

2.3. The Level of Procedure

2.3.1. Role of Procedures in the Thinking Approach

Richards and Rodgers point out that an approach does not specify procedure (Richards & Rodgers, 2001:23-24) – it is the level of design that connects the two. Therefore, it is essential that procedures we describe in this section are considered in the context of technologies themselves as described in section 2.2.3. At the same time, it is necessary to note that it is exactly the level of procedure where one can really distinguish different methods. For example, quite many task types offered in TA are not unique by themselves. Such tasks as concept questions or sorting out in CGT or bringing to another medium or the odd one out in TT and FT are well-known in the field of ELT. Whether these tasks are TA tasks or not, often depends on how they are dealt with, or the level of procedure. This is what we will consider in this section by giving examples of what exactly happens in the TA classroom when learners work with this or that technology.

2.3.2. Procedures in the Creative Grammar Technology

2.3.2.1. Procedures at the level of task

Each task offered in CGT has a specific function in the context of a system of tasks. This function can be understood best in the context of a role each part of a system performs (see section 2.2.3.1.3). The task which is often a cause of many questions asked by new TA teachers is a concept question task. In this section, we will consider procedures characteristic of this type of task. Let us start with an example (the example is taken from (Sokol, 2005).

Table 2.3.1. Procedures for Dealing with Concept Question Task.

(students are working on the concept question task – a full text of the task is presented in Appendix 2.2.)

T: Ok, let's take sentence 4. If I say, 'I've already had coffee this morning', what time could be now?

S1: Morning.

T: Can it be any other time?

S2: Yes, any time.

T: What do you mean by 'any time'?

S2: Any time today. If we speak about today, we can use Present Perfect.

S3 and S4: Yeah, right.

T: So, it's a quarter to 4 now. Can I say, 'I've already had coffee this morning'?

S4: Why not?

T: Ok, one more question. Can I say, 'I already had coffee this morning'?

(pause)

T: If both are correct, then what's the difference? You could think of some more sentences. For instance, if we talk about that maths test you mentioned, would you say 'we had a terrible test in maths in the morning' or 'we've had a terrible test in maths in the morning'? Or, if you speak about your German exam last month, would you say 'we've taken a DSD exam' or 'we took a DSD exam'?

S1: But isn't it the same as with that example with Shakespeare?

T: What exactly is the same?

S1: I mean that we agreed that Time of Action is the parameter we are discussing. Values can be different. Maybe finished and unfinished?

T: Fine, we could accept it as a hypothesis. Do you understand Dima's idea? Let's try to check it. We have a number of sentences in this exercise and 16 sentences in the sorting out exercise. Can we explain the difference in tense form by these two different values of Time of Action?

<...>

The example above describes a typical teacher-students interaction when doing a CQ task. The main purpose of this task in TA is to help learners build their draft model of the difference between forms under discussion (DID and HAVE DONE⁶⁶ in the task learners work on in the example). Thus, when doing the task, the teacher always draws learners' attention to those parameters that could become the basis for learners models (such Time of Action in the discussion) and invites them to consider possible values under these parameters (such as finished and unfinished in the example).

It is important to stress that unlike in traditional use of CQ the teacher's task is NOT to bring learners to the right answer (the teacher's or the course / grammar book model) but help them propose their model. The teacher does not give feedback by saying that learners' model is "right" or "wrong". Models cannot be either "right" or "wrong" – all of them can be divided only according to scope or applicability limits and this is what learners will do when they work on the following parts of the system. Instead of dividing learners' hypotheses into "right" and "wrong", the teacher invites learners to test them against the data already available to them. This usually includes other utterances in the CQ task and students' answers to concept questions and also Bank 1 which consists of sample utterances illustrating the use of the forms under discussion.

⁶⁶ No meta language is usually required from learners at this stage, moreover it is often advisable that learners are making a model of structures (DID and HAVE DONE) rather than a tense form (Past Simple and Present Perfect).

Thus, if learners have a hypothesis that HAVE DONE is used when no specific time is mentioned, the first thing the teacher should do is to invite learners to see if it is true about other utterances with HAVE DONE they have already come across. Depending on a specific CQ task and content of Bank 1, learners may see that it is not so already at this stage or, alternatively, may accept their hypothesis as a basis for a draft model and test it against a new set of utterances offered in enhanced practice tasks. An essential thing is that it is the learner him/herself who comes to accept or reject the hypothesis and understand why this has been done.

Another question is what could be done when dealing with weaker learners who have difficulty to offer any hypothesis about a possible difference between the forms. Procedures are generally similar here, however a number of additional elements of work have to be highlighted.

