

Tutoría Toolkit

Introduction. What is tutoría?

Welcome

This guide contains the basics of *tutoría* in theory and practice. It seeks to inspire teachers, educational authorities, students and parents to engage in tutorial relationships with each other regardless of age, background or position, and to transform their school environments into *tutoría*-based learning communities.

The Origins

The *tutoría* model began in 1999 as a program for secondary school students in rural communities of Mexico. These students had limited access to well-trained teachers, but had plenty of written and online materials to read and watch. Due to these factors, and to the novelty of secondary education in rural communities, the role of the teacher in these areas diverged by necessity from that of their urban peers. Rural teachers could not afford to impose a fixed curriculum and have students passively drink it up, they needed to create a more active and flexible learning environment to engage students.

[foto del ambiente rural mexicano. decir que los jóvenes juegan un papel activo en la manutención de la familia--o quizás fotos de distintos ambientes donde ha pegado la tutoría]

The proposed solution was to change the role of the teacher altogether: he would serve as a tutor to each of their students on an individual basis, focusing on topics that the teacher had mastered and the student had expressed an interest in learning. Teaching took place in dialogue and centered around helping the student reach his solution and interpretation of a reading or problem. The ultimate objective was not that the student cover any given curriculum, as would be the case in a conventional setting, but rather that he acquire reading comprehension and self-confidence to a level that would enable him to become a life-long learner.



The Tutor's Role

The tutor's goal during dialogue is not to impart his knowledge, but to present the tutee with a challenge and support them in finding their own solution, proceeding at their own pace and following their own learning path. The tutor's support comes mostly through eliciting, paraphrasing, and challenging the tutee's ideas. As both parties dialogue their way towards solving the challenge, they engage quite naturally in open-ended processes of inquiry, which is a departure from rote methods of learning that pervade traditional schooling. In *tutoría*, even seemingly simple questions reveal themselves and often have different interpretations and solutions. This reflects a complexity that is inherent to learning, but that is often not fully explored in traditional schooling.

Tutoría starts from the premise that we learn best when we have a say about what we want to learn, and when someone who knows that topic takes the time to listen to us attentively and supportively. Thus, the tutor strives to facilitate a horizontal relationship between himself and the tutee, so that each one's ideas are treated seriously and equally. This creates an environment of mutual respect in which learning, both academic and socio-emotional, can flourish.

Another feature of *tutoría* is that, throughout the dialogue, the tutor actively makes the tutee reflect about the range of ideas and emotions they experience during the learning process. This reflection encompasses aspects like the tutee's expectations, previous experiences and attitudes towards the topic, struggles with the challenge, tentative solutions, and conclusions. This reflection is then recorded in writing or other media, providing a vivid picture of the development of the tutee's ideas during dialogue. Through this kind of reflection, the tutee builds a deep understanding of the topic they learned as well as the process that led to this understanding.



The Student as Tutor

When receiving personalized attention in *tutoría*, students do not just solve the reading challenge or problem at hand, they learn a new form of learning interaction that is based on respect and mutual support. Initially, the teacher acts as a tutor to students on an individual basis, but as students demonstrate mastery of the learning and reflection process, they are encouraged to become tutors to their peers. This challenges students to develop dialogic and interpersonal skills on par with their learning skills, and also empowers them to become responsible for another's learning.

Ultimately, *tutoría* leads to a learning environment known as the *tutoría-based learning community*, in which each pair of students works through a challenge that one acting as tutor to the other has already solved. Learning becomes a shared endeavor in which everyone in the classroom alternatively plays the role of learner and tutor, enriching his mastery of the topics, the skills to learn meaningfully and the practice of dialogue.



