

HOW PEOPLE LEARN: EXPERUENCES OF LEARNING

SUMMARY

This summary primarily presents, in a thesis-like format, several of the most general observations from the research—those that appear to be the most radically innovative and that more or less systematically represent a certain vision of learning and teaching.

It is recommended that these ideas be used when initiating a learning/teaching process—during the planning and implementation of its methods and approaches. In other words, they should be considered from an applied/methodological perspective.

Of course, this selection does not exhaust the full richness of the research. Every reader, while engaging with the book, will find numerous additional key insights, recommendations, and methodological approaches—many of which include and expand upon the ideas presented in this conclusion.

THE ESSENCE OF LEARNING

Learning is viewed as a source of life or as life itself. Not learning is equated with a state of death or non-existence. Most scholars understand “learning” as comprising four main components or aspects:

- Acquiring information (becoming familiar),
- Understanding,
- Remembering,
- Reproducing (applying).

The method of learning often depends on which aspect or component of learning is being addressed. The **goal of learning is to learn how to learn**. Mastery of what is learned is the degree that allows one to independently find answers and solutions to problems and questions arising in that field, including teaching others.

In today’s world, the process of learning does not stop because the revelation of truth is not considered a completed process. It is continuous because humans constantly need to update their knowledge and skills to remain relevant in a changing world. Even knowledge and skills considered “true” are continuously evolving phenomena. Therefore, the learning process never ends.

In this context, learning ceases to be merely the process of assimilating knowledge and skills already deemed true and transforms into a creative act. The learner evolves from someone who passively imitates to someone who discovers through exploration. Understanding this also means recognizing the significant degree of the learner’s participation in the learning process—and thus, their role in determining its forms and methods.

Learning helps individuals engage in their own lives and societal processes. According to some experiences, learning fosters greater freedom. It enables independent thinking, and the sense of independence enhances one’s degree of freedom, helping them break free from others’ authority and preserve their own perspective.

Learning broadens one's outlook, allowing them to see things previously invisible. It is a means of changing one's perspective. One of the key outcomes of learning as an action aimed at acquiring new knowledge is the formation and development of a person's ability to think broadly and deeply.

Learning helps overcome feelings of uncertainty, which in turn fosters a greater sense of safety and security.

KEY FRAMEWORK CONDITIONS FOR LEARNING

External motivations often have a coercive nature, despite being packaged in pleasant and metaphorical expressions like love, honor, respect, and responsibility.

Violence by the teacher is unacceptable, no matter what other virtues they may possess. The emphasis in the learning process should be on collaboration, not competition. In group learning situations, it is essential to ensure the absence of pressure, presence of teamwork, and the rejection of authority. However, when using group methods, clear systems for checking and monitoring mastery (of **learnuk**¹) must be in place to truly assess effectiveness.

In group learning environments, fostering a team atmosphere is crucial—one where not the competition among group members (winners vs. losers, successful vs. unsuccessful) but rather focus on maximizing individual contributions to the collective outcome through personal growth and effort is the key.

Highly regarded are those teachers who refrain from criticizing learners and instead encourage even small or step-by-step successes and the courage to express oneself.

Questioning is one of the primary methods of learning for many learners. Sometimes, the reason is the lack of other or accessible sources. In some cases, it is the accessibility of acquaintances—why go read or sift through audio and video materials if someone you know possesses the information you need? However, the more critical reason for turning to acquaintances is trust in their practical knowledge and experience, as well as the added value of personal, face-to-face, live interaction. Often, people turn to acquaintances who have practical knowledge on the topic of interest.

Thus, despite the diversity of online learning opportunities, the human source (formal or informal teacher) remains highly valuable, even though learning from them is more resource-intensive. Their significance is unlikely to diminish with the advent of the internet. The human source can guide learners toward online and other supplementary resources.

This means that someone who knows something must be prepared to serve as a source (see the subsection below, “Teaching as an Effective Means of Learning”).

¹ The research introduced a new concept, **սովորուկ** that we decided to translate as **learnuk**. **Learnuk** is a unit of learnable material according to the perceptions of the learners. **Learnuk** can be of different ‘sizes’, from a few words of a new language to an entire course or skill that is already being used in practice. This is a unit of learning that, according to the learner, has a beginning and an end and is a link in the chain of continuous learning. The need in this concept arises from the importance of orientating in the universe of learning to make sense on how to systematize that universe at least partly.

Teachers should often conduct lessons outside traditional classroom settings, as this promotes free thinking and helps avoid rigid behavioral stereotypes.

The primary trait that hinders learning is arrogance.

The importance of **management** (the science and practice of organization and administration) as a separate profession and its study has not yet been fully realized by Armenian society and the state system.

“If you are a bear, you should not become the chair of bears—that is, if you are a good scientist, it does not necessarily mean you will be a good rector. If you are a good writer, it does not necessarily mean you will be a good leader of a writers’ union. This is not understood in this world.”