First, weaker learners normally need more language input. In the context of a CQ task, it will mean that in addition to those utterances already contained in the task, the teacher will give additional examples illustrating the same point (see, for instance, examples with a maths test or DSD exam in the sample dialogue).

Second, degree of contextualisation as already done by the teacher may be higher for weaker learners. Utterances in CQ task are usually not contextualised and thus before learners actually answer questions following utterances, they need to contextualise them. With weaker learners, the teacher can take over at least a part of this job, thus reducing the cognitive load on the learner.

Third, the teacher can help learners with the procedures for development of draft models. A model usually appears as a result of an analysis of answers to similar questions (questions aimed to draw learners' attention to one and the same parameter – see section 2.2.3.1.1.2. for details). However, weaker learners may fail to see similarities between questions. The teacher may choose to help them notice these commonalities. The general procedure for helping is usual for a constructive approach to learning – the teacher has to scaffold learners. Actual scaffolding may take different forms and depends on many parameters, such as the type of learners, context of teaching, etc and may vary from specific questions

that will help learners to generalise (e.g. *What are we interested in when asking this question?*) to asking them to go back to the previous model they developed and analyse the steps involved in the process.

Finally, it is important to understand that learners are neither expected nor able to develop a perfect model at this stage. All their models are bound to be incomplete and it is important that this fact does not worry the teacher. Learners still have plenty of time to improve their models when they continue working on the system of tasks. Moreover, it is exactly this process of improving the model when most learning takes place.

2.3.2.2. Procedures at the level of system

The main idea of procedures at this level is that both learners and the teacher remember that it is a system rather than separate tasks they are working with. Thus, the aim is not so much to complete a task and not to make mistakes but to reach the goal envisaged in each part of the system. It is the so-called approach from the function which is recommended here and it has a number of implications.

As we have already mentioned, each teacher can and should adapt a system of tasks to his/her own context. However, adaptation is not just choosing what one likes. As each part of a system has a specific function, it is impossible just to take it away. If the teacher happens to be unsatisfied with a certain part due to some reason, he/she should think how the function of this part can be performed by another element. For example, learners may use a text or several texts to get acquainted with a grammar structure as an alternative to Part 2 in the system of tasks.

When choosing to work on particular tasks with each part (both the teacher and learners themselves can do this), it is also important to remember the ultimate goal. Thus, if the aim of Part 4 is appearance of a draft model and this draft model appears after task 4.1., it is hardly necessary to spend time on other CQ tasks. At the same time, if most learners have not developed their draft models after one task, opinions such as “we have no time for another task” can hardly be accepted as an excuse for moving forward to Part 5.

One of the most difficult things about working with CGT is a permanent feeling of uncertainty. As Wiske mentions “interests in certainty and simplicity still outweigh interests in ambiguity and complexity.” (Wiske, 1998:370) This outweighing is typical of both teachers and learners. At the same time, models of work offered within CGT is more like what Ellis refers to as “work of a field linguist” (Ellis, 2002:164-165). It is only the actual language a field linguist comes across which can answer his or her doubts about “correctness” of a model – there is no authority around to say what is right or wrong. The same culture is established in TA classrooms where the teacher’s role is not that of authority that answers questions but rather that of a more skillful field linguist who can give advice on how better models can be developed. This approach requires a change in the mind set of both learners and teachers and such changes need time. What is important though is that the approach is consistent as only then a certain classroom culture can be created.

A tool that can help teachers and learners to work with uncertainty is a grammar bank. By collecting and analyzing it, learners not only work with language but also get used to a different mode of learning when it is them rather than the teacher who scaffolds their learning. Therefore, it is important that learners start working with banks from the very beginning of their learning with TA. Input to learners’ banks can come from everywhere, starting from tasks they do in the classroom (eg mistakes in enhanced grammar practice or other types of tasks) to samples of language they notice in their everyday life (e.g. McDonald’s motto *I’m lovin’ it* which can be a good entry not only to learners’ but also many teachers’ banks). One of the difficult things here is an absence of a habit for collecting banks with most learners. Therefore, the teacher should introduce certain forms of control at earlier stages and sometimes just to remind learners of a necessity to add entries to banks.

Another important element of work with CGT is what happens after learners have finished working with a system. Unlike in more traditional forms of learning, TA learners never finish working with a theme. Even when a system is over, the work

continues, first as a part of a personal syllabus⁶⁷ and then as a permanent work with Bank 2 on a given theme which learners collect as long as they keep learning (i.e. all life). It is important though that the learner him/herself remembers about it and therefore it is the teacher, especially at earlier stages of learning, who is expected to draw their attention to this and introduce certain forms of stimulation. It can be either a task dealing with learners' banks on certain themes or another form of work where learners are supposed to come back to their banks and make sure they are working (e.g. a class conference where everyone presents their banks).