Principles of Learning in Tutoría

Some of the principles of learning that tutoría lives by are the following:

- the learner is encouraged to pursue their learning interests with ever greater freedom
- personal, horizontal dialogue is the foundation for learning
- students engage with challenging, complex questions during dialogue
- the supportive environment allows students to take chances, make mistakes, and learn from them
- reflection about the learning process is embedded in the dialogue and allows students to learn for life
- students receive ever greater responsibility for their own learning decisions
- students make their learning visible through written records and oral presentations
- all students are encouraged to teach what they have mastered
- the ability to teach is distributed, leading to the construction of learning networks in which educators, students, and parents, are all welcome

Transformation of School Culture

One of the main premises of *tutoría* is that the learning occurs best in personal, empathetic interactions between a person who has mastered a topic and a person who is interested in learning this topic. This kind of apprenticeship is already familiar in some contexts like music learning, academic advisory in graduate school, and the learning of trades. However, we can argue that traditional schooling provides with almost antipodal conditions: teachers and students establish an impersonal, unidirectional relation in order to reach objectives set by external authorities and embodied in curricular and assessment demands. The teacher's academic strengths and areas of opportunity are not taken into account, nor are the students' interests and needs. *Tutoría* seeks to make assessment and curriculum planning a function of the students' learning, rather than the other way around.

Tutoría, like other educational innovations addressing the core of instructional practice, invites us to look critically into the assumptions of school culture. The successful transformation of the classroom into a tutoría based learning community requires that teachers, parents, educational authorities and students all play a contributing role.

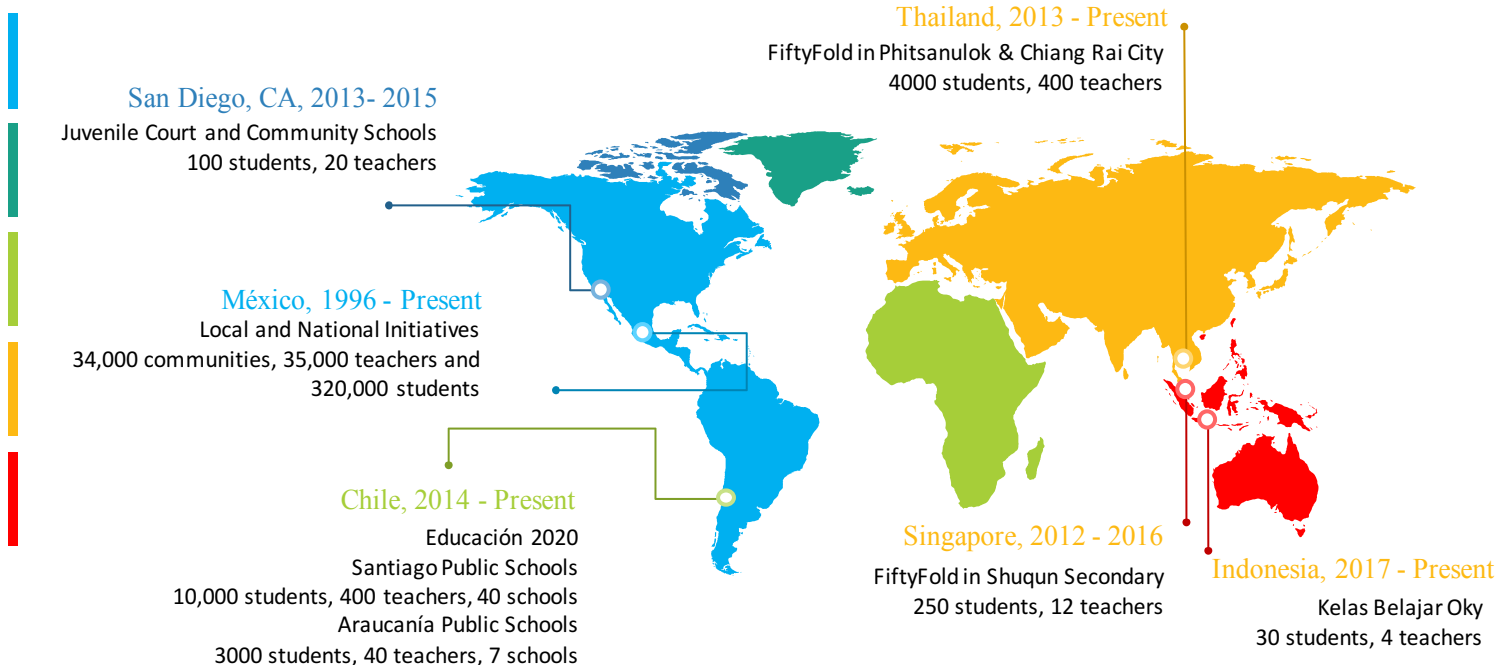




Extension of the tutoria model

In the time that the model has been implemented, we have found that these factors have positively impacted students and helped them become lifelong learners.

