

Indicators of Strategic Planning in Schools (School Education Programmes – Czech Republic)

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Abstract

The goal of this paper was twofold. The first goal was to provide a methodological framework for classification of indicators in education, specifically focusing on school education programmes (SEPs) of Czech primary and secondary schools. The second goal of this paper was to analyze the use of these indicators in SEPs. The first goal of this paper was met by providing comprehensive list of thematic areas and related indicators. These may be used in strategic planning in education more generally. Concerning the second goal of his paper, indicators related to learning outcomes are the most common in SEPs. Moreover, a variety of indicators is used in SEPs, suggesting the presence of several 'core', more frequently used, indicators and several 'peripheral', less frequently used, indicators.

Keywords: indicators, evaluation, strategic planning, school education programmes

1. Introduction

Strategic planning is an important theoretical concept implemented in public sector organizations, including schools, nowadays (see, e.g., Bryson 2010; Bryson, Berry & Yang 2010). Bell & Chan (2005), Davies & Ellison (2003), Fidler (2002) mention the following characteristics of strategic planning in schools:

- School is understood in a holistic nature. Hence, all school activities are considered.
- The planning is future-oriented. Hence, a long-term time horizon is considered.
- The planning has a proactive character. Hence, the school is able to identify its strengths, weaknesses, opportunities and threads and reflects these in its development goals and measures.
- The planning creates a framework for all school activities.

- The planning emphasizes school key topics, mission, vision and priorities.
- The planning accentuates links to external forces and internal school resources.

It is expected that strategic planning improves decision-making processes in schools, supports their choice of priorities, improves coordination of all school activities and prevents the omission of crucial opportunities for school development (see, e.g., Caputo & Rastelli 2014; Dunaway, Kim & Szad 2012; Fidler 2002; Bush 2007). Moreover, strategic planning enables systematic evaluation and monitoring of school progress, including the influence of determining factors. And just the last point is the research subject of this paper, focusing on the evaluation part of strategic planning generally and on indicators of strategic planning in schools in particular.

The first goal of this paper is to provide a methodological framework for classification of indicators in education. Specifically, the paper deals with indicators that are used in school education programmes (hereafter referred to as SEPs) of primary and secondary schools in the Czech Republic. Hence, the second goal of this paper is to analyze the use of these indicators in SEPs. The paper is structured as follows. The second section provides theoretical framework of this paper. The third section presents its methodology and the fourth section empirical results. The last chapter concludes.

2. Indicators in education – theoretical framework

In strategic planning, goals are always connected with indicators. Mitchell (1996), Scerri & James (2009) understand indicators as an instrument which supports strategic analyses of the state-of-art and development trends, which supports the choice of development goals and paths, and which supports monitoring and evaluation of development goals. Hence, indicators stand in the hearth of strategic planning. Additionally, several authors also mention the information role of indicators resulting into a better understanding of complex problems (see, e.g., Salvati & Zitti 2009).

The choice of indicators is one of the crucial questions when dealing with indicators (see, e.g., Salvati & Zitti 2009). Generally, indicators are expected to be related to the goals of strategic plans and may be defined at different evaluation levels, including the level of students, the level of teachers, and the level of schools (see, e.g., GOI 1999). Table 1 gives an overview of indicators extracted from various information sources related to strategic planning in education and classified into five thematic areas. Three additional remarks are noteworthy (see, e.g., Ewy 2009; Fidler 2002; Cheminais 2010; Klein et al. 2005):

- Generally, indicators may be related to various learning outcomes of cognitive, affective, psychomotor and meta-cognitive nature. Hence, indicators may be decomposed with respect to a number of partial criteria – e.g. achieved points and marks, but also mastery in processes and others (see, e.g., Hattie 2009). The same may be applied regarding learning subjects and students' characteristics (e.g., students with special educational needs, boys and girls and others).
- Generally, indicators are expected to achieve better central values and reduce the level of data variability. This is in accordance with the goals of quality and equity in education.
- The following attributes of indicators are desirable: (a) replication; (b) comparability; (c) practical use; (d) the opportunity to be influenced through interventions.