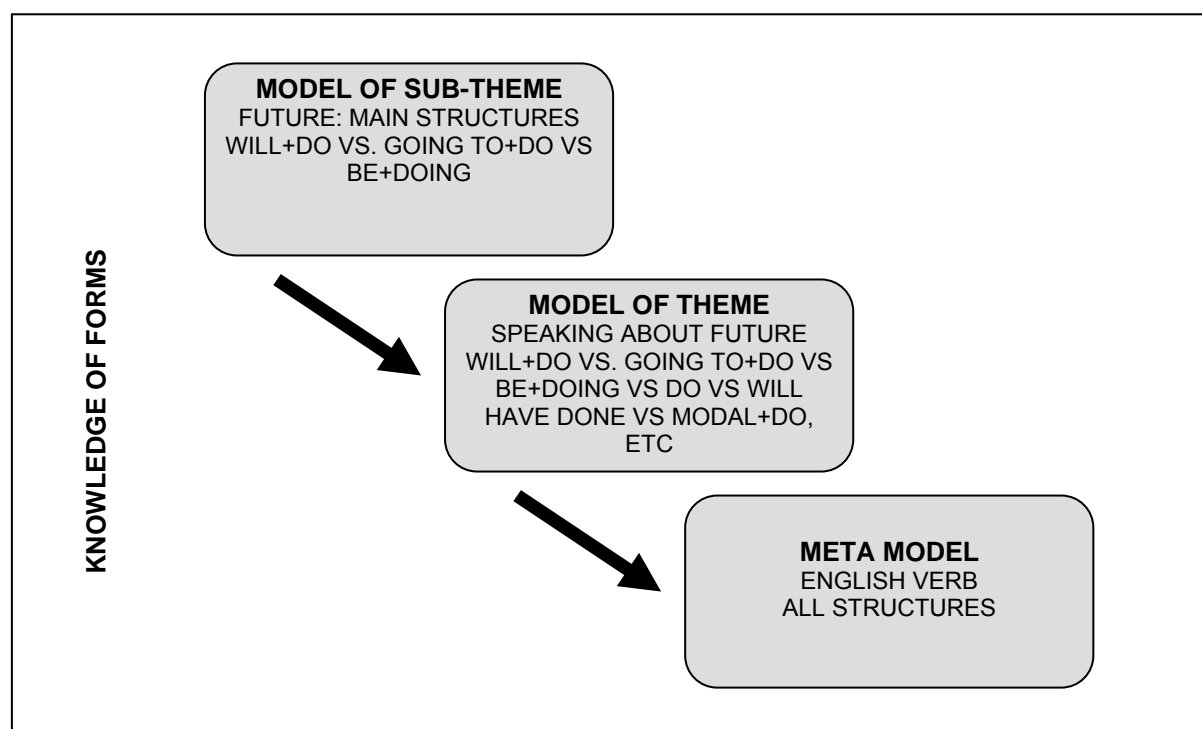
2.3.2.3. Change of procedures in time

It is only natural that procedures with CGT change with time. The focus of learning is different when we deal with first and third year learners⁶⁸. In the former case a major focus will be on helping learners develop basic models within themes. For instance, if dealing with Future, learners will hardly be expected to distinguish between WILL DO and WILL HAVE DONE while differences between WILL and GOING TO, for instance, will be important. In the latter case though, it is already a more complete model of a theme learners are interested in (all possible ways of referring to Future in English and what makes them different). Moreover, at this stage or even earlier learners start converging their models and are interested not only and not so much in separate models of various themes in the English grammar but rather one meta-model that not only makes it easier to opt for the best form in a given situation but also offers a systemic vision of the English grammar. Figure 2.3.1. offers an illustration of a change in focus in CGT with time.

⁶⁷ Whether learners continue working with a theme as a part of their personal syllabus depends on the results they obtained in the final test and their own learning priorities.

⁶⁸ Here it is exactly the time learners have worked with TA rather than the age of learners we are speaking about. Both first and third year learners will be at least young adults.

Fig. 2.3.1. Change of Focus in Creative Grammar Technology with Time.