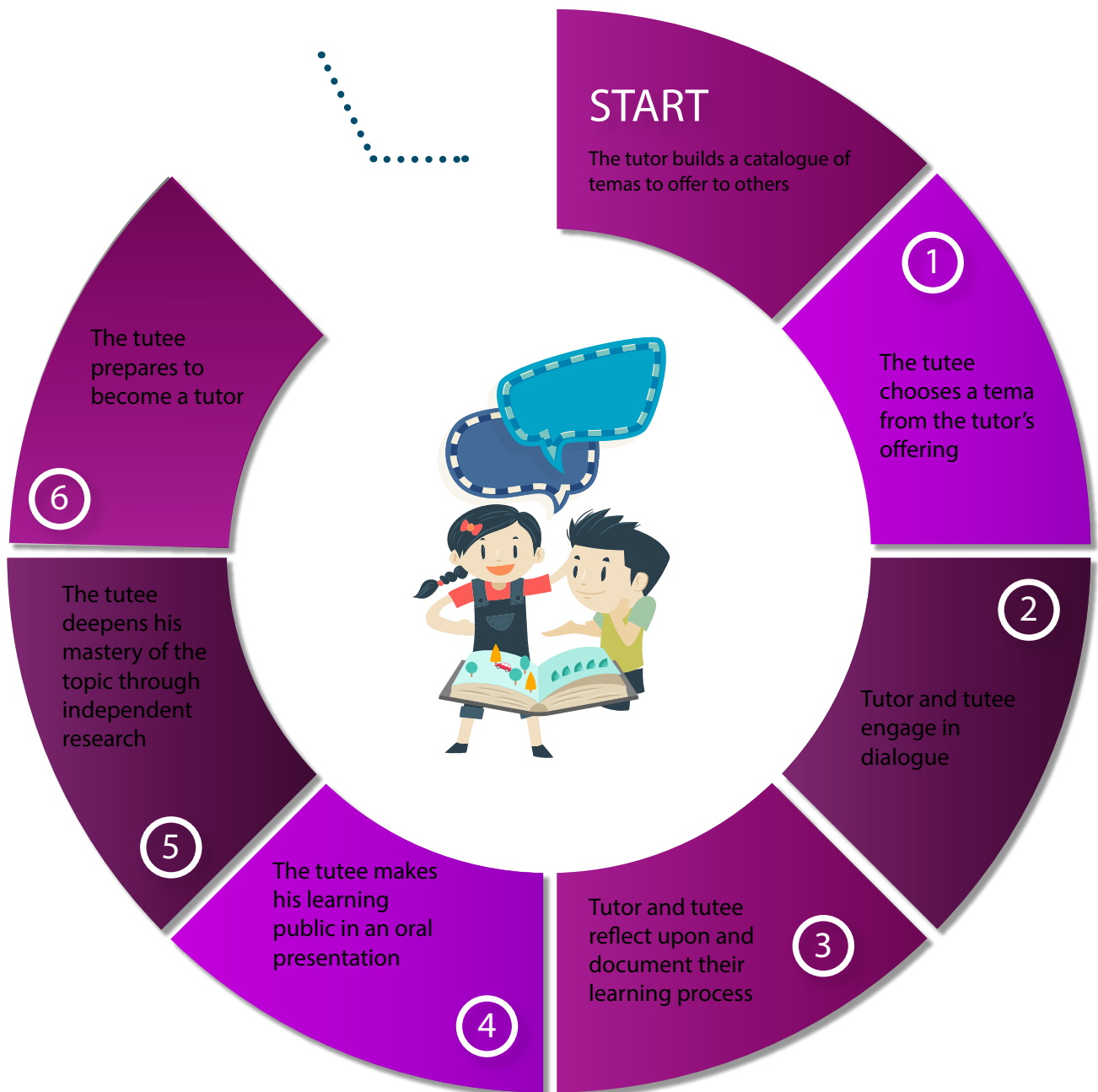
From its humble beginnings, the model has spread worldwide. The *tutoría* model is now being implemented in countries such as Thailand, Singapore, Chile, and the United States. *Tutoría* has also garnered the attention of experts from around the world, by academics such as Richard Elmore, Dennis Shirley, Michael Fullan, Santiago Rincon-Gallardo, Meixi, and Inés Aguerrondo.





