https://doi.org/10.53656/str2024-2-8-app

APPROACHES TO ASSESSING THE CREATIVE CLIMATE AND POTENTIAL FOR INNOVATIVENESS OF EDUCATIONAL ORGANIZATIONS

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Abstract. The paper provides an overview of selected methods and instruments for assessing the innovative capacity of organizations in general while raising questions about their potential application to schools. The premise is that diagnostics would be pointless if it were not accompanied by a strategy as well as a tool at the fingertips of school managers or leaders because the forms in which innovative potential can be manifested in a school are various. Innovation is not merely an object of transfer and exchange, but a matter of organizational climate which needs to be nurtured. Thus, the paper argues that the research of potential for innovativeness should be conducted by assessing the creative climate instead of organizational innovative culture; and suggests that organizational microclimate in the educational organization should be accompanied by efforts to foster, and respectively – assess – the team's competencies related to generating and implementing local innovative solutions. Whatever strategies, approaches, and skill sets the managing team chooses or has access to, these can only be effectively applied if 1) the settings (givens and constraints) are well understood and are taken into account; and 2) there is an awareness of the differences between traditional management and innovation management, which is associated with facilitating processes rather than leading them. The latter is covered elsewhere and not addressed here.

Keywords: organizational climate; potential for innovativeness; assessment of creative climate for innovations

Innovation (as in products, services, or processes) and innovativeness (as in the characteristics of organizations) are fairly broad concepts, and in addition to being challenging to conceptually define and clarify for a school or any educational organization or institution. Even more challenging is their measurement, although there are multiple frameworks for that – Diamond Model (Tidd & Bessant 2009), OECD – NESTI/Eurostat Framework (Oslo Manual 2005), Innovation Value Chain (Birkinshaw & Hansen 2007), etc.

For sure innovations change the organization's relationship with its environment, namely by addressing a need or offering a solution to overcoming a challenge/ problem. However, before the innovation becomes a fact – prior to fulfilling its completed cycle process of solving a problem (proto idea), invention, and innovation (i.e. the innovation funnel model), it exists in a potential that is embedded within the very fabric of the organization at various levels and in its climate. This paper aims to find ways of assessing the condition (creative climate) of schools/organizations to generate innovations.

Initial premises

For the study that is being provided as a part of a larger inquiry, we are starting from the following initial premises:

If we are interested in the innovative potential of schools and educational institutions in general from a management perspective, it is undoubtedly the managerial approaches themselves that are important. Here, however, our focus is on the manageable, not on management itself, i.e. the research inquiry is not on how, but on what and whom. Hence, we are interested in the organization itself and the people in the organization.

In terms of the innovation process, we should look at it through separate and different phases – that of creating an innovative solution and of implementing it. In our context in Bulgaria, particularly in the education field, we tend to discuss more frequently the transfer of innovations, or the exchange of "innovative practices". Yet, our focus here is on the process of creatively developing an innovative solution within the organizational environment (respectively with the leading role of its own teams).

As for innovative capacity, we distinguish between its manifestation (e. g. the innovativeness) and its latent (tacit) form (which we here call "potential" for innovativeness). Therefore, the topic of discussion is the conditions in educational organizations or institutions, particularly the discourse of competency level related to innovation (which is not addressed here), on the one hand, and the creative climate for the enhancement of innovativeness of schools and, respectively, any educational organization, on the other, by raising the question of "how could we assess it?".

Conceptual considerations

First of all, we intend to focus on the organizational potential for innovation as embedded within the *organizational climate* (≠ organizational culture, which in schools, is deeply rooted, stable over time, and well-known in terms of values and beliefs). The climate on the other hand, according to S. G. Isaksen (2007), is more susceptible to change and impact, and therefore easier to track and assess, and is a matter of attitudes, relationships, and patterns of behavior within the (educational) organization itself.