Table 1: Thematic focus and related indicators (examples)

Thematic focus	Indicators – examples
Learning results	<p>Indicators related to education standards, e.g. classification (marks, oral evaluation); certified courses (e.g., ECDL, language certificates)</p> <p>Indicators related to students' results in external tests; added value of education</p> <p>Indicators related to students' or external evaluators' evaluation (e.g., self-evaluation instruments; standardized evaluation instruments)</p> <p>Indicators related to students' results in competitions</p> <p>Indicators related to students' education and employment carriers (e.g., success in school enrolment; unemployment)</p> <p>Indicators related to students' early exit from education</p>
Stakeholders' satisfaction	<p>Students' satisfaction with particular elements of school activities</p> <p>Teachers' and directors' satisfaction with particular elements of school activities</p> <p>Parents' satisfaction with particular elements of school activities</p> <p>Graduates' satisfaction with particular elements of school activities</p> <p>School occupation rate</p> <p>The rate of the number of applications to the number of enrolled students</p> <p>The share of students outside the natural catchment area</p> <p>The number of complaints related to school activities</p> <p>Media image</p> <p>The number of participants in school activities (e.g., school events)</p>
Personal management, human resources	<p>The number of teachers and other school employees</p> <p>The rate of the number of students to the number of teachers</p> <p>Teachers' qualification</p> <p>Teachers' and other employees' fluctuation</p> <p>The number of applicants per a vacant job</p> <p>Evaluation of teachers regarding various elements of school activities</p> <p>Teachers' participation in further education</p>
Support system	<p>The quality of material equipment; physical state of buildings</p> <p>The number of problems identified with respect to school internal processes</p> <p>The number of innovative ideas implemented in school activities</p> <p>Time management – the level of absenteeism; the share of not explained absenteeism; the rate of cancelled lessons</p> <p>The offer of extracurricular activities; students' participation in these activities</p> <p>The offer of special measures for students with special educational needs</p> <p>The frequency of students' misbehaviour; students' misbehaviour – classification</p> <p>The number of cooperating community partners</p> <p>The number of events organized in cooperation with parents and community partners</p>

Table 1: Thematic focus and related indicators (examples)

Thematic focus	Indicators – examples
Financial resources	Total school financial resources; structure of income and expenditures
	The expenditure level per students
	Financial efficiency – the expenditure level per students and school learning outcomes

Source: own elaboration based on Cabrera, Colbeck & Terenzini (2001), Creemers et al. (2013), Ewy (2009), Fidler (2002), Cheminais (2010), Klein et al. (2005), Rossin et al. (2009), Rovai et al. (2009)

The overview of indicators given in table 1 provides the main theoretical input for the empirical part of this paper. The next section presents its methodology.

3. Methodology

The methodology of this paper is based on content analysis of a sample of SEPs of primary and secondary schools in the Czech Republic. In this regard, the methodology consists of the following steps.

The output of the first step of the methodology was a sample of primary and secondary schools in the Czech Republic and their SEPs as the information source for content analysis. The sample was created as follows. Firstly, the population of all primary and secondary schools in the Czech Republic was compiled from the official public register of primary and secondary schools in the Czech Republic. Subsequently, these schools were distributed in 42 strata according to two variables:

- school type – primary schools, classical grammar schools, and secondary schools,
- region of school location with 14 possible values.

Additionally, three variables were used for implicit stratification inside the strata: (a) school size; (b) school type regarding its founder; and (c) some specific characteristics of education programmes. Finally, a sample of 343 schools was randomly selected from the population. The number of schools from particular strata was determined proportionally according to the total number of schools in these strata (see, e.g., Hájek et al. 2013 for this approach).