The tutoría learning cycle

One-on-one interactions are the building blocks of a tutoría-based learning community, and are thus the first step that must be mastered by the educator seeking to implement tutoría in his classroom. In this section, we get into the details of the tutoría learning cycle, which embodies the learning principles outlined in the previous section. In the next section, we will tackle the problem of building a learning community out of one-on-one interactions.





The tutor builds a catalogue of temas to offer to others

One of the main assumptions of tutoría is that we have to be successful as learners before we can be successful as teachers. Thus, the tutoría learning cycle begins with the tutor's learning. We advise that the tutor begin with some short material--whether it be a short story, a single mathematical problem, a historical essay, an experiment, etc, depending on the subject matter--and learn it for mastery. The budding tutor writes down his motivation to learn that material, his previous experiences with the field, the difficulties he encounters, the discoveries he makes along the process, and the questions that remain open for him.

Once he is satisfied with his learning and feels like he can facilitate a similar process to someone else, he can add that material--the story, problem, or experiment--to his "offering catalogue". The broader his catalogue, the more choice he can later offer his tutees.

A crucial step in the process of adapting some material for tutoría is to identify the main learning challenges it poses. These challenges are worded as questions, as in the following examples:

What characteristics does a solid body have to have so that it can be used as a die?

What does the short story "[Un señor muy viejo con unas alas enormes](#)" ("[A very old man with enormous wings](#)") make us feel, imagine, understand, and enjoy? What resources does the author--Gabriel García Márquez -- use to make us feel, imagine, understand and enjoy what we do?

How are the four seasons of the year related to the motions of the Earth?

What position does the author of the essay "[La Revolución es ya un hecho pretérito](#)" ("The [Mexican] Revolution is a gone-by fact") take towards the Mexican Revolution and how does he support his view?

It is important that the tutor's learning go further than an individual learning material. Ideally, the tutor must have some knowledge of the larger topic to which the learning material belongs. He must also be familiar with the type of inquiry and the patterns of thinking characteristic of the discipline. This is part of learning for mastery, and is therefore acquired gradually.

The result of this comprehensive study is a *tema* (Spanish for theme or topic). This comprises the initial material we offer the tutee, the questions we have prepared to challenge his understanding of the material, and the further lines of inquiry (including more learning materials) we can offer him to continue learning the topic.





The tutee chooses a tema from the tutor's offering

Once we have constructed our tutoría catalogue, we are ready for the next step in the tutoría learning cycle: our tutee chooses from our catalogue a tema he is interested in. The offering is made verbally and visually, so that students know from the start what they can expect from each tema.

For the temas mentioned above, the tutor could prepare a poster and make an offering along these lines:

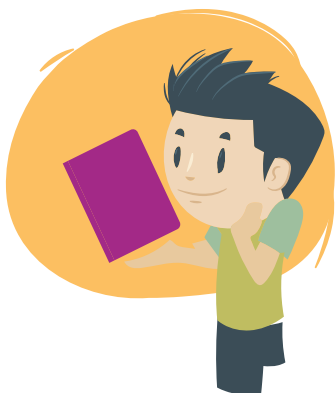
“In our daily lives, we use objects like computer mice, tables, chairs, toilets... each serving a specific and unique function and having a specific shape. How are function and shape related in these examples? In this challenge we are concerned with dice. They are typically cubical, but actually some other shapes are possible. This challenge is about working out what characteristics all dice shapes have in common.

“Stories are all around us from a very early age--in our family, our community and our school--and the characters and situations often grow to become part of our inner world. Gabriel García Márquez was a very renowned author of novels and short stories, in which he often entwined reality and fantasy and portrayed characters from the Caribbean regions he grew up in. Here, we read the short story “Un señor muy viejo con unas alas enormes”. Our challenge is, first, to enjoy, imagine and understand the story, and then try to pinpoint how the author conveys those feelings and ideas to us readers.

“Each time of year has a characteristic weather, [insert further detail according to your region]. Not all regions are the same: some have a rainy season and a dry season, others have four distinct seasons. In either case, the general weather in given season repeats the next year. What causes this regularity?

