A Curriculum Planning and Implementation of an Inquiry-Based Learning in Hungary

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Abstract

My lecture has three logical pillars, which are focused on the inquiry-based learning "question triangle", namely Why? – How? – What?. "Why?" is responsible for the contextual background of my topic. At the part of "How?", I would like to show and analyze some research data, finally the "What?" pillar has emphasized some dilemmas, questions and drawn conclusions. The key question of my presentation is: What are the differences between the teaching- and the learning-centered curriculum implementation? Under the umbrella answering the complex question, the paper addresses the feasible coherency between the effective curriculum implementation of the national standards and turning to the learning-centered education.

Keywords:
curriculum implementation
inquiry-based learning
learning-centered education

"Curriculum development is making balance"
(Péter Szebenyi)

1   Introduction

Curriculum implementation has a long history, but it is the significant part of the *curriculum theory,* which is based on some key concepts: *curriculum evaluation, curriculum management, curriculum implementation.* Researchers, policy makers, curriculum specialists, school principals, teachers and learners are all increasingly interested in effective and successful curriculum implementation. This growing interest is based on more than 30-years curriculum research and the dominant statement of curriculum implementation has different overlapped levels. The starting point is the *Tyler-rationale*, which emphasized four fundamental questions:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained? (Tyler, 1949)

The history of curriculum implementation research started answering the last question. Nota bene Tyler raised and transformed this question at the rationale (see 4th chapter): How can the effectiveness of learning experiences be evaluated? Tyler stated:

"It should be clear that evaluation then becomes a process for finding out how far the learning experiences as developed and organized are actually producing the desired results and process of evaluation will involve identifying the strengths and weaknesses of the plans. This helps to check the validity of the basic hypotheses upon which the instructional program has been organized and developed, and it also checks the effectiveness of the particular instruments, that is, the teachers and other conditions that are being used to carry forward the instructional program." (Tyler, 1949, p. 105)

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Explicitly, Tyler did not stress the concept of curriculum implementation, but implicitly the curriculum evaluation emphasized some quality criteria, for instance validity and effectiveness, which became the basic points of the "first boom" of curriculum implementation. (see later)

2   Contextual background (Why?)

Through this paper we analyze the required and feasible consistency among the levels, especially focusing the way from theory to practice, from research to action. Dominant paradigms: *teaching-* and *learning-centered curriculum* in the conception of curriculum implementation have several coherent connections traditionally coming from these levels. The basic aim of my presentation is differentiating and comparing the teaching- and learning-centered implementation via stressing these implementation levels. These levels are based on the representations of the intended, the implemented and the attained curriculum. Goodlad, Klein and Tye (1979) differentiated these representations, adapted by Van den Akker (2003), who analyzed them.

"The intended curriculum contains both the ideal curriculum (the vision or basic philosophy underlying a curriculum) and the formal/written curriculum (intentions as specified in curriculum documents and/or materials). The implemented curriculum contains both the perceived curriculum (interpretations by users, particularly teachers) and the operational curriculum (as enacted in the classroom). The attained curriculum is comprised of the experiential curriculum (learning experiences from pupil perspective) and the learned curriculum (resulting learner outcomes)." (McKenney, Nieveen & Van den Akker, 2006, p. 113)

In summary, the concept of the above-mentioned representations has resulted the "first boom" of curriculum implementation research, which is a *product-oriented process*. It has based on the traditional *Bloom's taxonomy*, especially from the curriculum development point of view, the cognitive, knowledge-based domains: *knowledge, comprehension, application, analysis, synthesis, evaluation.* (Bloom, 1956) Consequently, the *affective, emotion-based and psychomotor, action-based* domains were neglected at the curriculum planning process. In brief, *level of knowledge* at the cognitive domain means recalling and listing information, which is based on memorization and concentration strengthening formal, reproductive learning. *Level of comprehension* can stress understanding and translating promoting conceptual and critical thinking. *Level of application* is responsible to the applied knowledge and problem-solving. The next level can develop *analytical thinking* in order to analyze the trends and processes. The *level of synthesis* can strengthen imagination, creative and systematic thinking. Finally, the *evaluation* can promote comparison. However, the traditional Bloom's taxonomy has been transformed in different ways at the curriculum implementation, the hierarchy of the levels has resulted in the formalization of classification and the operationalized, rigid process. The traditional Bloom's taxonomy was revised in 2001 by Anderson and Krathwohl. The revised cognitive taxonomies are more useful for curriculum planning and implementation, because it has represented the overlapping among the different levels of knowledge: factual, conceptual, procedural and metacognitive. First level is remembering, where memory is used to produce or retrieve definitions, facts, or lists, or to recite previously learned information. Second level is understanding can promote interpretation, classification, summarization, comparison and, explaining. Third level is applying where learned material is used through products like models, presentations, interviews or simulations. The next level is analysis, which is responsible to differentiation, organization and higher mental representations. The next level is evaluation, which is based on standards and criteria in order to make judgements. Finally, the highest level is creating, which requires users to put parts together in a new way, or synthesize parts into something new and different creating a new form or product. This process is the most difficult mental function in the new taxonomy. (Anderson & Krathwohl, 2001)