Second, it is essential to distinguish the organizational climate from the psychological paradigm of understanding it. As James & James (1989) have noted, whereas psychological climate is determined by subjective experience at an individual level, organizational climate is the collective perception that directly affects the work environment. (Glisson & James 2002)

Third, we should use Schneider's (1975) "thesis of plural climates" (Siegel-Kaemmerer, 1978) in order to tell the difference between a specific climate and the overall atmosphere in a school, even though they are both interpenetrated and affecting each other. A provision like this is essential, especially when we are to discuss assessing the *innovative potential* as opposed to any other kind of potential and the relevant climate suits as soil for such capacities to thrive.

Last but not least, we also consider that potential is typically in an inactive form, and despite how it is assessed, it cannot be used to foresee future innovations. That is because potential is relatively untapped. Therefore, for it to serve as an indicator of future states, additional conditions, such as those imposed by management and those set by the organizational environment, are required.

Statements about the climate in an organization

The term *organizational climate* was coined by K. Lewin, R. Lippit, and R. K. White in their experimental research on the social climate in a group (1939), without being conceptualized or methodologically supported. K. Kundu (2007) proposes an evolution of the concept of organizational climate (OC), from which the following definitions were obtained:

– [OC consists of] "formal organizational policies, employee needs, values, and personalities" (Argyris 1958);

– [OC is a] "normative structure of attitudes and behavioral standards which provided a basis for interpreting the situations and act as a source of pressure for directing activities." (B. Gregopoulos 1963);

– [OC is a] "set of characteristics that (a) describe the organization and distinguish it from other organizations (b) are relatively enduring over time and (c) influence the behavior of people in the organization" (G. A. Forehand & B. V. H. Gilmer 1964);

– [OC has] "six dimensions [...] that include i) structure ii) responsibility iii) reward iv) risk v) warmth and vi) support, [and later, influenced by McClelland's need factors' of motivation, the authors Litwin & Stringer (1968)] suggested the operationalization of climate through the assessment of members' perceptions" (G. H. Litwin and R. A. Stringer 1966, 1968);

– [OC could be] "measured through the shared perceptions of the organizational members [...and could be modeled by its] four compact dimensions" (B. Schneider & J. Bartlett 1968, 1970);

– [OC is a] "set of attributes specific to a particular organization that may be induced from the organization, dealing with its members and environment. For the individual member within an organization, climate takes the form of a set of attitude and expectancies which describe the organization in terms of both static characteristics and behavior outcome and outcome-outcome contingencies" (J. R. Campbell et al. 1970; Kundu 2007, pp. 100 – 102).

The latter description appears to be the one that is most applicable to our view of the dynamic and diverse activities within school communities and also the various stakeholders who interact directly and indirectly with individuals who are employed by any educational organization. The emphasis placed on the likelihood that the features stated could be triggered is yet another argument in favor of such a choice.

L. R. James & A. P. Jones (1974) classified all studies published, definitions, conceptual frameworks, and measuring methodologies into three main groups. They categorized the important theoretical concerns and the relevant several research papers on organizational climate into three approaches, distinguishing organizational and individual traits: "(a) Multiple measurement-organizational attribute approach, (b) Perceptual measurement-organizational attribute approach, and (c) Perceptual measurement-individual attribute approach." (ibid:101) Therefore, individual perception of the organization determines organizational climate and a set of attributes influences individual behavior. The climate is regarded as a situational variable or a main internal factor. (ibid:103) The most appropriate *approach* for assessing the organizational climate seems to fall on multi-dimensional scales about individual perceptions of the OC, from which to make predictions (from research and managerial point of view) about the most probable attitudes and behavioral strategies coping with addressed innovativeness at the local/grassroots level.

Nevertheless, the organizational climate is associated with innovation capability as a prerequisite for its manifestation, whether the so-called *culture of innovativeness* is understood to be the disposition and cumulative attitudes towards innovation in general. That is, when we need to organize the categories in processual order, it is appropriate – particularly for organizations in the education sector – to build them as follows: *Organizational climate* (specifically with regard to innovation) *– (Climate for Creativity/Creative Climate) – Innovativeness – Innovation culture*, the latter being the outcome of already manifested innovativeness and goal-directed preference within the organization instead of a requirement. As a consequence of researching the potential of organizations, we should pursue *methods for assessing* the organizational climate for thriving innovativeness (which is in fact *creative climate*) by developing or selecting/adapting available measurement instruments for such assessment.