“In our everyday lives it often happens that different people hold different views about an event they experienced. For example, if two friends in a group argued over something, one person in the group might recall the incident as almost a joke, while another might think it was a serious fight. Are historical events also subject to interpretations? How do historians provide support for their particular views? In this tema, we look at a historian's view of the Mexican Revolution and try to make sense of his interpretation of it.

Once the learner has made his selection, the tutor typically leads a conversation about the learner's previous experiences and knowledge of the topic, and his interest in the challenge at hand. They then set a learning objective together, which can be as loose or as specific as the learner requires and feels comfortable with. The tutor's attention to the personal needs of the learner includes a tailoring of the challenge to his context, at this point or later in the dialogue.



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Tutor and tutee engage in dialogue

During tutorial dialogue, the tutor does not strive to convey his own solution to the learning challenge, but to engage the learner in the process of discovering his own solution. This means the tutor does not give explanations, as does a teacher in traditional schooling, but listens to the tutee's out-loud thinking and poses focused questions that allow the tutee to clarify and refine his ideas.

The tutor's questioning--and, in fact, the whole tutorial--is successful if it engages the tutee in complex cognitive tasks like:

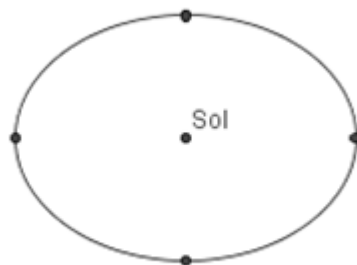
- making and testing hypothesis
- inferring and negotiating meaning
- advocating his ideas, listening to those of others and reaching consensus
- understanding and interpreting written materials
- making explicit connections between existing and incoming knowledge

The personal, one-on-one attention allows for a more authentic and empathetic relation between tutor and tutee than is possible in traditional schooling. It also opens the possibility for surprise, since the course of dialogue is different for each tutee and cannot be predicted beforehand. There is no set time for tutorial dialogue, but 90-120 minutes sessions have proved sufficient. Longer engagement, typically through further sessions, can be arranged mutually by the tutor and tutee, whenever they consider it suitable.

We now present some examples, coming from written reflections by the tutor, of what dialogue can look like when students solve some of the challenges introduced earlier.

Tutoría from a tutoría promoter to a fellow promoter Tema: the seasons of the year

[After a discussion on the motions of the Earth with respect to the Sun], I asked the learner: "are any of these motions related to the seasons of the year?" She said yes: along its translation motion, the Earth is sometimes nearer and sometimes farther from the Sun. Accordingly, our planet becomes hotter or colder. I asked her to make a diagram to explain the situation and she made a sketch similar to this:



The learner emphasized the fact that the earth's orbit is oval. She also assumed that the Sun sits at the center of the oval. As a result, there are two moments of the year when the Earth is at its farthest from the Sun, and two when it is at its nearest. But then, she realized something didn't quite add up; her set up could not account for the sequence of the seasons. The points of minimum Earth-Sun distance must occur during the warm seasons—spring and summer—, but those



points are not consecutive, as are spring and summer. Here is one of the learner's attempts at labeling the points along the Earth's orbit:



The learner made other attempts to solve this difficulty, but none proved satisfactory. With this conflict in mind, I invited her to read the prepared text.

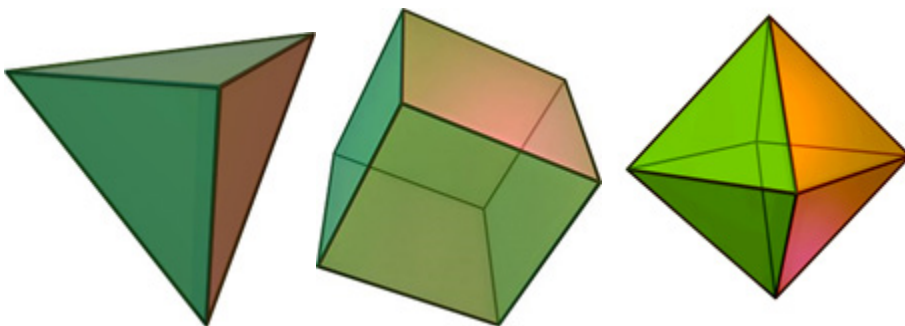
Tutoría from an advisor to an elementary school teacher

Tema: the characteristics of dice

[The material for this challenge is a set of cardboard regular polygons: triangles, squares, pentagons, hexagons, all with the same side length. One can tape these polygons together in order to build solids. The learner had built four such solids: a cube, a triangular pyramid, a square pyramid and a square bi-pyramid or octahedron (although, up to this point, it hasn't been necessary to name the figures.)]