A change of focus in the technology is directly connected with a change of procedures. In the first phase, the teacher's feedback is mainly aimed at helping learners develop models. At this stage, learners are not used to the whole idea of building their own rules, nor are they skilful in the use of the ENV model which is a basis for a well-organised description. Thus, learners may often experience demotivation feeling that "nothing works". It is usually the teacher who demonstrates that a lot has already been achieved and learners merely underestimate their results stating that nothing works. This underestimation is typical of the first stage as most learners still believe that a rule must be perfect, therefore any situation when the developed model does not work is seen as a major threat and a proof that they have not worked well.

With time however, learners' attitude changes. They are already used to the approach, they know that they can develop rules as they have already done it and it is no longer their belief that a good rule must be a perfect rule. Thus, in this phase the teacher's role changes. Her main task is to help learners see those areas where their rules don't work, i.e. help learners collect more and more

examples to their grammar banks. Thus, here the TA teacher acts in her usual role of a challenge provider.

In the third phase, the teacher already deals with rather independent learners who have got a good knowledge of grammar. They have developed models for most grammar themes and feel quite happy with the things they have done. They are well acquainted with the approach to learning and are quite independent in learning grammar. However, it is still true that most learners have got a long list of separate models of various grammar themes. In other words, their vision of grammar is still fragmented. The teacher's task is to help learners establish connections between their models and as a result to come to a few converged models of English grammar. What the teacher often does at this stage is bringing learners up the generalisation axis. If major work in the first two phases occurred when learners faced specific problems with their models (came across utterances that could not be explained – low level of generalization), here the major focus is not a specific utterance but models themselves (high level of generalization).

2.3.3. Procedures in the Text and the Film Technologies

2.3.3.1. Procedures at the level of task

2.3.3.1.1. INTRODUCTION

We described procedures employed with some types of the tasks in section 2.2.3. Here we would like to continue this theme and focus on two issues which are often problematic to new TA teachers. The first one is the question about the procedures when dealing with one of the most popular types of tasks in TT and FT for new TA teachers - a content generation task. The second issue is a feedback on written works which we will consider in the second part of this section.

2.3.3.1.2. CONTENT GENERATION TASK

Table 2.3.2. Example of a Content Generation Task.

- 4.4. What *features* of relationships between dates are more important for you? What should be their *values*? Will you have the same answer for all situations?
Choose three different types relationships (e.g., casual acquaintance, permanent friend, lover, etc.) and mention the *features* and *values* you find more important in these situations.

Context or type of relationships (describe briefly)	Most important features	Preferable values
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Think of a person (a group of people) who would see relationships in a very different light, ie their preferable values would be a direct opposite to yours.
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As we have mentioned earlier, most of TA tasks are not unique. One can easily come across similar tasks in various communicative materials. The differences exist at different levels. One of them is the level of a system – TA tasks are connected with each other and make a system – we considered this level in section 2.2.3. The other one is the level of procedures – what makes TA tasks different is HOW they are dealt with in the classroom. Further on we will try to exemplify the difference by comparing various procedures for dealing with task 4.4.

Procedures for dealing with such types of tasks can be divided into two groups. The first one will include what we call mechanistic procedures, eg whether students work individually or in groups, how much time is given for this or that part of the task, whether an outcome of the task is presented orally or in a written form. Mechanistic procedures are considered to be secondary in the TA classroom, their choice is usually not restricted and depends on the main function of the task in a given situation. This latter factor is primary and determines a second group of procedures. They are connected with the development of the task or provision of a challenge. The main difference between TA and non-TA procedures can be summarised as follows: TA is primarily concerned with task development procedures while the focus of most non-TA approaches at this level is mechanistic procedures. This is explained by different aims set for tasks: TA tasks aim to provide learners with a context for introducing and / or practising OTSM models and language practice is seen as occurring within work with a task while non-TA tasks seek to offer exactly language practice.

In TA context, the aim of task 4.4. would be to provide learners with a context for practising the ENV and the multi-screen models of powerful thinking. As a result, learners will be expected to see that a good comparison is based on considering various values under the same name of feature (basic ENV model) and a much better idea of a system can be obtained if it is considered in relation with its sub-, super- and anti- systems, as well as before- and after- systems (multi-screen

model or advanced ENV model). Thus, when the teacher is confronted with the first draft of learners' outcomes (and what learners produce at the beginning is always considered to be a draft in the TA context), whether it is written or oral, she could choose a direction for her feedback. It could be aimed at either providing further context for practising the ENV model, the multi-screen model or both.