In summary, the differences of the traditional Bloom's taxonomy and the revised version have some advantages and disadvantages on effective curriculum implementation. The advantages are the cognitive domains are focusing on different stages of learning emphasizing creativity and creative problem-solving. The disadvantages are fixing the rigid, operationalized taxonomy, which cannot promote flexible, personalized implementation stressing the intended and not the attained curriculum.

Parallel with these representations, curriculum implementation is taking part at the different levels. At *government level (macro-level)*, political and administrative decisions about the curriculum are made; at *school* and *classroom level (meso-level),* the implementation of the curriculum is executed and at *learner level (micro-level)* the impact of the curriculum is viewed through the output. Intended curriculum at the macro-level and the implemented curriculum at the meso-level have faced the challenges of the content, time allocations,

instructional strategies for teaching and learning. The attained curriculum at the micro-level has focused on the outcomes (competences and attitudes). (Van den Akker, 2003)

From the perspective of the implementation of the Hungarian Core Curriculum these challenges are interconnected at the different representations and levels increasing the problems of effective implementation. First problem is changing the traditional content-based content regulation system emphasizing the roles of competences. Second problem is, parallel with this systematic process, the Hungarian education system, under the umbrella of lifelong learning strategy, is transforming from the teaching- to the learning-centered paradigm. Finally, the third problem is the difference between standardization and standards at the different domains.

Among the numerous articles, books and research papers on curriculum implementation, a common key issue is the professional and public discussion about the function of the public education in the 21st century. As raised the question by Jacobs (2010): "What year are preparing your students for? 1973? 1995?" Answering this question has become the driving force of the education reform, especially the curriculum implementation as well. As Jacobs raised the critical and pragmatic point: "I often wonder if many of our students feel like they are time travelling as they walk through the school door each morning. As they cross the threshold, do they feel as if they entering a simulation of life in the 1980s? Then, at the end of the school day, do they feel that they have returned to the 21st century?" (Jacobs, 2010 p. 7)

3   Redesigning curriculum implementation (How?)

The fundamental starting point of the redesigning curriculum implementation is on the one hand the Van den Akker's curricular levels (macro, meso, micro), which have been enriched by the *internationalization* (see international comparative research on curriculum implementation) and the *personalization* (see the concept of personalized curriculum). The *supra-* and *nano-level* combining the "traditional triumvirat" have created the process and way of effective curriculum implementation. It draws attention to the process-oriented curriculum implementation, which requires professionalism and systematic thinking of curriculum development and evaluation as well. Consequently, it means that the third pillar of the implementation strategy (school development and leadership) has become dominant.

The significant turning point from the product- to the process-oriented curriculum implementation is based on the work of Fullan and Stiegelbauer (New meaning of educational change). In this dominant work Fullan and Stiegelbauer used the concept of curriculum implementation in a broad sense, where the implementation has conceptualized the process and formulated the important part of the curriculum (eg. aims, content, teaching methods, assessment techniques etc.). Under the umbrella of conceptualization on educational change, Fullan differentiated three phases of the process:
1.   INITIATION (adoption, mobilization)
2.   IMPLEMENTATION (narrow sense, innovation, change the practice)
3.   INSTITUTIONALIZATION (organization, systematic change)

The emphasizes of process-oriented curriculum implementation are turning to the third phase, namely the required and feasible coherency between institutionalization and leadership. As Fullan stated: "If principals are to maximize their impact on learning, we must reconceptualize their role so that it clearly, practically, and convincingly becomes a force for improving the whole school and the results it brings." (Fullan, 2014, p. 6) It seems that maximizing the impact of leaders is a force of effective curriculum implementation as well.