In essence, OC is viewed as a variable that influences organizational processes such as problem-solving, decision-making, communication, coordination, control,

learning, creation, motivation, and commitment. It impacts the organizations in terms of the quality of their value proposition, the efficiency of the work processes, the creativity of the staff, and their job satisfaction and well-being, as well as profitability. In return, the resources – both tangible and intangible – of (educational) organizations have an effect on the OC as well. The emphasis of the OC in this regard falls on the creative climate because although the concepts of innovation and creativity are not identical, the *creative climate* is a prerequisite for innovation and thus for the *innovation culture*. To form an innovation culture the educational organizations have to look at what type of climate they are supporting. As Ekvall (1991) pointed out it is about "*the observed and recurring patterns of behavior, attitudes, and feelings that characterize life in the organization*".

The most widely known and validated methodologies and instruments for assessing the creative climate for innovativeness

Creative climate or climat for creativity [CC] theories date back to the late 1990s, viewing the climate as a mediating agent of the individual desire to innovate (Mumford & Gustafson, 1988), stressing on the necessity the maximum potential and creativity of the staff to captured (Woodman & Sawyer & Griffin, 1993), or linking individual creative behavior, motivation, and work environment as preconditions for innovation (Amabile 1997).

We specifically sought the *CC* for innovativeness methodologies and focused on the following review; hence, along with an overview of the selected assessment methods below, a brief discussion is initiated with the concern which are the most appropriate for our *educational settings*.

By starting with the **SSSI** which stands for **Siegel Scale of Support for Innovation** and was created earliest, we take into account the measurable factors of the working environment of the organization that support the creativity of its members. This instrument is the only one that is designed specifically for school organizational factors that are supposedly present in a given innovative educational organization. (Siegel & Kaemmerer, 1978) The authors develop the method on the basis of a retrospective analysis of two schools – a traditional and an innovative one. On the basis of a factor analysis of 225 initial statements describing the relationship between working environment and creativity, S. M. Siegel and W. F. Kaemmerer further narrowed them down to a questionnaire of 61 items, later also tested in business organizations. They identified three key factors that had the most relevance to the independent variable – namely, *support for creativity, tolerance of differences,* and *personal commitment*. (ibid)

The validity of the instrument raises some questions due to the fact that at its design: first, the sample is of high school students (with very few teachers participating) – here we question to what extent the instrument measures organizational climate or students' perception of it. Here we can agree and

also rely on our research on people‘s perception of climate – what else could it be? But here, secondly, the selection of the two schools is based on their self-designation as ‚innovative‘ or ‚traditional‘, based on which the authors assume that once you are an innovative school, students must claim creativity as climate. However, we can trust the theoretical findings and the leading role of the three factors, recommending the questionnaire to investigate the CC rather within the learning process, precisely because of the students‘ statements in its development.

Similarly, **KEYS: Assessing the Climate for Creativity** by Amabile et al. (1996) seeks to view the impact of the work environment at different levels in the organization (organization-wide, group, and supervisory levels) through the staff perceptions. Again, the independent variable is the creativity and development of new ideas. The leading intent behind the instrument is for practitioners to use it to diagnose to what extent the work environment fosters creativity in the organization. The questionnaire has 8 variables – 6 enabling, and 2 constrainings: *organizational encouragement, supervisory encouragement, work group support, resources, challenging work, freedom, workload pressure, and organizational impediments* (Amabile et al. 1996).