When aiming at working with the ENV model, the TA teacher may choose one or several comments presented in the left column of table 2.3.3 below. The middle column shows a possible function of each comment while the right one presents possible reasons for giving it. It is necessary to note that a comment here is more than just a response of the teacher – it is rather an invitation to continue working on a task in a certain direction. Apparently, examples of comments below present just a few possibilities – each teacher can and should think of other comments that are more appropriate in her particular context.

Table 2.3.3. Possibilities for teachers' feedback when working on task 4.1. to the text *It Kills me* by J D Salinger

Teacher's comment	Possible function	Reasons
<ul style="list-style-type: none"> • What are the parameters according to which you compare three different types of relationship? 	<ul style="list-style-type: none"> • Help learners produce a better organised description by considering what is hiding behind such phrases as "what we talk about", "time together", "friendship", etc 	<ul style="list-style-type: none"> • parameters for comparison are not formulated • no difference is made between parameters and values
<ul style="list-style-type: none"> • what are the parameters where values will be more or less similar when comparing these relationships and what are the parameters where values will be very different? 	<ul style="list-style-type: none"> • Get learners to look for additional parameters for comparison 	<ul style="list-style-type: none"> • Only a few evident parameters are given – a learner has just brainstormed the task instead of approaching it a systematic way.
<ul style="list-style-type: none"> • Think of a type of relationship where the values under the parameters you mention will be really different 	<ul style="list-style-type: none"> • Get learners to go beyond the type of relationship they have every day and choose another type of relationship for analysis (something they have not thought about yet) 	<ul style="list-style-type: none"> • All types of relationships mentioned are similar and as a result comparison tends to be a very tedious task
<ul style="list-style-type: none"> • ... 	<ul style="list-style-type: none"> • ... 	<ul style="list-style-type: none"> • ...

A combination of mechanical and task development procedures gives us quite a large number of variants on how a possible work with task 4.1. may look in the classroom. One such variant is presented in table 2.3.4 below. Let us stress it –

this is just one possible variant and should *not* be taken as *the* procedure for this particular task.

Table 2.3.4. A possible variant of mechanical and task development procedures for task 4.1.

1. Students work individually and fill in the table. As a result, they will have three types of relationships and three parameters upon which these three types could be compared. Preferable values under each parameter will be mentioned. Suggested time is about 10 min. While students are working, the teacher goes round and gives help with both language and the actual task.
2. Students make pairs. If students in the pair have different types of relationships, each member adds the missing types and compares them to the existing ones according to the previously chosen parameters. Then, both students compare the parameters and the values they have chosen. Each student adds the missing parameters and mentions his/her preferable values for them. Suggested time: about 10 minutes. The teacher's role is the same as in 1.
3. Students make groups of 4 (two pairs join – preferably mixed sex groups). Each group has to prepare a presentation which summarises parameters and values mentioned for different types of relationships by its members. Suggested time: about 10 minutes. (A more interesting, and at the same time more demanding, alternative would be not just to summarise answers but to see which group members would have most problems in relationships with each other if they performed one or several of the mentioned roles).
4. Groups make presentations. Other groups do one or several of the following: ask questions, try to decide which member of the group could have chosen this or that preferable value and prove their point of view, evaluate the quality of the presentation (delivery), evaluate the content of the presentation (task achievement), etc. Suggested time for one presentation – 5 min.
5. Summarising discussion. Outcome: conclusions about (a) how the ENV model could help in this type of task, (b) similarities and differences of class views of relationships, (c) features of successful presentation. Possible time: 5-10 minutes.

2.3.3.1.3. FEEDBACK ON WRITTEN TASKS

2.3.3.1.3.1. Initial Problem and Function of Feedback.

When starting to apply the Thinking Approach (TA) to language teaching, many teachers face the problem of writing a feedback on students' written work. Normally within the TA context, the work submitted for the first time is a draft. The teacher's role here is to help the student improve on the draft and eventually produce a better version of the work. While doing it, the teacher must remember two major aims of any TA based course, namely the development of language and thinking skills. The latter is extremely important – pure language feedback, no matter how good it is, is not enough for a TA based course. Thus, we may formulate a function of the teacher's feedback: create the context for the development of the student's language and thinking skills.

2.3.3.1.3.2. Groups of Tasks and Framework for Feedback Writing 69

All the tasks students are given can be roughly divided into two groups: **primary** tasks and **secondary** tasks. The former comprises initial questions posed by the task, and they are the same for the whole group of students. The latter, however, are much more individual as they comprise questions offered by the teacher after she has got acquainted with the students' response to the primary tasks. According to the TA, a larger part of learning takes place exactly at the given stage. Eventually the teacher has an opportunity to evaluate how much a student was able to improve in comparison with the first draft of his/her work.