— International development expert, author, male, 60.

RADICAL REFORM IDEAS IN LEARNING/TEACHING APPROACHES

Practical Learning

Start with practice as much as possible. If it’s physics—start with experiments; if it’s language—start with speaking and immersion; if it’s making something—start by making it. Introduce theory later or alongside, piece by piece, after each stage of practice (**practical learning**).

This is a proposal for a radical shift in the accepted learning paradigm: learning by doing, where practice is fundamentally prioritized over theory. For example:

- Learning physics by starting with experiments,
- Learning a language by speaking,
- Learning a craft by attempting to produce the expected result under a master’s guidance,
- Learning to swim by jumping into the water and splashing around.

The effectiveness and drawbacks of this approach deserve separate discussion.

In sports, arts, and related professions, we often witness the sequence of action → understanding. The action is planned first, but to understand whether it is “ideal” as planned, it must first be performed—as in theatrical performances, film shoots, or sports training. The actual process of understanding begins during or after the action or experiment.

This approach can and should be applied to learning other materials and skills. The qualities required for learning may emerge after mastering the material, further proving that one of the most important methods **in learning is practice**.

It is also valuable to study others’ learning experiences (how someone learned something) as a method of learning and a component of education—this is the approach this research is based upon.

Teacher’s professional experience and delivering the topic based on practice are crucial factors in fostering trust and interest in the knowledge being imparted.

Teaching as an Effective Means of Learning

One of the radical proposals is learning by teaching: as soon as you learn something, start teaching it, and in the process, you will learn it more deeply, refining your mastery.

“Once you learn, start teaching—together, you become developers, forming an algorithm for mastering and using what you’ve learned.”

Transitioning from learner to teacher from the very beginning—not just mastering something but also teaching it as early as possible—is one of the best methods for learning anything.

In this process, the learner also reinterprets what they know, develops it, and understands why and how they comprehend and master the material, driven by the need to communicate it to others.

The best way to learn something well is to teach it to someone else, for many reasons, including the fact that the “sign systems” of learning and teaching are different (see below in the section “Key Additional Applications in Learning”). That is, you compare learning the same thing through two different sign systems.

Many psychological and other factors come into play:

You are an authority, entitled to make mistakes and correct them, but you must also correct your mistakes to avoid teaching others incorrectly—you are responsible.

You learn from the person you are teaching—from their questions, work, mistakes.

Collaborative work generates new, deeper insights into problems and their solutions.

You gain a team, and so on.

Approaches to mastering knowledge or skills can be considered effective when an attempt is made to reproduce or transmit what has been mastered.

“What you learn is not only for yourself but also so you can pass it on to others. In group settings, my main advantage has always been helping others understand more—or vice versa, others helping me understand more.”

— Psychologist, a student, female, 22.

“I noticed something: during exams, when I got questions on topics I had taught, I answered with such confidence that the lecturer was stunned. I realized that by teaching that topic, I had become an expert on it.”

— Education expert, lecturer, male, 53.

Group (team) learning creates opportunities to teach others in the group. However, this method is also applicable outside group learning: learners can be advised to teach someone else what they have learned to master it better.

Children often learn this way—for example, playing “house” and explaining to adults why they perform certain actions at a given moment.

Mastered knowledge can also be used for pedagogical purposes—when the learner gives lessons, during which their own abilities are enhanced.

The learner, in the role of the teacher, learns something new and develops skills in the subject being taught.

Vision for the Future

Every course and, within its context, the study of individual subjects and **learnuks** should begin with the teacher and learner discussing and formulating the learner's goals.

Depending on the specifics of the material being taught, dedicated time should be allocated in the curriculum for formulating learning goals.

A key methodological tool is working with the learner to formulate goals, clarify steps, and create a broad "roadmap" for acquiring the given knowledge or skill. This can foster the learner's interest in navigating their own path, turning each lesson into a self-motivated and meaningful endeavor rather than an externally imposed task.

The roadmap is not a system for checking the quality of mastery but an opportunity to reflect during the "journey" on how the roadmap was envisioned versus how the learning process actually unfolds—adjusting the roadmap's milestones as needed while preserving the "big picture" of the learning process.

Project-Based Approach to Learning

The approach to learning that the research has arrived at is as follows:

- Formulate the learning goal,
- Define expected outcomes (and later, achieved outcomes),
- Plan expected actions,
- Proceed while reassessing the results of each action.

This is the same as the process of creating and implementing a project. Thus, the concept of learning can be framed as the introduction of a project-based approach (or entering the project paradigm), considering not only the execution of specific projects during learning but also the methodological characteristics of learning at a meta-level.

The actions of formulating goals, outcomes, and roadmaps may include the context expansion method (see the next subsection).

