Grassroots Innovations in Schools: Barriers and Ways to Overcome Them

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Relevance and research problem

Innovations proposed by school staff* (grassroots innovations) are important because of their characteristics:

- focus on local needs and context
- absence of institutional restrictions, creativity
- adaptability, high response speed, [Koroleva and Havenson, 2015; Seifang and Smith, 2007].

The emergence and diffusion of grassroots innovations is a complex process, as it faces a large number of barriers [Halasz, 2018; Bolotov, 2014; Frumin and Kasparczak, 2012].

Sucha et al. [2021] examines the barriers and drivers of innovations in Czech libraries at four different levels: personal, local, organizational, and structural.

However, the mechanisms that can help to overcome these barriers are described only fragmentary in the literature.

* Grassroots innovation is a new or improved practice for a particular school that arose on the initiative of its employees.

Empirical data

Sample:

Perm region is an average region in terms of economic indicators and successful in terms of the quality of education

8 settlements (megacity, city, town, rural area)

Headteachers, deputies, teachers and other school staff

Semi-structured interviews N=90.

Survey: N=690

Research questions:

What mechanisms exist to overcome barriers of grassroots innovations at school?

How do innovators "maneuver" between barriers at different levels?

Theoretical framework

Theoretical basis	Developed group codes
Levels [Sucha et al., 2021]	Levels: - personal - organizational - locality (NP) - regional - federal
Barriers [Koroleva, Naushirvanov, 2020; Sucha et al., 2021]:	Content: - relations with actors - lack of financial and material technical base - characteristics of the team - personal qualities - laws - competence

Barriers and coping mechanisms

Lack of time to come up with or implement a new idea

- average at the sample (51 %)
- more typical to participants aged 40-49 (55.7%) and 50 and above (54 %) then younger colleagues (41,6%).
- more typical to urban participants (58.8% VS 45.7%)
- no differences for administration and teachers

Overcoming (qual):

1) Set the start date of the project avoiding busy periods;
2) Follow the principles of division of labour (for example, in terms of writing grant applications);
3) Relieve tasks for innovators (e.g. tutoring);
4) Involve not teachers but other staff (e.g. librarians, social workers);
5) Attract part of the team from outside of schools (parents, volunteer).

Lack of people with the necessary competencies

- average at the sample (49%);
- more typical to participants aged 40-49 (54,2%) and 50 and above (50,2 %) then younger colleagues;
- more typical to school administration (54,9%), than school staff (45%)
- no difference for urban and rural participants.

Overcoming:

1) Training seminars for employees;

2) Flexibility in choosing topics, time, formats.

3) "One for all": Search, structuring, reduction, distribution of information;

Lack of necessary materials and equipment or funding

- average at the sample (47%);
- more typical to young participants (52 %) then aged 40-49 (47,2%) and especially 50 and above (44,5 %);
- more typical to principles (51,4%) and teachers (50,1%) then to vice-principals (39,2 %);
- participants in town (48.7%) are more concerned about the barrier then those from mega cities (41.3%) and rural areas (41,4 %).

Overcoming:

1) Use of grant support;

2) Barter/sponsorship from other organizations, colleagues, parents, graduates (including barter/sponsorship from other cities);

3) Attracting new participants to the project with the necessary resources;

4) Reduce the scope of the project.

Analysis of the barrier level and the mechanism for overcoming it

The barrier does not have to be overcome at the same level

Project: conducting career guidance

Barrier: enterprises are not ready to cooperate with all schools in the locality due to limited resources, or if the school has lost competition
Level of barrier: locality

Overcoming the barrier: resources for career guidance from open online sources + engagement of parents and graduates as "expert lecturers" in their professions
Level of overcoming: online sources + organizational

The barrier can be overcome by our own resources

Project: children read new books and vote for the best one

Barrier: lack of methodological developments for holding the competition

Level: federal (closing down "Book of the Year chosen by children" program)

Overcoming: the school's own methodological developments

Level: organizational

"We decided to use this idea. We bought some books ourselves. We have an absolutely amazing librarian who selected all the new items very carefully. And it turns out that the books we have are not those that are offered to us, but those that we have chosen ourselves"

Summary and implications

1. We **distinguished** some **mechanisms for overcoming** the following **barriers**:
    -   Lack of time to come up with or implement a new idea
    -   Lack of people with the necessary competencies
    -   Lack of necessary materials and equipment or funding

2. If the opportunity necessary for the project was closed at one of the levels, innovators **looked for resources at other levels** or filled these gaps with **personal resources.**

4. Resources lacking in a locality or region can also be replenished through **the use of online resources.**

Thank you!
Questions are very welcomed

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Horizontal (barter) interaction can help to overcome the barrier

Project: biological study of reservoirs

Barrier: lack of equipment for conducting a research

Level: organizational

Overcoming: partnership with another school

Level: horizontal interaction between schools from different regions

"We have a connection with the lyceum in Yoshkar-Ola [the city of other region], we go there in the summer to conduct researches of the lake, since we don't have appropriate equipment yet, but they do"

The barrier does not have to be overcome at the same level (2)

Project: school students volunteer for the city (for example, helping senior citizens)

Barrier: finances

Level: organizational

Overcoming: city grant won

Level: locality

"It was a city grant, we won and <received funds> for uniforms, badges. They wrote that we are helping the city, organizing a team of volunteers for free, but we want it to be an incentive system, because my school, for example, does not have money for this now."