There are three primary criteria for evaluation of primary tasks.

- Correctness of task achievement
(Did the student do what he/she had to or what was easy to do?)
- Employment of OTSM-TRIZ tools while performing the task.
(Did the student approach the task through a conscious use of some of the earlier acquired methods or was it just a brainstorming activity, where ideas appeared basically as a result of the Trial and Error method?)
- Extension of the formulated hypothesis/constructed model.
(What are the Applicability Limits of the hypothesis/model proposed by the student?
Can they be extended? In which way will it be necessary to correct the hypothesis/model?)

2.3.3.1.3.3. Sample Analysis for Feedback

Let us look at a story 'Jane' by J D Salinger told from another point of view as written by Form 11 student from one of Riga schools.

Jane. Telling story from another point of view.

I am very close to Jane, probably the closest thing that she has ever had. We are always together, never part or argue, because I'm the part of her soul – the part of her body that feels everything. Let me introduce myself – I have that honour to be her lovely and soft hands. It is often said that hands don't feel anything. But it's only a stereotype.

The first thing to be said about this unordinary day is that after two months' drought that had made my hands rough, I had that opportunity (chance) of feeling rain on my skin. But the thing I want to

⁶⁹ - here we do not consider feedback on language mistakes as it is given in a standard way practiced in process writing, i.e. the presence of a mistake and, possibly, its type are mentioned on the margins.

tell you is about my owner. Yes, Miss Jane! She's such a sweet girl just like her mother, at the same time they are so different. The proof of this statement is her stepfather, Mr. Cudahy, who always shouts at my poor Jane. This makes her feel awful, as well as me. I can't sleep those nights when she feels bad. I always want to tell her how much I love her, but I know – humans don't understand us. The only thing we can do is to serve them.

However, there is that boy who used to follow Jane everywhere, I don't like him, although his hands are so clean and tender that I can't stop holding them. Once they went to that horrible movie "Frankenstein". But I didn't have time for it, because he was holding me and I couldn't resist him, although Jane didn't like him. She simply needed someone who could give her true feelings like – love. Nobody understood her except this boy and probably it was the reason why I started liking him. As I said before her stepfather wasn't a pleasant man. I remember the day when Jane felt ashamed, because she started crying in front of the boy when Mr. Cudahy, who looked like a booze hound, asked for cigarettes. That was so rude! There was something mysterious among them, but only ears and eyes know what it was. As for me, I've never touched that boy's hand since then.

2.3.3.1.3.3.1. Task achievement.

A typical problem here is that teachers 'love' any work which is 'creative'. As long as creative is often understood as anything beyond the routine, teachers often give a very high evaluation to the content of point of view tasks. A possible way out is to place restrictions on the final product. First of all, students have to write a story. Let us decide what it means. Traditionally, a story is supposed to include the following elements: plot, characters, setting, theme and point of view. All these elements must be interconnected and have a function in the context of the story. Let us see on the example of the work analysed.

- a) plot – a number of events are present in the story, however, connections between them are often loose (see, for example, paragraph 2 where the author jumps from one event to another without an apparent reason).
- b) characters – present
- c) setting – not clear
- d) theme – not clear
- e) point of view – first person narrative; not fully developed though.

Some conclusions.

This work can be called a story, however, the author could be recommended to pay closer attention to theme, setting and connections between events in her story.

Another requirement to task achievement is that it is a story told from another point of view. It has to be distinguished from telling a new story when the author possesses much more freedom. Telling a story from another point of view, on the

other hand, demands the presence of all major facts from the original version and, at the same time, a change of an attitude to facts and a manner in which they are presented. Let us look at the work again.

Paragraph 1 – no facts from the original story

Paragraph 2 – three facts, characters (Jane and Mr Cudahy) and rain.

Paragraph 3 – five facts (the boy, holding hands, going to the movies, crying in front of the boy, asking for cigarettes.)

Facts omitted by Simona:

Being on a porch

Playing checkers

A tear plopping down on the checkerboard

Jane crying

Narrator kissing Jane all over

Putting on a red sweater

Jane putting a hand on the back of narrator's neck

...

New facts added by Simona:

Two months' drought

Jane's mother is sweet and different

Mr Cudahy always shouts at Jane

Hands don't sleep at night when Jane feels bad

Narrator used to follow Jane everywhere

The title of the movie was 'Frankenstein'

Jane didn't like the narrator

Nobody understood Jane but the narrator

Jane never touched the narrator's hands after the story

...

Some conclusions.