During the formulation of learning goals, an important task is developing the learner's ability to formulate their own learning objectives. The learning goal is not static—it influences the success of the learning process but is itself shaped by learning.

Context Expansion and the Bigger Context

Sometimes, a person may realize the need to learn something but find the subject uninteresting or too challenging. In such cases, it is highly beneficial to place the isolated problem within a larger learning context.

Learning can also be viewed as a tool for solving questions in other contexts (e.g., other professions, fields, or everyday situations). In other words, when clarifying the framework of learning/teaching, it is methodologically essential to consider in advance how the learned material will be applied in other contexts. This will also influence the learning process, path, and methods from the outset.

Further research is needed to determine how knowledge specific to a particular field or topic can be effectively and operatively applied in other fields and everyday decision-making.

Context expansion as a tool helps find more accurate answers to many questions:

- Recognizing the complexity of a problem more clearly than if only a single cause-and-effect relationship is considered.
- Distinguishing more significant factors from less significant ones.
- Avoiding a “tunnel vision” approach.
- Not overlooking more significant factors when discussing a topic.

In conditions of information overload or narrow professional contexts, thoughts often diverge toward topics and causal hypotheses proposed by public discourse (or market demands). This rigidifies approaches and leads to dead ends or closed loops of thought. The larger factors are being forgotten, and mistakes are made while assuming cause-and-effect relationships and trying to identify dependent variables.

Context expansion exercises help avoid these mistakes. Even when discussing sub-problems, keeping the model of the larger context in mind prevents forgetting it and occasionally refines thinking by referring back to the larger context.

KEY PREREQUISITES FOR SUCCESSFUL LEARNING, OR WHAT TO DEVELOP TO LEARN SUCCESSFULLY

Communication, Erudition, Articulation, Reflection

The entire research naturally emphasizes **the importance of communication skills** in the learning/teaching process. The role of **dialogue** and (oral) discussions in learning is highlighted.

Learners are engaged when the teacher turns the lesson into a discussion, raises interesting questions, and listens to learners’ opinions and stances.

Communication skills include **constructive and cooperative communication**—non-manipulative (the research emphasizes **honesty** as a crucial aspect of the learning/teaching process).

But for full, free communication, **erudition** is also necessary—not only professional but also general knowledge, including ‘performative’ and other abilities, as well as skills in communicating through different sign systems (see the section “Key Additional Applications in Learning”).

The ability to express these through language is called **articulation**—the ability to present or explain something using a developed linguistic repertoire. In other words, the ability to communicate in a **structured** manner.

The ability to articulate accumulated experience also implies reflection—the ability to formulate what you know and don’t know, to see the boundaries of your knowledge “from the outside.” It is through this that a person (the teacher) appears as an articulated individual.

Articulation is the “next stage” of reflection—being able to **explain** what you have felt or understood in a reasoned way, making it clear or convincing to others, and discerning why something is, in your opinion, wrong, incomplete, or correct.

At what level is the error—factual or methodological? What underlying principles of thought are the arguments based on?

In this regard, it is important to consider the **development of reflexive skills** in the learner as one of the tasks of the teaching process. This primarily relates to developing the ability to evaluate one's own actions and the teacher's work.

Sometimes, in group settings, the facilitator performs reflexive actions, hoping the group follows their train of thought and that this process is generalizable to the entire body of prior learning and all participants.

The outcome of reflection is important here, but it would be dangerous to assume that this is a manifestation of the learners' independent work. Thus, the **profanation of methods**, even with good intentions, and their superficial use are dangerous.

Another communication skill is **empathy**—imagining what level of erudition, reflection, and thus articulation skills the interlocutor possesses, and **calibrating** communication accordingly.

This means, in some cases, avoiding overly complex, unexplained terms, explaining the thesis with examples, deepening knowledge mastery through dialogue, and so on.

The issue of calibration is often associated with the learner's age. Naturally, you would not explain something to a child in the same terms as to an adult professional. However, experience shows that presenting an approach slightly more complex than what seems age-appropriate—if it aligns with the material and the teacher's natural intuition—helps rather than hinders the learner. It sets a bar for striving to understand, intensifies the effort to comprehend, and provides satisfaction when understanding is achieved.

Imagination

One of the key prerequisites for articulation is imagination. Taking a component of **learnuk** and developing it imaginatively, picturing its “adventures” (to remember, understand more deeply, or communicate to others):

“I would fixate on a word that seemed like a unique gateway to the next stanza, inventing melodies so that this line ended here, and therefore this other line had to come next—that's how I learned. For prose, like others, I would imagine it as a movie—each character with their own scent, hair color, and so on.”

Awareness of Diverse Methods

As part of erudition, awareness of different learning methods (for different **learnuks**) is crucial for improving learning effectiveness. The more methods a learner is aware of, the more likely they are to choose the most optimal options for learning.

