

Ensemble Learning: A Lens for Group Learning in Schools

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ABSTRACT: Organizational learning posits a relationship between individual learning and group learning. The various processes of organizational learning and the characteristics of learning organizations have been given much attention, and the notion of the operational unit of learning, the group, has been approached from a variety of perspectives. The most common nomenclature for this unit is that of team. Although the notion of team has been given much attention, the power of the term has been lost as some managers assume that groups or collections of individuals will necessarily become teams (Katzenbach & Smith, 1993). It is perhaps because of the universality of the term that the application of teams tends to be somewhat pallid. For this reason, it may be of value to illustrate the nature of teams through the lens of a specific type of team with which readers will have only a passing familiarity – the musical ensemble. This paper argues that the notion of the learning ensemble can provide valuable insights into cooperation and collaboration in schools.

RÉSUMÉ: L'apprentissage organisationnel établit une relation entre le savoir de d'individu et celui du groupe. Il a été apporté beaucoup d'attention aux divers procédés d'apprentissage organisationnel et aux aspects des organisations de formation. On a aussi abordé sous différents angles le groupe comme concept du secteur opérationnel de formation. Pour ce secteur, la nomenclature la plus courante est celle de l'équipe. Bien qu'on ait prêté beaucoup d'attention au concept d'équipe, l'impact du mot a perdu son réel intérêt. Ainsi, certains directeurs supposent que les groupes ou les ensembles d'individus seront automatiquement des équipes (Katzenbach & Smith, 1993). C'est probablement à cause du galvaudage du terme «équipe» que la mise en place des équipes a tendance à manquer quelque peu d'intérêt. De ce fait, cela vaut peut être la peine de représenter le véritable esprit d'équipe par la lorgnette d'un type spécifique qui est seulement familier pour les lecteurs; celui de l'ensemble musical. Ce papier

soutient que le concept de groupe d'apprentissage peut offrir des aperçus importants pour la coopération et la collaboration dans les écoles.

The literature on organizational learning often refers to the learning group as a *team*. Although there is considerable value in the team metaphor, the application of teams within organizations often falls far short of delivering on the promises of enhanced productivity, collaboration, and consensus. Katzenbach and Smith (1993) stated "that teams and performance are inextricably connected" (p. 44). They provided an effective working definition of teams that differentiates teams from groups, collections of individuals, and the like. "*A team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable*" (p. 45).

It is perhaps because of the universality of the team concept that one often considers any grouping of people involved in a task to be a team. For this reason, it may be of value to illustrate the nature of teams through the lens of a specific type of team with which readers will have only a passing familiarity – in this case, the musical ensemble. It is not my intent to suggest that effective teams must behave like ensembles or look like musical groups, or to provide a comprehensive definition of a musical ensemble, I only suggest that there are some unique insights into effective teams that can be learned by taking the "road less travelled" and examining the notion of team through the lens of the musical ensemble. Although there are varieties of types of ensembles (e.g., dramatic, musical, dance) this paper will deal primarily with the musical ensemble.

An ensemble is defined as "a group producing a single effect" (Merriam-Webster, 2001). Following the definition provided by Katzenbach and Smith (1993), musical ensembles are heterogeneous, they are made up of unlike, yet complementary, instruments with different roles and musicians with specialized skills all focused toward the same purpose and performance goals. Ensembles are self-managing groups that are "composed largely of specialists who direct and discipline their own performance through organized feedback from colleagues, customers, and the organization's management" (Seifter & Economy, 2001, p. 9).

I will examine the usefulness of the notion of ensemble learning through the conceptual frame of several key words from Katzenbach

and Smith's (1993) definition, namely, (a) ensemble size, (b) complementarity, (c) skills, and (d) purpose and performance goals. For this discussion, reference will be made to a recent book about the Orpheus Chamber Orchestra (the world's only conductorless orchestra) to shed light on the nature of collective learning and collaboration in self-managing groups.