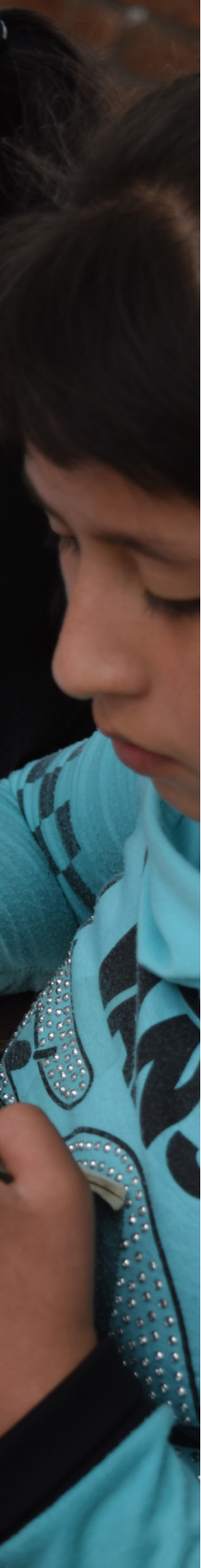
After carefully observing his solids, the learner came to the conclusion that the square pyramid would not work as a die, because the square face had a larger area than the triangular ones and, thus, the pyramid was more likely to land on the square face. "The solid's faces must be symmetric"—the learner said. When I asked what he meant exactly, he was able to pinpoint two aspects: all faces of the solid must be the same—all triangles or all squares, for instance—and all must be regular polygons—no isosceles or scalene triangles, for example.

So, up to this point, the learner had built the following three dice:



Triangular pyramid (or tetrahedron), cube (or hexahedron), square bi-pyramid (or octahedron)





I then showed the learner a solid that fulfilled the two characteristics he had pointed, but was unlikely to work as a die. My example was the solid that results from gluing two triangular pyramids by a face, making a six-triangles body (it is called hexa-deltahedron, but it was not necessary to name it during the tutoría).



Hexa-deltahedron

When I asked the learner if this solid could work as a die, he observed it intently from different perspectives. He also compared it to the octahedron, which seems natural given the fact that both are made up exclusively of equilateral triangles. Upon this inspection, the learner came to the conclusion that this body was unfit as a die, and gave two arguments. The first one was that the angles formed by adjacent faces (which we later learned are called 'dihedral angles') are all equal in the octahedron, but not so in the hexa-deltahedron. When I asked how he had measured them, the learner replied that he had eye-balled them, but it could be due to the number of faces in each solid (we didn't pursue this line of thought). His second argument was also highly visual: the octahedron is symmetric "from every perspective". He pointed several planes through the center of the octahedron, which always split the solid into two equal parts. In the case of the hexa-deltahedron, one could identify several analogous planes which cut the solid into two unequal parts.

In reaching this conclusions, my sole role had been as a listener to the learner's out-loud thinking. He was fully engaged with observing the solids and verbalizing his conclusions about them.



Tutor and tutee reflect about and record their learning process

One of the purposes of tutoría is to endow students with the ability to learn for life. The learner builds his confidence during dialogue, because he gets the chance to come up with his own ideas and conclusions. But a second, crucial factor to becoming an autonomous learner is the awareness of what we know and how we have learned it, as well as what we ignore and how we could go about learning it.

The tutor promotes this reflection--also called metacognition,

thinking about thinking-- throughout all phases of the tutorial cycle, and both the tutor and the tutee record their reflections. These records highlight the moments of dialogue that most directly led to the construction of knowledge. They provide vivid descriptions of how ideas develop during dialogue, and they allow tutors to reflect upon and improve their tutoring practice (the above accounts of learning are examples of tutor-written records).

We now offer some guidelines on when and how to reflect about and record learning:

After the tutee has chosen the tema he wants to work on, the tutor asks him questions about his attitude towards and his previous experiences with the topic. Together, tutor and tutee set and record a learning goal.