KEY ADDITIONAL APPLICATIONS IN LEARNING

System/Order

To understand learning material, learners try to place it within some system. This system is usually a structured version of their prior knowledge.

If the incoming **learnuk** does not fit (or cannot be fitted) into the existing system, it may be forgotten or its mastery postponed.

Being aware of the existing parts of the system and having an idea about them allows one to determine whether a given **learnuk** is integrable or not. If not, it should not be forgotten but “suspended” until the system, to which the learner already has access, develops enough to accommodate the suspended material.

Again, being aware of the already prepared, mastered parts of systems requires the work of reflection and imagination.

Rhema

A common and important micro-method in learning is highlighting, noting, accumulating, and systematizing key and noteworthy messages and concepts. This means mastering the skill of thematic/rhematic division.

Thematic/rhematic division refers to the approach of the Prague Linguistic Circle, according to which meaning-bearing material can be divided into “actual” components:

- What is known or serves a functional purpose (theme),
- What is new and important (rheme).

For example, in the sentence “I am going to school,” “I am going” is the theme, and “school” is the new information being communicated, which actualizes the meaning conveyed by the sentence.

In conversation, the theme is often omitted, as in dialogue:

“Where are you going?”

“School.”

Here, the theme (“I am going”) is omitted, and “school” is the rhema—the new information the speaker is conveying.

In learning, the thematic/rhematic approach is used to distinguish the unimportant from the important, the new, and the actual. Of course, what is new for one addressee may be old for another, but generally, group members with roughly the same thesaurus and erudition perceive the new versus the old similarly.

The rhema is the novelty that appears, building on the theme—the old, the known. If there is no rhema in a text or speech, the communication is incomplete. If the rhema is not sufficiently anchored in the theme, it cannot be conveyed—the addressee will not understand what is being discussed.

In this context, distinguishing the important from the unimportant is one of the most crucial skills, allowing one to sift through vast amounts of information to find what is useful, separating it from what is unimportant or transient—even if the latter may later be reevaluated when parts of the material previously non-actual become relevant.

For example, this afterword is structured using the thematic/rhematic approach—selecting from the research those theses and conclusions that seem particularly innovative and that, when extracted from the text, form a systematic connection with one another.

However, readers are advised to refer to the full text, as, depending on their needs, they may discover many other rhemas there as well.

Combining Different Sign Systems to Facilitate Learning

An important skill for remembering and understanding **learnuk** is combining different sign systems, using them simultaneously, or transferring the same topic, material, or **learnuk** from one system to another for mastery or teaching purposes.

The research mentions the combined use of the following sign systems:

- Combining speech and visuals,
- Rewriting what you know in another language,
- Reading (or listening to) material in two languages and comparing comprehension differences,
- Listening and reproducing in your own words,
- For actors, physically acting out the text (the opposite, writing the text based on physical performance—is more the function of a director or playwright),
- Gestures accompanying speech, facial expressions, and other forms of bodily expression, intonation,
- Teaching what you have learned,
- Explaining practical learning verbally, theoretically.

Another case of using alternative sign systems to understand material is relating it to everyday reality.

Most scholars are aware of the method of placing learning material into other sign systems or structures familiar to them for understanding.

One of the most common ways to combine different sign systems is the verbal or written reproduction of material in one's own words (e.g., school paraphrasing or oral exercises in non-formal education to develop listening and comprehension skills).

Live examples, allegories, and metaphors are very useful additional sign systems for understanding learning material. Complementing theoretical thought with examples is one of the best ways to master theory, as well as learning to correctly interpret examples from real-life cases.

Attaching an example to theory or inserting allegory in scientific and formal language to facilitate learning, though these are linguistically part of the same sign system (the same language), belongs to the same class of learning methods as juxtaposition of different sign systems, due to its stark contrast with the surrounding style.

The opposite case—inserting scientific information into artistic speech—is also such a method (if done well).

Another example is using formulas in technical or exact science texts alongside verbal explanations of their meaning.

The study shows that understanding is facilitated when learners try to explain the learning material using signs and examples familiar to them (paraphrasing, concrete and real-life examples, etc.).

Therefore, one of the teachers' goals should be to provide and encourage this opportunity for learners.

Another sign-related method of understanding is deriving new material from the learning material, obtaining a new 'meta-text.'

Creative application of **learnuk** in other contexts can also help master material effectively. For example, applying technical or social science knowledge in an artistic context.

Generally, using multiple sign systems during learning helps better understand the material. Such systems can include diagrams, drawings, songs, verbal and non-verbal signs, body language, etc.

Attempts to understand material in another sign system are usually followed by a return to the original sign system of **learnuk** to check whether the core messages (rhemas) have been correctly understood.

Those who solve the problem of understanding through the chain of material → another sign system → return to the material usually do not need additional efforts to memorize the material.