In the second step of the methodology, a database of SEPs for the selected sample of schools was compiled. These SEPs were analyzed subsequently. Hence, a data matrix, which consisted of SEPs in rows and analyzed variables in columns, was created in the third step of the methodology. The variables were related to indicators of SEPs, considering two research areas: (a) thematic focus of indicators; and (b) particular indicators. In this regard, thirteen thematic areas of evaluation were defined, supplemented by a list of related indicators. Subsequently, the presence of each item (thematic areas, indicators) in particular SEPs was analyzed, indicating two possible values – ‘present’ or ‘not present’. The frequency related to the presence of thematic areas and indicators in SEPs was evaluated and discussed as the last step of the methodology. Table 2 gives the list of both, thematic focus of indicators and related indicators. Note that table 2 is a crucial element of the first goal of the paper because it provides general methodological framework for dealing with indicators in SEPs of Czech primary and secondary schools.

Table 2: Thematic focus and related indicators (methodology)

Thematic focus	Indicators
1. Learning outcomes	1.1 Achievement of expected learning outcomes (classification)
	1.2 Added value of learning outcomes
	1.3 The number of failing students
	1.4 Results of external comparative testing
	1.5 The number of passing students in certified examination
	1.6 Students' achievement in education or employment carriers
	1.7 Support to students with special educational needs
	1.8 Participation and results of students in competitions
	1.9 The share of students studying a part of the studies abroad
2. Learning processes	2.1 Quality of learning processes
3. Professional consulting and prevention of misbehaviour	3.1 Students' absenteeism
	3.2 The number of punished students due to misbehaviour
	3.3 The quality of professional consulting
4. School climate	4.1 Students' satisfaction
	4.2 Teachers'/employees' satisfaction
	4.3 Parents' satisfaction
5. Extracurricular activities	5.1 The offer of extracurricular courses
	5.2 Students' participation in extracurricular courses
6. Personal conditions and human resource development	6.1 Number, structure and fluctuation rate of teachers
	6.2 The share of fully qualified teachers
	6.3 The system of further education reflecting teachers' needs
7. School management	7.1 The quality of school management
8. Cooperation with parents	8.1 The quality of cooperation with parents
9. Cooperation with community partners	9.1 The quality of cooperation with community partners
	8/9.2 The number of complaints regarding the school
10. Material and physical conditions	10.1 The quality of physical and material conditions
	10.2 The use of classrooms and material equipment
	10.3 Compliance with legal requirements concerning safety and hygiene
11. Financial resources and economic efficiency	11.1 The total budget allocation
	11.2 The total budget from external resources, sponsoring
	11.3 Financial efficiency
	11.4 The number of projects realized by the school

Table 2: Thematic focus and related indicators (methodology)

Thematic focus	Indicators
12. School presentation	12.1 The number of applications, the enrolment rate
	12.2 The number of school events and the number of their participants
	12.3 The number of media articles about the school
	12.4 Accessibility and update of information
13. SEPs	13.1 Compliance of SEPs and Framework Education Programmes
	13.2 The level of SEPs implementation

Source: own elaboration based on Cabrera, Colbeck & Terenzini (2001), Creemers et al. (2013), Ewy (2009), Fidler (2002), Cheminais (2010), Klein et al. (2005), Rossin et al. (2009), Rovai et al. (2009); and based on the sample of analyzed SEPs

4. Empirical results

In this section, empirical results regarding the analysis of a sample of SEPs are presented. Firstly, the results concerning the thematic focus of indicators are illustrated (see table 3). The following findings are noteworthy:

Table 3: Thematic focus of indicators – the share of SEPs with the thematic focus

Thematic focus	Share of SEPs
1. Learning outcomes	100,0 %
2. Learning processes	53,4 %
3. Professional consulting and prevention of misbehaviour	19,5 %
4. School climate	48,4 %
5. Extracurricular activities	14,9 %
6. Personal conditions and human resource development	50,7 %
7. School management	46,6 %
8. Cooperation with parents	51,3 %
9. Cooperation with community partners	34,7 %
10. Material and physical conditions	50,1 %
11. Financial resources and economic efficiency	41,1 %
12. School presentation	22,2 %
13. SEPs	41,1 %

Source: own elaboration based on the sample of analyzed SEPs

- Firstly, the indicators related to learning outcomes are included in all SEPs. It is hardly surprising when considering learning outcomes as an ultimate goal of education.
- Secondly, (a) extracurricular activities; (b) professional consulting and prevention of misbehaviour, and (c) school presentation are the thematic areas that are less frequently included in the SEPs.