Ensemble Size

There are many types of ensembles, but for this discussion, I will focus on small ensembles. Small ensembles are better suited to group learning processes. Large symphony orchestras often fall victim to the same hierarchical constraints and hegemony that we see in typical organizations. Guitarist Mark Worrell (cited in Seifert & Economy, 2001) stated "in a symphonic context, you find 'workers' with fabulous talents, formal training, and an abundance of theoretical knowledge, and yet strangely enough these musicians are forced to separate their capacity for conceptualization from the moment of execution" (p. 10). This description may sound alarming familiar for many educators.

There may be an optimum size when developing interactive self-managing learning ensembles. The Orpheus Chamber Orchestra was faced with the problem of the large group being unwieldy in decision-making. Their solution was to develop a core of decision-makers. The decision-makers' responsibility was to make initial decisions and then bring the other ensemble members on board. Large groups are more likely to result in a few people taking leadership and power from the group, and are more likely to result in a marginalization of other group members. Grove (cited in Seifert & Economy, 2001) stated, "eight people should be the absolute cutoff. Decision making is not a spectator sport" (p. 156). Similarly, Leithwood, Steinbach, and Ryan (1997) found that the size of the group had a bearing upon the effectiveness of group learning. "It ... seems to be the case that small schools facilitate team learning through the proximity of members and the interaction that occurs among them as a result" (p. 323).

The level of group interaction will depend on the size of the group. The larger the group, the less spontaneous interaction between the members can be tolerated. In large musical groups (i.e., big bands, orchestras, etc.) spontaneous or unplanned interaction is limited. Interaction still exists but it is typically more scripted or pre-planned. "There are natural limits to the amount of feedback that can usefully be processed, and limits, too, to the number of participants who

should be involved" (Evers & Lakomski, 1996, p. 68). This has implications for learning teams. The size of the group has an influence on the capacity of that group to learn collectively. In musical ensembles much larger than five or six people, the ability to hear and interact with others becomes increasingly difficult. In these cases, it is necessary to plan the course of the song and assign roles to the players. The same may be true of teams in learning organizations. A learning team that is much larger than five or six people may have difficulty in interacting, adapting, changing leaders, changing the primary soloist, and responding to the context.

Complementarity

Ensembles are made up of musicians playing different kinds of instruments and often playing vastly different parts. In music, the diversity of rhythms, notes, and directions of musical phrases is referred to as counterpoint. Counterpoint is complex. At its extreme, it can resemble cacophony, but when complimentary and vastly different melodies are combined, the result is a unified whole constructed of complex, seemingly independent voices. It is the control and balance of dissonant (harmonically unresolved) and consonant (stable) sounds that guides the composition.

Diversity in ensembles is not only tolerated but is encouraged, the same applies to the learning ensemble. Research has demonstrated that several experts in the same domain are not necessarily advantageous. In fact, performance can be significantly reduced, as experts may often disagree about the problems and solutions of the situation. "If a single expert represents the pinnacle of his or her profession and the knowledge acquisition phase is reasonably successful, it is unlikely that adding more experts will improve performance" (Ford & Adams-Weber, 1992, p. 132). Computer scientists have also recognized this problem and have proposed that expert systems should not work in the same domain but should "run parallel." That is, multiple experts are appropriate but the domains of expertise should not overlap. Redundancy in domain expertise does not improve the efficiency of the expert system. "It is our experience that in many situations only this notion of 'running the experts in parallel' (i.e., independent expert systems) seems to work-either theoretically or practically speaking" (p. 132).

The heterogeneity of the ensemble is fundamental to the understanding of the collective nature of organizational learning. Marquart

(1996) argued that “most groups do not learn” (p. 44). The emphasis on homogeneity in teams may be a significant reason for the inability of teams to learn. Team members often feel as though they must fit in and think alike. Senge and colleagues (2000) argued that “team members do not need to think alike” (p. 73).

In contrast, the ensemble metaphor emphasizes the value of heterogeneous groups. Accompanying roles in music are complimentary, mutually dependent, and mutually elaborative. Homogeneity is undesirable. As you can imagine, every musician filling the same role would result in a group effort characterized by either cacophony or monotony. Elaboration, not parroting, of the input of others is what is required for successful group learning.