In a sense, passing through this chain resolves the issue of memorizing the core messages and ideas.

If the action is accompanied by text, as in theatrical art, sometimes the action itself suggests the text.

To memorize learning material, some learners rely on their auditory, visual, or combined auditory-visual representations.

Topics presented with examples are more easily mastered. It is especially desirable for examples that relate to current reality and local contexts.

Teachers who are most positively remembered are those who used figurative speech, allegories, and metaphors, were emotional, employed active kinetics, and used humor when necessary.

Thus, combining different sign systems (oral and written speech, speech and images, action and speech, etc.) is one of the most effective means for mastering, understanding, and reproducing **learnuk**—creating associative links between meanings expressed through different signs to effectively learn any large or small **learnuk**.

THE EXPRESSION OF FORMAL, INFORMAL, AND NON-FORMAL EDUCATIONAL APPROACHES IN RESEARCH

The research includes numerous examples related to all three educational situations. The examples of formal education systems, for understandable reasons, primarily refer to the Armenian formal (primarily state-run general and higher) education systems, which, as is well known, are filled with numerous shortcomings.

Respondents provide many examples from other learning experiences—on-the-job learning, non-formal educational seminars, private tutoring, self-learning, and learning via the internet.

It is worth once again summarizing the overall picture of learning opportunities.

Formal education systems, especially the Armenian state type, are group-based, divided into class periods, long-term (multi-year), and primarily based on traditional “subjects” (mathematics, physics, chemistry, Armenian language, foreign languages, history, etc.—in schools, and

corresponding subjects in specialized universities). They operate through systems of explaining lessons, asking questions, assigning grades, giving lectures, and administering exams.

In formal settings, it is especially emphasized that the learner does not necessarily have the freedom to choose what they study. Even if they have chosen their specialization at university, they do not choose what is presented to them.

Informal education, by contrast, is primarily a personal search—choosing a mentor or online materials, or learning within the work environment to successfully perform a task. Non-formal education is likewise a freer and more optional learning context.

Why did non-formal learning contexts develop so extensively worldwide in the past century? Naturally, because the rigid formal models described above, especially state models, revealed their limitations. They are slow to reform; when their resources come from the state (i.e., society as a whole through taxation), equalization policies (especially in terms of access, but also in provided content, teaching and assessment methods, and more) become one of their defining features.

Of course, there are private educational institutions and rare non-private experimental cases (such as the Mkhitar Sebastatsi educational complex) that can experiment and organize learning more freely. However, the general shortage of resources in society limits many people's chances to study at such institutions.

Informal and especially non-formal educational opportunities serve to fill this gap. They both provide new knowledge that the learner did not receive in the formal system (including completely new topics—when someone decides to learn things entirely unrelated to their current field or knowledge), and can also enhance what was learned formally.

Most respondents cite examples of non-formal education as trainings and seminars by NGOs, mostly funded by donors—primarily Western donors. They often don't realize that learning in the work environment is also often a form of non-formal education.

Non-formal differs from informal in that, in the former, unlike the latter, there is a subject (an organizer or educator) who determines the method of learning (and other conditions) and provides it to the learner. In the informal case, the learner themselves determines the method—explicitly or implicitly.

The insufficient conceptual clarity around non-formal education is also reflected in the fact that many respondents present it as isolated seminars rather than a long-term strategy. Meanwhile, in recent decades, the field of non-formal education has developed rapidly, based in particular on the learning methods and needs also revealed by this study.

The lack of an explicit and official evaluation system naturally helps to avoid potential frustration. The “lightness” of materials provided during a single seminar is based on research findings—on what and how much a person can effectively absorb in certain conditions.

Of course, quality issues may arise due to subjective reasons, but most non-formal educational methodologies are grounded in evidence- and research-based approaches.

The team- and project-based approach, and the teaching of “soft” skills, are driven by the fact that the rigid and often theoretical knowledge provided by formal education is often inapplicable

in real life and the labor market (at best, it serves as a foundation on which applicable knowledge can be gradually built). This particularly creates a demand for social adaptability and quick orientation.

It is known that some of the most advanced Western businesses do not require formal education credentials when making hiring decisions but instead ask to see what the individual can actually do—in theoretical or practical terms. Similarly, some top Western universities occasionally admit students without requiring proof of previous formal education, again based on demonstrated knowledge and abilities, independent of institutional history.

How and when the Armenian formal education system will be transformed to meet modern quality standards remains a question. To bridge that gap in practice, non-formal learning opportunities and environments are increasingly emerging. The most prominent of these are long-term, somewhat institutionalized, and well-known—such as the “Hetq” media factory or TUMO, both mentioned in the research.

It is evident that many of the “radical” ideas aimed at increasing learning effectiveness, competencies, and skills are widely utilized in non-formal educational contexts.