Hence, some ‘core thematic areas’ and some ‘peripheral thematic areas’ may be identified.

Table 4: Indicators – the share of SEPs with the indicator

Indicator	Share of SEPs
1.1 Achievement of expected learning outcomes (classification)	99,7 %
1.2 Added value of learning outcomes	2,3 %
1.3 The number of failing students	5,5 %
1.4 Results of external comparative testing	31,2 %
1.5 The number of passing students in certified examination	1,5 %
1.6 Students’ achievement in education or employment carriers	27,4 %
1.7 Support to students with special educational needs	28,6 %
1.8 Participation and results of students in competitions	25,4 %
1.9 The share of students studying a part of the studies abroad	0,3 %
2.1 Quality of learning processes	52,5 %
3.1 Students’ absenteeism	2,9 %
3.2 The number of punished students due to misbehaviour	12,5 %
3.3 The quality of professional consulting	18,1 %
4.1 Students’ satisfaction	41,1 %
4.2 Teachers’/employees’ satisfaction	34,7 %
4.3 Parents’ satisfaction	43,4 %
5.1 The offer of extracurricular courses	13,1 %
5.2 Students’ participation in extracurricular courses	6,1 %
6.1 Number, structure and fluctuation rate of teachers	9,3 %
6.2 The share of fully qualified teachers	17,2 %
6.3 The system of further education reflecting teachers’ needs	47,5 %
7.1 The quality of school management	45,5 %

Table 4: Indicators – the share of SEPs with the indicator

Indicator	Share of SEPs
8.1 The quality of cooperation with parents	44,6 %
9.1 The quality of cooperation with community partners	33,2 %
8/9.2 The number of complaints regarding the school	1,7 %
10.1 The quality of physical and material conditions	48,4 %
10.2 The use of classrooms and material equipment	6,7 %
10.3 Compliance with legal requirements concerning safety and hygiene	28,0 %
11.1 The total budget allocation	32,7 %
11.2 The total budget from external resources, sponsoring	14,0 %
11.3 Financial efficiency	15,5 %
11.4 The number of projects realized by the school	12,0 %
12.1 The number of applications, the enrolment rate	13,1 %
12.2 The number of school events and the number of their participants	21,6 %
12.3 The number of media articles about the school	7,6 %
12.4 Accessibility and update of information	13,4 %
12.5 The quality and update of web sites	6,1 %
13.1 Compliance of SEPs and Framework Education Programmes	23,6 %
13.2 The level of SEPs implementation	29,7 %

Source: own elaboration based on the sample of analyzed SEPs

Table 4 adds information on the frequency of including indicators in the sample of SEPs. Hence, it is obvious that the achievement of expected results is the most common indicator in SEPs. It could have various forms, including classification with mark or points and oral evaluation. Additionally, the other four indicators in top 5 include: (a) the quality of learning processes; (b) the quality of physical and material conditions; (c) the system of further education reflecting teachers' needs; and (d) the quality of school management.

5. Conclusion

The goal of this paper was twofold. The first goal was to provide a methodological framework for classification of indicators in education, specifically focusing on SEPs. The second goal of this paper was to analyze the use of these indicators in SEPs. The first goal of this paper was met in table 2 which provides a comprehensive list of thematic areas and related indicators and that may be used in strategic planning in education more generally.

Concerning the second goal of his paper, indicators related to learning outcomes are the most common in SEPs. Moreover, a variety of indicators is used in SEPs, suggesting the presence of several 'core', more frequently used, indicators and several 'peripheral', less frequently used, indicators.

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