Since 2000, Hungarian regulation on contents has been characterized by efforts to strike a balance of elements of regulation on output and input and by the introduction of a three-level regulation on curricula (National Core Curriculum, optional or compulsory general curricula, local curricula). *The National Core Curriculum (NCC)* confirmed the strategic nature of the core curriculum while maintaining its development function. (Vágó, Simon & Vass, 2012) But see the third problem above, the difference between standardization and standards, changing the decentralized and centralized system, it needs to balance the development and regulation role with the dilemmas of flexible or prescriptive content regulation system. The general tendency is that the emphasis turns from the revision of the National Core Curriculum to the curriculum implementation, especially balancing from the intended curriculum via the implemented curriculum to the attained curriculum, from the macro- via the meso- to the micro-level. The *Implementation Strategy* of the NCC has four pillars in order to solve these problems and to find the balance between the curriculum representations and levels. The first pillar is about the required *coherence between research, development* and *innovation.* Research part means international and national comparative studies of curriculum implementation from theory to practice in order to

analyze the trends and processes. Development part has focused on launching the promoting system of curriculum implementation developing general curricula and giving patterns to the local curricula. Innovation part has inspired researchers, specialists of curriculum development with the school heads and teachers taking part in the innovative process from planning via renewing teaching methodologies and classroom management to assessment. The second pillar has strengthened the *middle level* of the Hungarian content regulation system by adding to the general curricula the traditional and digital textbooks, educational and assessment tools with in-service trainings to the teachers. The third pillar of the implementation is about *school development* and *the impact of leadership*. It requires systematic thinking of the implementation of the NCC developing the competences of the principals. The fourth pillar is about the *communication of the implementation* strengthening the professional and public debate about strategy and the function of the public education in the 21st century, stressing the mutual understanding about the main contexts. (Vass, 2008)

4 Conclusion (What?)

Turning back to the key question of my presentation: "What are the differences between the teaching- and the learning-centered curriculum implementation?", it would be easy to emphasize the paradigm changes on the curriculum implementation. Firstly, the significant change from the product- toward to the process-oriented implementation. Secondly, the process-oriented curriculum implementation has focused on the attained curriculum stressing the role of the meso- and micro-level. Thirdly, turning to the learning- and learner-centered curriculum can promote using the revised Bloom's taxonomy in a flexible, personalized way, which requires maximizing the impact of the leaders and develop teachers' competences strengthening professionalism via the process of curriculum implementation. However, in my view, this the culture-oriented curriculum implementation is based on affective and psychomotor domain of revised Bloom's taxonomy emphasizing the role of attitudes and motivation at the process of curriculum implementation. It makes sense to know that inquiry-based learning is a tool and approach to the effective curriculum implementation through three potential approaches: UNIDISCIPLINARITY (traditional), INTERDISCIPLINARITY (content and/vs. competences) and TRANSDISCIPLINARITY (trust and collaboration). The challenges of the effective curriculum implementation show how can we find the balance between knowledge and competences.

References

Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J. & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives* (Complete edition). New York: Longman.

Bloom, B. S. (1956): *Taxonomy of educational objectives: cognitive domain.* New York: McKay.

Fullan, M. (2014): *The principal. Three keys to maximizing impact.* San Francisco CA: Jossey-Bass.

Goodlad, J. I., Klein, M. F. & Tye, K. A. (1979). The domains of curriculum and their study. In J.I. Goodlad (Ed.): *Curriculum Inquiry* (pp. 43-76). New York: McGraw-Hill.

Jacobs H. H. (Ed.) (2010): *Curriculum 21. Essential education for a changing world.* Alexandria, Virginia: Association Supervision for Curriculum Development.

McKenney,S., Nieveen, N., and Van den Akker, J., (2006): Design research from a curriculum perspective. In Van den Akker, J., Gravemeijeir, G., McKenney,S. & Nieveen, N. (Eds.): *Educational Design Research* (pp. 110–116). New York: Routledge.

Tyler, R. W. (1949): *Basic principles of curriculum and instruction.* Chicago: The University of Chicago Press.

Vágó I., Simon, M., Vass V. (2012): The contents of teaching and learning. In Loboda, Z., Balázs, É., Kocsis, M. & Vágó I. (Eds): *Education in Hungary 2010* (pp. 69–91). Budapest: Hungarian Institute for Educational Research and Development. http://ofi.hu/sites/default/files/ofipast/2012/11/angol_jelentes.pdf

Van den Akker, J. (2003). The science curriculum: between ideals and outcomes. In B. J. Fraser & K. G. Tobin (Eds.), *International Handbook of Science Education* (Vol. 1, pp. 421–449). Dordrecht: Kluwer Academic Publishers.

Vass, V. (Ed.) (2008): *The implementation of the National Core Curriculum* (Hungarian version). Budapest: Ministry of Education. http://www.nefmi.gov.hu/letolt/kozokt/nat_implement_090702.pdf