In this respect, it is important to discuss some of the opinions expressed by the respondents in the study. In the subheading “Learning as a Journey,” a respondent expresses dissatisfaction with the commonly used “expectation tree” exercise at the beginning of non-formal courses.

Naturally, this is a key component of the “roadmap.” It turns out that while suggesting to draw the tree is methodologically correct, the exercise often may become formalized and devoid of substance. Experienced non-formal educators, knowing this, work to engage participants in a way that avoids stereotypical expectations, clarify that not all expectations will be met, and have tools to adapt the activity to incorporate at least some expectations that weren’t part of the original plan.

Ultimately, they consider it a means of socialization—to help a diverse group of participants begin to form a team. People become aware of each other’s expectations. That is, educators may assign greater or equal importance, as one respondent says, to “students playing some sort of game, drawing attention from others, standing out to the course organizers, and similar things” than to the content of the expectations themselves.

In many non-formal education methods, the socialization and networking of participants are considered core components of the learning process. This means that participants often learn not just, or not mainly, content, but social skills—solving problems together, discussing, navigating group dynamics, listening, etc. These are precisely the kinds of skills that are often not imparted in formal education systems.

Whether it is appropriate to treat this “secondary” function—often not explicitly mentioned in the agenda—as a primary goal is an important question. Does this amount to a distortion of the very idea of education? Some educators may feel their efforts have failed when participants later write in their final evaluations that “the most important part was the interactions during lunch” (a case mentioned in the research).

The expectations tree is useful not only because it informs other participants about each other’s expectations, but also for other reasons. It’s one thing for participants to write their expectations

ahead of time or to agree with the event's objectives before attending, and quite another for these expectations to be voiced in a public space.

First, such statements are remembered better. Then, they become shared knowledge, owned by the whole group. Lastly, having them posted on a wall allows everyone to refer back to them whenever necessary—as a kind of sketch of the roadmap. This marks the beginning of combining symbolic systems—spoken and written-visual—which, as repeatedly discussed in the text, is a key method and tool for learning and building habits of learning.

The resistance expressed in the respondent's comment can be explained by two possible factors. One is that if the entire training ends up being rather superficial (a not uncommon occurrence, though such cases do not carry positive methodological lessons), then collecting expectations merges with the overall impression and is remembered negatively, as the disappointing start to a wasted session.

But there's another possible explanation: in the Armenian context, socialization has traditionally not been considered an important factor in the educational process. It is no coincidence that the respondent frames “getting others' attention” as a negative thing (suggesting they weren't really interested in what others were saying). Yet, showing respect for oneself, introducing one's personal approach, and being ready to listen and understand others are all natural, civilized forms of social behavior and valuable skills.

Likewise, sketching a roadmap using visual symbols in addition to speech, and keeping it visible (posted on the wall and referenced repeatedly) is a sound methodical practice. The student visually collects the entire learning “journey” like beads on a string. And as with many new methods, it may, unfortunately, be met with resistance.

A final note: collecting expectations also makes it possible to compare, at the end of the training (either verbally or in writing), to what extent participants feel their expectations were met. Not all expectations need to be explicitly addressed during the training to be considered fulfilled. A good training participant might find their expectations met even if not directly addressed. A reflective participant will mention those cases in their evaluation, recognizing when their expectations were satisfied implicitly.

In general, comparing expectations with outcomes provides organizers with valuable feedback for improving future trainings.

It is common in such events to hear instructors say, “I'm learning with you,” or “I'm learning from you too.” Indeed, although the learner and the teacher may be learning different things from one another, it is well understood that in non-formal learning contexts, the learner more clearly takes on a teaching role, and the teacher—becomes a learner.

Thus, in almost every participant in a non-formal educational process, there can be, in different ways, a blending of the learner and teacher roles.

An interesting and well-known fact is that when formal processes—lacking quality tools for assessing educational experiences—are juxtaposed with non-formal ones, which are more focused on educational effectiveness and quality, resistance toward the latter often intensifies. One reason is that society's members may have limited capacity or readiness to accept new approaches—a reflection not of their failings but of their cultural and historical background.

Another reason, as noted in the research, is that people often come to non-formal education opportunities with the desire to immediately address an urgent societal issue that concerns them. In that context, they expect to dive straight in—improvisationally—asking, “Why waste time on all these warming-up exercises? Time is valuable!”

They often forget that in school or university, it took months or years to learn something, not just 1–3 days. And often, they were not in a position to properly evaluate whether that investment of resources was justified.

Because many respondents encounter non-formal education as adults—they consciously take non-formal educational classes often precisely due to the inadequacy of the formal system—they may express opinions, sometimes critical ones, about the very methodological techniques that beneficially distinguish non-formal from formal education.

Yet the research clearly shows that the more clearly the learning path is made explicit, the more empowered the learner becomes. And isn’t the formulation and awareness of learning goals (which can differ significantly among learners in a non-formal setting) one of the most crucial steps in creating the educational roadmap?