The tutor presents the learning material to the tutee and poses tailored challenges to him. The tutor encourages the learner to make and record a plan before tackling each challenge.

While the learner is immersed in solving a particular challenge, the tutor elicits, listens to and paraphrases the learner's ideas. As he follows the learner's train of thought, the tutor writes down the gist of his ideas and some verbatim comments.

After the learner has solved a challenge--to the extent of his ability--, the tutor encourages him to look back on the process, asking questions like, did you follow the plan? Why or why not? Did you encounter unexpected conflicts or difficulties? If yes, how did you solve them? How are these difficulties related to the main challenge? What puzzled/ frustrated/ satisfied you? What questions still remain open? How could you figure them out?

Learning involves emotions as well as thoughts, and these questions are meant to encourage reflection about both. The same principles of dialogue apply during the reflection stage: the tutor must remain curious about and respectful of the tutee's feelings and thoughts.

Although records have traditionally been done in writing, we encourage the use of all media available to learners and tutors, including audio and video recording.





the tutee presents his learning publicly

Once the tutee has solved the challenge to his satisfaction and reflected about his learning, he makes an oral presentation of his learning to other students. Public presentations are typically five to fifteen minutes long, so one of the main skills trained is ability to synthesize a long learning process into its main points. After the presentation, the tutee receives questions from the attendants, both about topic itself and about his learning process.

Once the learning community is up and running and many tutor-tutee pairs work simultaneously, public presentations become a shared event. Parents, relatives and students from other classrooms or schools are also invited to attend and ask questions to tutoria students. Thus, public presentations are also an opportunity for students to practice public speaking.



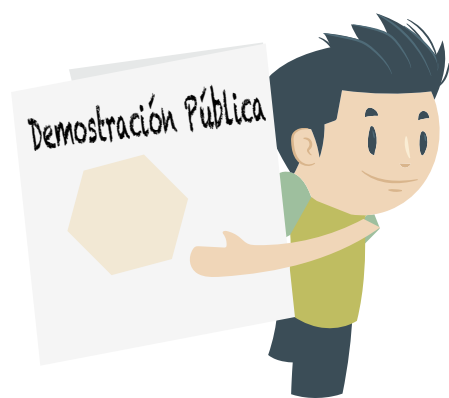
The tutee deepens his mastery of the topic through independent research

During tutoría dialogue, the tutee's curiosity may lead to questions whose answers are unknown to the tutor. Effective tutors welcome these questions as great opportunities for the tutee to direct the learning process. Oftentimes, the time of the dialogue is insufficient to pursue these tangential questions and, therefore, the next stage of the learning cycle is the tutee's independent research.

This stage builds the learner's autonomy because he gets to choose the questions he wants to pursue, the print and online materials he wants to use for the research, and the extent of his time commitment to the topic. The tutor's role during this stage is mostly to provide encouragement and to support the learner's reflection about his process.

Coming back to our example temas, finding the characteristics of dice might lead to questions like, how many different dice can be built, and how can we be sure that we have them all?, why is the hexagons and pentagons design of soccer balls so popular? These kind of questions leads directly to the study of regular and semiregular polyhedra.

The reading of Garcia Márquez's "Un señor muy viejo con unas alas enormes" might prompt questions like, how does this story fit into the author's literary work? Where can I find more stories like this to read? How did the author's life experiences influence his writing style? This will lead the learner to magic realism and authors like Argentinian Julio Cortázar, Mexican Juan Rulfo or American William Faulkner.



The discussion about the seasons of the year may inspire questions like: is the summer hotter in the northern hemisphere, in the southern hemisphere, or just as hot in both? Do other planets have a varying weather throughout the year? How does the Moon move relative to the Earth, and what effects does this motion have? This questions will lead to investigate the complex relationships between the bodies of the Solar System, and probably to principles like Kepler's or Newton's laws.



The tutee prepares to become a tutor

One of tutoria's goals is to distribute the ability to teach into everyone who has shown mastery of the learning process and willingness to share it with others.

When students receive tutoria, they experience first-hand the principles of learning in dialogue. When they pursue independent research, the strengthen their ability for self-learning. This has set up the stage for the final stage of the tutoria learning cycle: the tutee becomes a tutor.