Jazz musicians use the metaphor of conversation to describe the process of elaboration as it applies to the improvising soloist and the improvising accompanist. Simply repeating what one hears when speaking to another person is not conversation. Conversation requires that one understand what is said to them and that one respond or elaborate on the point made by the other person. This is the same process that occurs in ensembles and in learning communities. Group learning is about alignment, coordinated action, elaboration, and complimentary action (Marquart, 1996), not duplication or homogeneity. Seifter and Economy (2001) referred to this mutual elaboration as synthesis. “All successful leaders in *Orpheus* routinely incorporate the ideas of others into their own personal strategies. We constantly rely on designated leaders to build consensus by synthesizing the group’s best ideas and approaches into a coherent whole” (p. 91).

Every ensemble member needs to be thought of as a soloist. Contrary to conventional wisdom, an ensemble thrives from the proper deployment and utilization of soloists or *stars*. Similar to leaders, soloists in an ensemble are constantly shifting. In the *Orpheus* example, “every member gets the opportunity to solo. For a performance to reach its full potential, everyone has to be fully engaged” (Seifter & Economy, 2001, p. 24).

Orpheus emphasizes constantly changing roles for its members. They encourage “members to fulfil shifting roles on an informal basis when it will best serve ... [the] product and quality” (Seifter & Economy, 2001, p. 73). The type and extent of involvement that a player takes is based on the task at hand and the expertise that is available within the group. “Any person or group with special knowledge or un-

usually clear perspective automatically has a clear and respected role to play in decision making" (p. 73).

Proper ensemble functioning requires that, while roles and leadership may change, all members have an equal authority and autonomy in the group. The notion of subordinate/superior has no place in the learning ensemble. Drucker (cited in Seifter & Economy, 2001) stated no "knowledge ranks higher than another; each is judged by its contribution to the common task rather than by any inherent superiority or inferiority" (p. 108). The implications in schools are obvious. Most schools utilize teacher assistants, caretakers, and food service staff; very few treat these staff members as equals in the task of educating the child. Schools need to ensure that all employees are members of the ensemble. This means that teachers must include these other employees in staff meetings, professional development, and workshops on group process development. This is rarely done in schools. In the Orpheus example, while each member "assumes full responsibility for his or her performance, the orchestra functions as a cross-communicative team of equal experts who develop and implement common goals and outcomes" (pp.110-111). Arguably, the common goal of schools is the learning of students. In a learning ensemble, teacher assistants, teachers, clerical staff, support staff should all be treated as equal experts dedicated toward the goal of increased student achievement. The extent to which all employees are included in this process will influence the efficacy of the learning ensemble.

Skills: Practice Makes Perfect

In a musical ensemble, each musician brings to the group a wealth of individual skills and group skills. These skills have been forged primarily through individual practice and hours of group rehearsal. Ensemble members diligently practice their individual contributions and then rehearse together so as to ensure success at the time of performance. This individual and group practice is what enables the ensemble to perform together.

Proponents of learning organizations refer to empowerment and enabling as key to the development of learning organizations (Senge et al., 2000; Mitchell & Sackney, 2000). Empowering refers to providing the autonomy, trust, influence, opportunity, and authority for ensemble learning to take place. Enabling refers to the skills, knowledge, values, and ability that it takes to participate in ensemble learning. Many schools and administrators have made attempts at

empowerment, but few have given adequate consideration to enabling their employees so that they can develop a capacity for organizational learning. This is not surprising, as the provision of support, encouragement, and resources is a natural set of activities for the administrator. More difficult, and less natural for the administrator, is the process of teaching the members of the ensemble how to learn as an ensemble and what the required knowledge and skills are for ensemble learning.

There have been many attempts to empower self-managing teams but, for the most part, team members have been “left with relatively trivial decisions regarding team process and function” (Seifter & Economy, 2001, p. 8). Meaningful power and authority are essential for the effective functioning of the ensemble. Employees should have the ability to:

Exercise some measure of authority over such areas as setting work schedules and environment, developing and executing budgets, hiring and firing employees, developing what products and services will be developed and sold, and participating in the development of mission, strategies, and goals” (p. 21).

This is uncomfortable terrain for administrators. Empowering means sharing power and relinquishing control. “Creating an environment where employees are truly empowered means loosening the reins on authority and giving employees access to resources that are usually controlled by managers” (p. 36).