When participants’ expectations intersect with the goals set by facilitators, a shared purpose is formed—within which a high-quality non-formal educational experience can occur. These expectations, linked to the event’s objectives, add a subjective dimension—drawing from the individual’s life experience or other personal factors explaining why they consider participation important.

In the section on non-formal education, one respondent specifically mentions a method known in professional literature as *elicitive learning*—a method of drawing out or bringing into the light information that a student already possessed, even if not realizing that. Its essence lies in the belief that when discussing public issues with adults, the goal is not simply to provide theoretical knowledge (which can be memorized), but to first map their existing opinions—whether far from the truth or partly aligned with it—and only then engage in discussion by comparing these views and clarifying what should be understood.

According to this approach, people at a certain age already hold many opinions, based on various information sources, personal experiences, and observations. So it makes more sense to teach them not “by someone else’s words,” but by helping them find a “path to move forward” through the synthesis of their own views.

This application of polyphony has deep scientific foundations. Correlating multiple testimonies to clarify or verify the truth is well-known in investigative work, journalism, and science (through verification experiments). None of the subjective perspectives exactly matches “reality,” but their variety allows a person, through mental effort, to orient themselves toward which aspects of the situation are closest to what actually happened.

This approach also resembles a certain method in philosophy. According to the traditional method—followed, for instance, by Armenia’s formal education model—if people want to understand what “freedom” means, they must read what Plato, Aristotle, Hegel, Kant, Marx, Heidegger, Deleuze, and others have said about it. In contrast, the opposing or Socratic approach suggests starting by mapping out what people currently understand by “freedom,” what kinds of examples they can think of from their lives or experiences that illustrate either its presence or

absence. Only after that should one discuss which historical thinker interpreted which version of this concept in what way.

This approach goes even deeper when it comes to revolutionizing the way history is taught. It recommends starting instruction from recent historical facts—moving from the present to the past, rather than from some arbitrary point in the past toward the present. Recent history may be reflected in a person’s memory even if he/she was a child at the time, or they may have heard family stories about it, or ask and find out from close relatives—parents, grandparents, etc. They have direct emotional connections to these stories, making it easier to grasp these events than events from a thousand years ago. Also, there are often more sources (or at least the possibility of finding sources) about the recent past, unlike ancient times.

Finally, the vocabulary and system of thought, descriptive values involved in discussing recent history are closer to the psychology of today’s learner than those that describe the distant past. Someone born in the age of mobile phones must be specifically told why people used to get anxious when someone was late for a planned meeting. Someone who’s never ridden a horse—how could they deeply understand what cavalry was?

Modernizing history education in this way—reversing the chronology—is something that often occurs precisely in non-formal education in Armenia. From both a methodological and effectiveness perspective, it helps people gain relevant knowledge. Understanding the complexities of several decades of the immediate past, often presented insufficiently in textbooks and/or presented in a politicized manner, gives a person the flexible imagination needed to approach less immediate and ancient history critically, to grasp it better, ask more precise questions, distinguish myth from fact, evaluate sources, and so on.

This is similar to the American tradition of writing CVs beginning with the most recent events and then working back, as opposed to the continental European tradition of starting from birth and only mentioning the present occupation at the end. The American style offers the opportunity to better understand one’s past path: only if the person’s current expertise is relevant (e.g., for a job opportunity) is it worth checking how they got there.

That’s why collecting oral histories is spreading as an approach in civil society projects in Armenia—so that society learns to document the life stories of those around them. This helps avoid a future shortage of material when people will try to understand today’s present and the recent past. The 20th century is far more frequently a topic in non-formal learning settings, whereas it is only superficially taught in general education contexts (apart from a small number of specialists who do that at universities and research institutions). This is problematic. If society is not well-informed about its immediate past, how can it make wise decisions about today and the future? It’s like a person with amnesia.

Another issue worth addressing is the specifics of using group work methods in non-formal educational environments. Here, plenary teaching is often interspersed with group work, where, for example, 30–40 participants are divided into smaller groups to address a specific issue through brainstorming or other methods. Later, if the process isn’t superficial (e.g., due to time constraints), they reconvene in a plenary session, and designated speakers present the group’s work, while others add input and give feedback.

In this way, a dynamic “engine” of intra- and inter-group engagement is created for ‘digesting’ the topic. This allows many issues to be effectively addressed through participation—issues that otherwise might go untouched—and empowers people who may have been passive or quiet in a larger group setting. Often, individuals with that psychological tendency feel freer to express themselves in smaller groups.

This method has several aims: activating the “passive listeners,” giving more people the opportunity to engage in practical work, and also weakening possible build up of unneeded hierarchies. The facilitator in this case has even less power than in a plenary, able at best to observe one group in depth or wander between groups to track general dynamics. Groups may have sub-facilitators who keep the process constructive, but usually group activists take the initiative into their own hands.

