. *“A learning community creates preconditions for learning together and learning from each other”* (FNBE, 2014, 25). The learners’ self-knowledge and creativity enable them to interact constructively.

According to the curriculum, interaction and cooperation promote learning and well-being as well as the ability to work with a wide variety of people. When learners work together and gain experiences of participation, the community is strengthened and has the potential to learn together. As members of the learning community, learners are developing both their own understanding, but also contribute to the formation of understanding between groups. The association with social and cognitive factors of learner-centered approach can be seen (see Table 1), Information and communication technology as part of the learning environment is seen as one of the factors that strengthens the ability to work together. The perspective of participation is also emphasized in the choice of working methods. *“The selection of working methods may also be used to support communal learning where competence and understanding are constructed in interaction with others”* (FNBE, 2014, 29). Learning-to-learn skills also develop in interaction with others, and examining the learner’s own internal knowledge involves listening to others. *“The way in which the pupils see themselves as learners and interact with their environment influences their thinking and learning”* (FNBE, 2014, 18). Construction of knowledge is described from the perspective of participation as follows, *“the pupils are guided to use information independently and in interaction with others*

for problem-solving, argumentation, reasoning, drawing of conclusions and invention” (FNBE, 2014, 18).

The importance of social interaction in the curriculum text is reflected widely in the descriptions of transversal competences. Out-of-school collaboration is useful for learning, as it develops operation in different settings, provides information on ways to participate and influence, and gives a broader perspective on things. In the school community, learners have the opportunity to develop in their own expression and presentation skills, to take care of the well-being of others, to network, for example, using ICT and language skills, and to take into account the perspectives of others.

Interaction plays a clear role in assessment. *“For most part, assessment takes place in interaction between the teacher and pupils” (FNBE, 2014, 47).* The culture of assessment is based on pupil participation, discussion and interaction. Learners also observe their learning as a group and its progress, as well as the factors influencing it. Shared assessment discussions are conducted and peer assessment discussions, i.e. peer assessment are developed in the group. *“Peer assessment and self-assessment that develop the pupils’ agency are also important in assessment during the studies. The teacher’s role is to create situations in which feedback that promotes and motivates learning is given and received through joint discussions” (FNBE, 2014, 50).* Working skills include the ability to act in constructive interaction and learners are guided in their behavior to consider other people and the environment and to follow the agreed rules.

The research shows that the curriculum is based on both the individual needs of the pupils and the objectives set for education. The text of the curriculum consistently describes how the role of the learner is strengthened, both for the community and for their own learning. Being a learner is taking responsibility for one’s own learning, understanding it, and the desire to develop learning skills. *“Pupils who are aware of and responsible for their learning processes will increasingly learn self-regulation. During the learning process, they learn working and thinking skills and practice anticipating and planning the various stages of learning” (FNBE, 2014, 17).* According to the curriculum, the learner-centered approach is an individual learning process for each learner, which the learners themselves influence in many ways, and in which the learner’s individuality and personal experiences are emphasized (cf. Vitikka, 2009, 225-226). Learners should be aware of their own learning objectives as well as the most appropriate ways to learn and evaluate their learning. Learners practice implementing self-regulation and breaking down objectives to guide their own learning. Learners understand the opportunity provided by the learning environment and the pedagogy implemented in it to achieve learning experiences that lead to pre-set objectives. To succeed in this, learners need the teacher’s support and guidance, but also the community.

5. Conclusions

This research focuses on the Finnish National Core Curriculum for Basic Education (FNCC) and especially on the examination of its pedagogical steering from the perspective of learner-centered teaching. It intends to describe what a learner is like according to the curriculum's conception of learning and how teaching and learning are organized to reinforce the role of the learner. The text of the curriculum appears to be learner-centered and the main emphasis is clearly on learning and the learner's learning experiences in accordance with the curriculum perspective (see Vitikka, 2009, 73). The text indisputably reflects the learner's active operation. The research shows that areas of the general text of the curriculum seek to support the learners similarly in their diverse development. The school's operating culture and the objectives set for it serve as a platform for the learning community, where participation and interaction steer the learning of the individual learner. The curriculum commits to the ideology of individual development, which is reflected in the text of the curriculum: "*It is particularly vital to encourage the pupils to recognize their uniqueness and their personal strengths and development potential and to appreciate themselves*" (FNBE, 2014, 20). The research does not take a position so much on the development of the curriculum, but the interest is to make the pedagogical emphases of the document visible, so that the support of the learners' activity in their own learning would be realized.