This is a major step that cannot be forced, but must be nourished little by little. One way the initial tutor can promote the future tutor's confidence is by reminding him that he has already gone through the tutoria learning cycle successfully. The following questions are helpful to recap the process: [during tutoria dialogue] what were your initial views concerning the topic of the tutoria? was your final solution to the challenge different from the initial one? (if yes) how so? what support did I give you in arriving to your conclusions? did we find difficulties or make mistakes along the way? how did we treat those mistakes? did more questions arise along the way? [during independent research] what questions did you decide to pursue? what role did I play? were you able to find satisfying answers? do you feel confident enough to offer this tema to someone else?





Setting up a tutoría-based learning community in the classroom and beyond

The ultimate goal of tutoría is to empower every student to become an autonomous, life-long learner. We have found that this can best be facilitated through a close apprenticeship between the learner and a tutor who has considerable mastery of the ability to learn independently and who can facilitate it through a set of temas. This is why we spouse one-on-one dialogue as the main kind of interaction in the classroom. We acknowledge, however, that, in traditional schools scenarios, a single teacher cannot offer his undivided time to each student for more than a few minutes a day -- especially if he has a large class. Here we make what seems like a bold move: we allow students to become tutors to each other.

Involving students as tutors to their peers maximizes the learning opportunities for everyone in the classroom. We are not just talking about academic learning, but also about socio-emotional learning, since exposing students to a variety of one-on-one interactions of shared commitment to learning also necessarily develops their social skills. Experience shows that the strength of academic work and social cohesion made possible by tutoría eventually spills into the families and the community outside the school. Students, teachers and parents organize “Learning Festivals” or “Tutoría Exchanges” with their peers from neighboring communities in order to display their work and the practice of tutoría.

Principles of building a learning community

Each student in the learning community has to experience tutoría on an individual basis before he can become a tutor. The process of a student becoming a tutor is gradual, for it involves the mastery of the academic topics and the dialogue process.

All students are given the opportunity to become tutors, independent of their academic strength relative to their peers.

When a student first becomes a tutor, the educator accompanies his dialogue as a participant observer, records

his observations and provides focused feedback to help student-tutor identify his strengths and weaknesses. The educator strives to enact the principles of tutoría learning at all times, even when he is not providing one-on-one tutoría. The entire school community--educators, students, parents and educational authorities--must be aware of the desired change and be willing to contribute to it.

It is important to notice that there is not a single way to go about building a learning community. It is an open problem that each school community has to solve according to their context. Teachers may assign time to provide one-on-one tutoría during the school day, or at the end of it. Sometimes tutoría is included as an elective subject meeting for two or three 60-minute sessions per week. Or, the educators may choose to couple project-based learning in small groups with a phase of one-on-one inter-group tutoría at the end. In any case, the building a the learning community requires an medium- to long-term strategy and the commitment of all educational actors.

IV.

Resources

[Interview with Gabriel Cámara](#), founder, for AERA (American Educational Research Association)

[Temas for deep learning in tutoría](#) (in Spanish):

La familia de los dados (The family of dice)

Revolución Mexicana (Mexican Revolution)

Cómo crear mentiras para escribir verdades: El cuento de Gabriel García Márquez, “Un señor muy viejo con unas alas enormes” (How to create lies in order to write truths: Gabriel García Márquez’s story “Un señor muy viejo con unas alas enormes”)

Patrones y progresiones (Patterns and progressions)

V.

Testimonials

“I would like to continue with Redes because it’s nice and rewarding, and you feel good for knowing that you are capable. You feel good when you know that you made it, that you reached your goals”. (Student, Chile)

“Redes de Tutoría builds your personality. There are always kids who are afraid to give their opinions... but they change when you start the tutoría. I used to be the shy girl, but not anymore. I’m becoming more confident in what I know and can do”. (Student, Chile)

“Now there aren’t bad vibes [in the classroom]. Before, there was division among different groups in class, but not now everyone is more mature, our personality has changed”. (Student, Chile).

“It is surprising to see the change in the students, their attitude, their

disposition to work, the confidence they show in class when presenting or consulting specific topics. It is so natural that I can't understand how it is possible that I had never seen this method before". (Teacher, Mexico)

"I really like this program, because we are taken into account, and we are able to feel proud of ourselves. Besides, I feel good because we have a teacher that encourages us to put forth an effort and who is truly interested in us". (Student, Mexico)



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