In this regard, the research mentions that active participants might drown out the passive ones and create a competitive atmosphere, but this is not inherently dangerous. Striving for leadership is also a form of showing initiative. If someone seeking leadership oversteps and silences others, ideally another person with leadership potential will check that behavior. Meanwhile, others who don’t seek leadership at the moment may observe and later use those insights. If civility is maintained, this kind of competitive environment is more beneficial than harmful.

Like before, using elicitive methods—structuring the situation—creates opportunities for people to express their leadership traits, which aren’t limited to talking the most. Leadership can also be shown by critiquing others’ ideas, proposing important concepts, listening to everyone, and summarizing the discussion.

Science, in general, warns against confusing external passivity with ‘internal’ passivity. Often, the person who seems externally passive and quiet may be engaging in the deepest reflection.

Another observation is that respondents often consider non-formal education to be just a single seminar or training session, even though such processes can be long-term. Of course, this depends on the available resources and topic. Deep topics often have to be covered in a situation of limited resources. But this is what makes non-formal education special: participants in a good event often say they learned more in three days than in six months of traditional formal education. As exaggerated as it may sound, this can be true—someone who clearly knows what they want to learn may, as an adult, gain more insightful knowledge from a non-formal seminar than from a subject they were forced to study in youth.

Of course, formal education usually provides background knowledge that helps later learning and articulation, but effective non-formal processes are often very intensive. They usually present condensed knowledge—through schemas and summaries—and the interactive, project-based approach allows participants to quickly absorb the topic or the part most relevant to them.

Even with limited resources, non-formal educational practices can overcome the “one-off training” model. Well-organized and ambitious non-formal events combine pre- and post-training text and video materials, focus on live, in-person interaction, gather evaluations afterward, maintain post-event contact for further support, arrange follow-up sessions, and create alumni networks. These practices—when supported by resources—turn a single event into an ongoing educational community.

Participant involvement—either by organizers or by participants themselves—in follow-up educational, research, or project-based processes—is considered a key indicator of non-formal education effectiveness. Some experts even consider it the most important indicator when participants begin working on projects together without the organizer’s involvement.

Effectiveness indicators include long-term social media groups, continued discussions, follow-up meetings, and actions initiated by participants. The strategic vision of non-formal education institutions is crucial for preventing trainings and seminars from becoming isolated events.

This ultimately implies a blending of non-formal and informal learning. After all, the distinction between non-formal and informal education versus formal lies mainly in the fact that the first two are based on voluntary choice and self-motivation, rather than even slightest coercion.

Non-formal education environments present the weakening of hierarchical power relations and empower participants—not only through the aforementioned and other methods but also by allowing them to openly express opinions about the process, the trainer, and even fellow participants. Only here, unlike in formal settings, is participant selection open to the judgment of other participants. In formal settings, usually no one even asks for your opinion on such matters.

There is an understandable (if paradoxical) reason why things that often cannot even be questioned in formal systems—because the learner is subordinated to the system—are constantly open to critique in non-formal systems: because the learner is empowered, and organizers usually listen carefully to feedback, collect evaluation forms, analyze them, and improve their methods from one seminar to the next.

All of this is based on referring to a bona fide ideal scenario. In real life, non-formal education experiences can be both successful and unsuccessful—just like formal ones. It is important that the shortcomings mentioned in the study are noticed and addressed.

The conclusion of this section is worth ending with a remark that once again highlights the unique importance of non-formal education environments in overcoming one of the main barriers to education—hierarchical, authoritarian power structures:

“One of the main reasons I participated in those trainings was to get out of the house and away from my neighborhood environment, and to find a space where I could socialize freely. Academic places—school, university—have always felt like places of violence to me, and I’ve always had a problem finding places free of violence.”

— Civil society employee, political scientist, male, 27

All of this leads to one simple and clear recommendation: where possible, formal education systems should incorporate the positive elements of non-formal education (as is happening globally). Unfortunately, that presents a challenge for formal systems, due to their limitations.

One example, not previously mentioned: classes run on fixed schedules, and different subjects follow one another like tiles in a mosaic. In contrast, non-formal settings have flexible timelines, where time can be devoted to a single focal topic over several segments.

There are many such issues. Some believe it’s probably impossible to learn mathematics in a non-formal setting. But today in Armenia, successful math circles operating as non-formal education centers prove otherwise.

Ultimately, none of the three learning environments—formal, non-formal, or informal—can, on their own, guarantee that a person will learn something successfully and become competitive. The only viable path for learning effectively in today’s Armenia is a certain combination of all three, the learning path being determined and constructed by the learner themselves.

It is best if the learner/educator is aware of this and makes it explicit—as a conscious method, a practical tool—when creating their learning/teaching plan.