Administrators do a better job at empowerment; it is a transformative, facilitating process. Educational theorists have moved away from notions of instructional leadership, with its emphasis on “improving the technical, instructional activities of the school” (Leithwood, 1992, p. 10) toward transformational leadership which focuses on facilitating learning. We provide opportunities, encouragement, resources for team learning, but what then? How do we ensure that team learning is taking place? What are the skills that are required? How do we enable our school staffs to develop into learning ensembles? Enabling focuses on the *hows* of ensemble learning.

Once individuals and groups have been empowered to have “control over their work” (Mitchell & Sackney, 2000, p. 60) they are often left with the question of how to work effectively as an ensemble. “Teams do not happen automatically just because a group of people has come together” (p. 67). Individuals must acquire the requisite skills of ensemble learning. This is the process of enabling. Seifter and

Economy (2001) argued that in order for ensembles to be truly enabled for learning, they must practice the skills required for collective learning.

Enabling Through Personal Mastery: Individual Practice

Any discussion of developing groups is necessarily a discussion of how to enable individuals and groups. Enabling is about giving the individuals and groups the skills and knowledge that are required for ensemble learning. The first step in enabling the group is to ensure that individuals have developed the appropriate personal skills. This involves the development of an individual's personal mastery (Senge, 1990). In an ensemble, each musician is responsible for his or her own contribution and for an adequate level of skill on her or his instrument (Seifert & Economy, 2001). This is a given in an ensemble and, one would hope, in schools! This, however, is only one level of the personal responsibility that each group member has. A group member is also personally responsible for "the outcome of the group effort" (p. 44) and "for selecting team leaders and offering suggestions and criticism to help them bring forth the very best ideas and energies of the group" (p. 45). The requisite skills for the latter two responsibilities cannot be assumed, and, I suggest, that these skills are uncommonly found in working groups and school staffs.

Senge (1990) refers to personal preparation for group learning as personal mastery. Personal mastery is an essential component for the learning ensemble. It is the proficiency of each individual that is a prerequisite for group learning. Personal mastery is a continuous growth process for the musician and for the member of a learning ensemble. Personal mastery gives the learner the skills to approach problems and adapt to new situations and new contexts. An effective enabling process guides individuals and the group through the stages of development of personal mastery. Effective learning ensembles operate at the highest levels of personal mastery.

Mitchell and Sackney (2000) identified the essential elements of a learning community as (a) personal capacity, (b) interpersonal capacity, and (c) organizational capacity. Their framework for a learning community represents the three pillars of a learning ensemble. Each of these elements is required for the learning ensemble to function. Personal capacity is crucial to the development of learning ensembles but it is, on its own, insufficient for the development of group learning. Interpersonal and organizational capacity allow for mastery to be

extended to the group through relationships, interactions, and structural elements that permit the translation of personal mastery or capacity into group capacity or mastery.

Enabling Through Group Processes: Rehearsal

Ensemble members need to be provided a framework for effective ensemble functioning and they need an opportunity to practice and hone their ensemble skills in order for there to be any chance of successful ensemble learning. Ensemble members rehearse together to ensure that the members of the group will perform well together, that the various interdependent parts are coordinated, and that each ensemble member has the same vision for the final performance. "Teams need to establish some ground rules for the team discourse and some expectations for dealing with violations of the ground rules" (Mitchell & Sackney, 2000, p. 67).

Roles

A musician, like any other worker, is constrained and enabled by the roles assigned to them. Ensemble member roles can be formal, those assigned because of a specialized set of skills, knowledge, or abilities, or informal, those developed and assumed by the group member because of aptitude and interest. Seifter and Economy (2001) stated, "knowledge workers, in particular, thrive when they understand their roles in a broad context" (p. 66). They did not, however, suggest an explicit, overly detailed or restrictive job description. In fact, knowledge workers find such specific descriptions limiting and frustrating. Ensemble members need to understand their role broadly, but this must not deter them from re-defining their role, taking on new responsibilities, and branching out into areas of interest – as long as the basic function assigned to them is adequately performed. Far from limiting ensemble members, clear roles provide a framework for autonomy. "Clear roles free people to grow into new areas of interest and competence" (p. 66). The manner in which roles are defined has a great influence on the individual's capacity for innovation. "Clearly defined roles function as an organizational safety net that gives us the security we need to grant each individual the freedom to take initiative" (p. 74).