The author based her vision of a story on a number of facts from the original story which were presented from the point of view of a new narrator – hands. However, it remains vague why about 50% of other facts from the original story were omitted, including some very important ones for the plot (e.g., Jane crying, narrator kissing her all over) and even those a new narrator could not help paying attention to (putting a hand on the back of the narrator's neck).

Quite many new facts were added, yet the purpose of their inclusion often remains unclear.

The author could be recommended to pay closer attention to the choice of facts from the original story (criteria could be formulated) and the purpose of inclusion of new facts.

2.3.3.1.3.3.2. Employment of OTSM-TRIZ tools.

First of all, it is necessary to mention that the use of tools is not the aim in itself. Students must learn to form the right attitude to the models of problem-solving, i.e. they are necessary when one cannot solve a problem without them. Thus, there is no point in asking a student to describe someone using the ENV model if he/she can provide a good description without any conscious use of the model. However, if a 'product' submitted by a student needs improvement, the use of models must be encouraged.

When dealing with a point of view activity, students are offered a special form which can help them work on the content of their future stories⁷⁰. The algorithm which underlies the form is nothing else but a systematic use of OTSM-TRIZ models. Let us see if the author used them in her work.

Step 4. Description of a new narrator and seeing how certain features of the new narrator may influence the treatment of facts and the manner in which the story is told. (The ENV Model)

Step 5. Decision on an addressee of the story and the context in which it is told. Determining the values of features of both the addressee and the situation which may influence how the story is told. (The Multi-Screen Model)

Step 6. Formulation of a function of a story. (The Model of Function)

Some conclusions.

Steps mentioned above point to what the author has not done. These are exactly the things she can be recommended to do in the process of working upon the next variant of the story.

⁷⁰ - the form is available from the TA website at <http://www.thinking-approach.org/index.php?id=198>

2.3.3.1.3.3.3. Extension of a formulated hypothesis / constructed model.

If you believe that a student has produced a masterpiece even in his/her first draft, it is normally possible to create additional room for improvement by asking them to consider their models in a wider context. For instance, in order to understand deeper motifs and possible reactions of hands as a narrator, it may be important to place them in different situations: hands of a girl who is madly in love – how they feel / behave; hands of a girl who is very lonely – how they feel / behave; hands of a girl who thinks her hands are marvellous, hands of a girl who hates her hands, etc.

It may appear that students are given a new task here. This is true, however this new task may eventually help them improve on their initial task and, more importantly, give them context for necessary thinking skills practice.

2.3.3.1.3.4. Feedback on feedback

In this section we would like to reflect on how we approached the process of feedback writing.

First of all, we formulated the function and determined typical problems the teacher may face when writing feedback. Then, as a possible solution to the above problems, we determined three main guidelines for feedback writing.

The first guideline, task achievement, dealt with the evaluation of the product in terms of parameters it must have and functions it is supposed to perform. The second, use of tools, was aimed at giving students recommendations on the technology of producing a 'product'. While the last, extension of the present model, was to bring students to consideration of a 'product' at various hierarchical levels and thus improving on it by enlarging its applicability limits.

2.3.3.2. Procedures at the level of system

As well as with a system of grammar tasks, here both teachers and students have a chance to choose tasks they are going to deal with. Normally, a student does one task from Part 3, two tasks from Part 4, one task from Part 5 (which is often the same for the whole group), one task from Part 6, two tasks from Part 8 and all tasks from Part 9. The number of tasks one does in each part may change though depending on specific aims of the teacher and a particular teaching context. It is

quite natural for a TA classroom that students are working on different tasks. It does not cause problems as procedures allow simultaneous work (see, for example, procedures for task 4.1. above where only steps 4 and 5 require participation of the class. At the same time, even a group that has worked on a different task may join in and act as an evaluator in step 4).

A major difference if one considers systems of tasks in CGT and TT is that in the former learners assess their progress primarily by comparing post- and pre-test results while in the latter it is more a question of improvement in a certain type of task over time. It is not strictly knowledge before and after work with a system that is compared but approaches to performing this or that type of task. For example, if a learner has chosen to work on a point of view task in October 2005 when working with a first system of tasks to texts, at the level of a system it is not so much his/her improvement between the first and the second version of the task that we are interested in, but the difference between an approach to this type of task in October 2005 and January 2006 (when the student will choose to work on this type of task again) and later April 2006 (when the student might choose to work on this type a third time). These changes in approaches to tasks should be a result of an analysis of tools banks learners are asked to collect when working with tasks in the TT. Tools banks contain learners' ideas on how typical tasks offered to them in this technology could be approached. In other words, here learners are also asked to develop their models. Only models themselves are more difficult as these are not models of specific objects (as in the CGT) but rather models of processes.