Through the study of the pedagogy of the curriculum, an idea is gained in which direction it is intended to guide the teaching-studying-learning processes, but the direction of the development of pedagogy cannot be predicted from it (Korkeakoski, 2008, 49). Research shows that national education steering is currently intended to influence the position of the learner: the learner must be involved in the planning, implementation and evaluation of teaching in a concrete way. The latest Finnish curriculum appears as a fascinating combination of pupils' individual needs and objectives set for education. According to the curriculum, the school has a strong role in supporting learning, one that aims to enable equal learning and equality. It is based on respect for the diversity of individuals, which means equal opportunities to develop their own aptitudes and personalities with support (Pyhältö & Vitikka 2013, 14). It is therefore worth remembering the potential impact of learners' different social backgrounds on the success of learner-centered pedagogy. The school provides the learner with a learning community where construction of knowledge and skills is possible for everyone and where the learner's own activity plays a key role. The pedagogical function of the curriculum to steer teaching-learning processes is reflected in its key objectives to strengthen pupil activity, increase the meaningfulness of learning, and provide positive learning experiences for each pupil.

The research, examining the texts of the general part of the curriculum, shows that the curriculum text portrays a consistent, learner-centered approach in accordance with the prevailing conception of learning. The curriculum provides teachers with an accurate description of all three factors of learner-centered approach: cognitive, social, and emotional. Therefore, it can be stated that the

steering nature of the curriculum in terms of pedagogy follows the principles of the learner-centered approach (cf. APA, 1997) and implemented teaching-studying-learning processes should support learner's development and learning. This information is relevant to the perception of the curriculum as a whole. For teachers in particular, it helps to create a structured view of the overall structure of the document from the learner's perspective, but also serves as a guide for the implementation of instruction (Vitikka, 2010, 28).

Previous research has found that teachers' understanding of the whole of a curriculum as a framework for the work and perceiving a structured view of the overall framework can be challenging (Vitikka, 2009, 24). This study confirms that the curriculum responds to how- questions, i.e. how the teacher can aim to achieve the objectives set for the teaching-studying-learning processes. However, it leaves room for teacher autonomy and provides teachers with tools to promote learning. Learning can be influenced by e.g. teacher guidance, learning support, and assessment and feedback. Instead of teaching, the text describes the role of the teacher as a supervisor (Krokfors, 2017, 259). The successful implementation of the curriculum requires the identification of the learner-centered approach at the school level, and the whole school community as well as individual teachers need to consider how learner-centered approach is enabled at school. In this case, learner-inclusive and learner-centered pedagogy can provide the necessary opportunities for the learner to learn different skills related to their own learning, but also the future skills that the curriculum's competency thinking seems to strive for (see Halinen, 2011, 79).

Previous research has shown that learner-centered learning has been slowly finding a foothold in Finnish basic education (Atjonen et al., 2008; Korkeakoski, 2001; Korkeakoski, 2008, 41, 45). According to this study, teaching-studying-learning processes should have more methods that give responsibility to pupils. These research results can be used to increase teachers' knowledge of the learner-centered teaching and pedagogy of the curriculum. It is hoped that pedagogical guidance will serve as a tool for developing teachers' skills and operation (Vitikka, Krokfors & Rigabi, 2016, 83). This study provides a framework for research into the teachers' understanding and the implementation of a learner-centered curriculum. Definitions of the learner-centered approach based on the results can be utilized in further research by examining teachers' perceptions in relation to them, i.e. what kind of teaching situations and teacher agency it requires. In order to develop the curriculum pedagogy implemented in schools, the research must indicate the operating preconditions of basic education from the point of view of teachers. It is essential to know the extent to which curricula guide the work of teachers in practice (see Krokfors, 2017, 258).

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