Although each member has an assigned role, his or her expansion into other areas of interest is critical to the success of the organization.

tion. The member's expansion of roles is directed by his or her focus on the objectives and goals of the organization. Stated in another way, a group member can assume another role because he or she is motivated by a commitment to the outcomes of the organization. "Companies that encourage their employees to apply specialized knowledge, experience, and perspective to the 'big picture' enjoy a significant competitive advantage over companies made up of people who are not allowed to grow beyond the narrow confines of their specialities" (Seifter & Economy, 2001, p. 120).

There needs to be a balance between the freedom and autonomy provided by specialized roles, and the flexibility and commitment provided by the member's responsibility to the overall organizational outcomes. Seifter and Economy (2001) argued that, in shared leadership, there is "no alternative but to depend on each specialist to develop a generalist's knowledge" (p. 120). This can be accomplished through cross-training. Most musicians have some training on other instruments. This gives them the ability to understand the music from a different perspective and to anticipate the challenges and approaches of other instruments so that they might better interact with and critique the other members of the ensemble. This same approach is vital in schools if staff members are to work together in a meaningful way. Specialization is a pre-requisite; generalization, however, enriches the individual's perspective and ability to see connections to other specializations and to work interactively toward a common goal.

All of this serves to illustrate that a balance is required between specialized roles and the ability of the ensemble member to venture outside of those roles when his or her passion, sense of responsibility to the ensemble, aptitude, or interest direct him or her to do so. "Questioning, puzzlement, and doubt are needed for learning and adaptation to take place" (Bushe & Shani, 1991, p. 11).

Leadership

In Orpheus, the leadership roles formerly assumed by the conductor have been appropriated by individual musicians. The members of this group "rotate formal leadership roles, while others spontaneously take on ad hoc leadership responsibilities in response to organizational needs and the specific demands of each piece of music" (Seifter & Economy, 2001, p. 11). Leadership in an ensemble is context specific and outcome dependent. As with soloists, leadership is constantly

changing in an ensemble. “We use the characteristics and specifications of the product to decide who will be the designated leader for each moment of each performance” (p. 69).

Leadership in ensembles needs to change depending on the expertise available in the ensemble. The basic assumption is that members of the ensemble have specialized skills and knowledge that requires that they assume leadership when the task aligns with their expertise. Ensemble members have a natural internal motivation because of their dedication to the task that facilitates shared leadership. “Most knowledge workers pursue careers that allow them to perform work that they love and value the opportunity to experience creative engagement in their work through self-expression and problem solving” (Seifert & Economy, 2001, p. 88). Shared leadership is natural for these people and in fact, “sharing and rotating leadership fuels employee motivation” (p. 88).

Communication and Consensus

Communication is comprised of two activities, talking and listening. “Most people are quite skilled at both talking and listening, but integrating and balancing the two are tricky, and effective communication in organizations involves equal measures of both” (Seifert & Economy, 2001, pp. 160-161). The balance between talking and listening requires that in talking, members are “extremely disciplined about which ideas ... [they] put forth” (p. 144) and the “focus [is] on developing solutions rather than just identifying problems” (p. 145). In order to increase the effectiveness of the group decision making process, each member must be aware that “withholding useful ideas or offering frivolous ones undermines his or her own performance as well as the orchestra’s” (p. 147) Listening requires that each member “suspends disbelief while listening to others, and each individual . . . remains open to other points of view—even those in direct conflict with our own preconceptions” (p. 144).

Open and disciplined communication facilitates consensus. “Consensus means reaching a broad level of internal agreement on a specific issue by involving as many stakeholders as possible in the decision-making process” (Seifert & Economy, 2001, p. 163). The focus of each member on the “big picture” is what allows consensus to be achieved. “Inevitably, consensus requires individuals to compromise, in order to realize organizational objectives” (p. 166).