The questionnaire consists of 78 broadly formulated items with 4-point Likert scales. Although it is very widely used, in terms of schools, it could be challenging and possibly highly subjective (and also misleading for educators) to distinguish between different sub-levels within educational organizations (i.e. supervisory level). Moreover, it is possible that challenges in analyzing the results could arise from the fact that the categories surveyed are not clearly related to a single one of the identified dimensions of climate for creativity. Nevertheless, it can serve in evaluating individual initiatives or forms, since it distinguishes high-creativity projects from low-creativity projects.

The next instrument we will touch on is the **TCI (Team Climate Inventory)** by authors N. R. Anderson and M. A. West (1994, 1998). The questionnaire, in its most widely used version, available in numerous languages, consists of 38 items, with four dimensions – *vision, participative safety*, *task orientation,* and *support for innovation.* (Anderson & West 1998)

Their main goal is to use the instrument as a team developing tool, which has direct practical application instead of suiting research purposes. However, it can be part of strategic organizational development (research) sought through the development of teams. The community of educators is rather a unit – it only comes up suitable for intrateam relationships surveys. Whether the TCI could be applied to individual structures and project teams is another issue, but they are also in dynamic configurations.

The last of the tools discussed here is the **CCQ (Creative Climate Questionnaire)** by G. Ekvall (1996), which was later known as **SOQ (Situational**

Outlook Questionnaire) its English version by S. G. Isaksen, K. J. Laurer, and G. Ekvall (1999). There are 10 dimensions explored through 50 items, with one dimension being removed in 1999. They are the following: *challenge/involvement, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debates, conflicts,* and *risk taking* (Isaksen et al. 1999).

Conclusion

As a result of our research, it appears appropriate to distinguish and graduate: *Organizational Climate* regarding innovation – *Climate for Creativity* (as a prerequisite) – *Innovativeness* (as a strategic end) – *Innovation culture* (as outcome).

Apparently, in spite of the availability of all the enabling factors for an innovation climate to thrive, innovativeness is also a function of the team‘s and its near stakeholders‘ expertise. In conclusion, assessing the organizational climate for innovation is a necessary but not sufficient requirement for proving potential for innovativeness. In this regard, additional *assessment of innovation-related competencies* is necessary.

Taken together, these findings could indicate to executives the given school‘s potential for creating innovation at the local level – both in terms of environment and in terms of team capacity that can be steered, fostered, and channeled successfully, but these latter are a matter of strategic vision and management efforts, as well as of well-developed and communicated organizational identity, clear commitment, and achieved consensus.

The choice or development of instruments to assess innovativeness should depend primarily on whether a school claims to be innovative, in which case it is preferable to use an instrument such as the OECD‘s, however, if the research question or management objective is to explore the organizational potential for being innovative, it is very important to use methodologies such as the CQQ/SOQ by G. Ekval et al. (1996, 1999).

After reviewing various instruments to assess the organizational climate for thriving innovativeness (=climate for creativity), we suggest that the construct of educational institutions’ CC consists of the following dimensions: *cooperation / trust / positive peer group* (i. e. Siegel & Kaemmerer 1978; Amabile et al. 1996; Ekvall 1996), *supportive management / top position management involvement* (i. e. Anderson & West, 1994), *mission clarity / shared objectives* (ibid)*, perception of freedom / autonomy* (i.e. Amabile et al. 1996; Ekvall 1996), *intellectually positively-challenging environment / exploring ideas* (ibid), *harmonious interpersonal relationships / sense of belonging / lack of conflicts* (Ekvall 1996), and *fearlessness to error / participative safety* (i.e. Anderson & West 1998); and of course, all of this against the background of the team competence profile and the resources/ competencies accessible in the proximate organizational environment.

Acknowledgments

The present paper is a part of dissertation research, partially supported by a project of Sofia University for the assignment of research activities to young scientists and postdoctoral fellows in the implementation of the National Program „Young Scientists and Postdocs – 2". The author expresses her appreciation to the colleagues from the Institute of Philosophy and Sociology at the Bulgarian Academy of Sciences, Petya Klimentova, Martin J. Ivanov, and Vesselina Kachakova – for the consultation and their recommendations.

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