Seifter & Economy (2001) posited a unique approach to consensus building. They stated, "the designated leader or another member of a divided group shifts roles from idea advocate to idea broker" (p. 170). An idea broker's responsibility is to act as a facilitator and to articulate the characteristics, strengths, weaknesses, and implications of a controversial idea to the group. It is their job to facilitate discussion. The idea broker must suspend their disbelief and give each idea an equal treatment. "Assigning the responsibility of being an idea broker to a member or a decision-making team consistently helps us [Orpheus] achieve consensus in artistic and administrative areas" (p. 171).

Consensus is also facilitated by a belief in experimentation. "It helps enormously that few decisions in Orpheus are truly 'permanent'" (Seifter & Economy, 2001, p. 173). Ensembles have a capacity to try various solutions. The belief that no decision is permanent allows for experimentation, evaluation, and reformulation by the entire group. This, in fact, is the essence of ensemble learning.

Seifter and Economy (2001) argued that consensus must be practiced. They suggested that employees undergo a process of discussion on a controversial topic and try to achieve consensus in pairs, followed by groups of four, and finally with the whole group. They stated, "practicing the process can help build organizational muscles for making consensus work" (p. 182). Mitchell and Sackney (2000) stated "consensual decision making is a team *thinking process*" (p. 72). Consensual decision making is a meta-cognitive skill that must be taught to members of the ensemble. It is not enough to tell them how to do it; it must be practiced, rehearsed, and developed in order to be an ensemble resource.

Purpose and Performance Goals

Most organizations have developed a mission statement that aligns with the goals and purposes of the organization. Members of an organization are seldom able to articulate the mission statement and often it has not been operationalized in either the individual or the organization. "When employees lack internal motivation for their work, businesses often turn to an authority figure to improve job performance, but at an enormous cost to the creativity and productivity of the entire workforce" (Seifter & Economy, 2001 p. 192). Mission must be intimately connected, not to purpose or goals, but to passion if it is to be inculcated into the organization. In a musical ensemble, the gene-

sis of the passion for the ensemble comes from a passion for the outcome, the music. This is the case in the Orpheus example; "for us, passionate dedication begins with the music itself" (p. 190).

In schools, the mission needs to be intimately and obviously connected with the passion of the school staff. Before the mission is identified, the passion of employees must be identified. "Passion motivates individuals to undertake challenging and ambitious responsibilities. We reinforce individual passion by using our mission to shape our tactical and strategic decision making" (Seifter & Economy, 2001, p. 191). Dedication to and passion for the mission enable ensemble members to move beyond their formalized roles and responsibilities toward a commitment to the organization's outcomes and goals. "When employees rally around a company's mission, they tend to go far beyond fulfilling their professional responsibilities by tapping personal reserves of creativity and energy, unleashing a level of performance that can't be achieved in any other way" (p. 200).

Summary

Although the metaphor of team learning has been widely used and has merit, this paper has argued that the example of the musical ensemble has much promise for understanding group learning in schools. Katzenbach and Smith (1993) stated, "*a team is a small number of people with complementary skills who are committed to a common purpose, performance goals, and approach for which they hold themselves mutually accountable*" (p. 45). The notion of musical ensemble provides a lens with which to explore team size, complementarity or homogeneity of teams, personal and group skills and the purpose and performance goals of teams.

In order to create effective learning ensembles, employees must be given the power and autonomy to have control over their work. They must also have opportunities to develop the necessary skills and knowledge for ensemble learning. Seifter and Economy (2001) argued that groups must practice their ensemble skills in order to ensure success. Administrators are responsible not only for empowering ensemble members, but also for enabling them to successfully work as ensemble members by training them and providing for practice of the skills of ensemble learning. Practice sessions should focus on communication, (talking and listening skills) consensus building, and shared leadership.

Diversity of individuals and diversity of roles in an ensemble is essential. An ensemble is dysfunctional when all its members perform the same role. It is the diversity of roles as well as the constantly evolving roles in an ensemble that accounts for the richness of the ensemble and the robustness of ensemble learning.

Finally, and perhaps most importantly, it is the alignment of the ensemble's mission with the passion of its individual members that allows for the creativity, energy, and efforts of the members to be directed in the same direction. In a musical ensemble, it is the passion for music that is always the central concern; in a school, it is the passion for student learning that must always be connected with the mission of the ensemble.

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