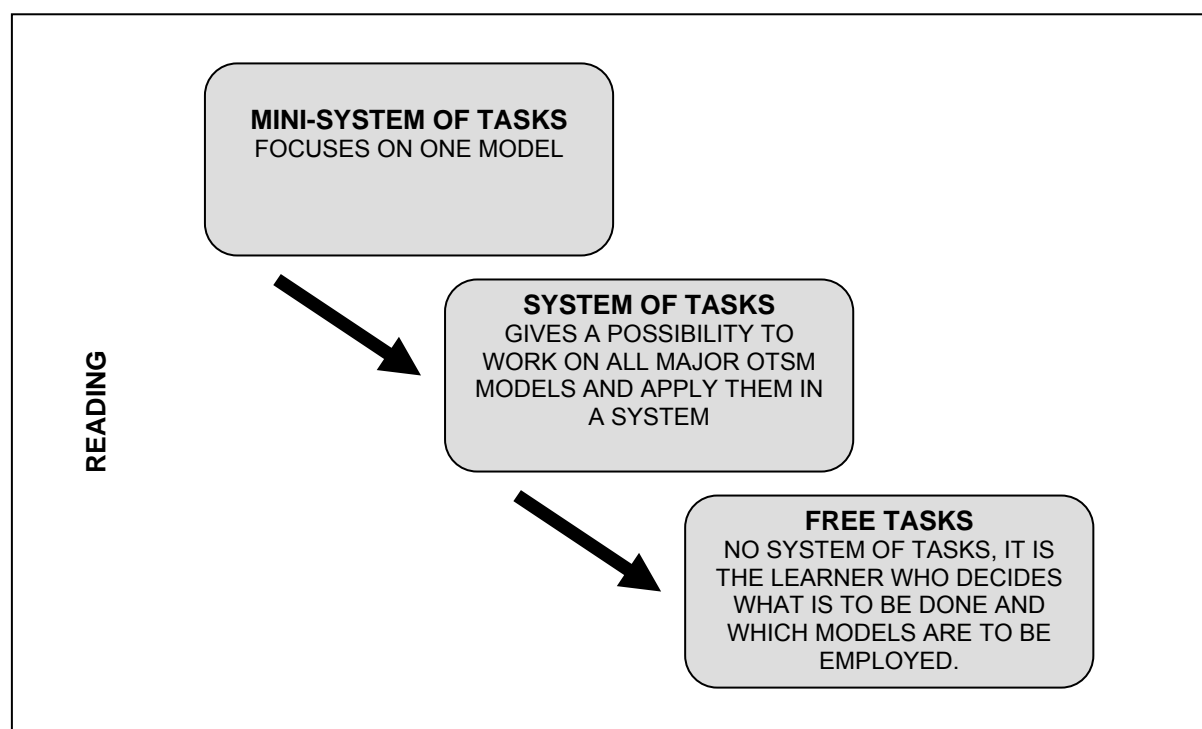
Procedures for working with Tools Banks are similar to those involved in banks work in the CGT. Every time students come across a situation when their models do not work, they make a new entry in the bank. For example, if a learner has developed a model for writing an argumentative essay (one type of a typical task) and as a result of applying this model, he/she has received a feedback from the teacher saying that the division into paragraphs is not logical, it normally means that the existing model of the student should be re-considered and an element dealing with the division into paragraphs should be added to it.

It is also necessary to note that although most time appears to be spent on development and improvement of tools for dealing with typical tasks encountered in the TT, the major focus of learning is different. It is not so much a repertoire of various tools that learners should develop but rather methods of development of tools that appear to be a major focus of learning. Apparently, real life will offer learners more tasks than the TT may even hope to touch. Therefore it is essential that learners can quickly develop new tools for coping with new tasks they come across rather than merely reproduce a standard repertoire they have already developed. It is methods of generating tools for typical problems that are emphasized in these technologies.

2.3.3.3. Change of procedures in time

As well as in the CGT, the main focus of work in the TT changes with time, which means that procedures also change. When learners start working with systems of tasks, the main focus is on one model or even its part. Students work with the so-called mini systems of tasks and learn to apply basic models of OTSM, such as basic ENV model, various axes of the multi-screen model, function, etc. At the next stage, when learners have already acquired basic models, they move to working with complete systems and are involved in doing more complex tasks requiring simultaneous work with several models. Here the focus is more on work with a system of models rather than separate models. Finally, when the learner is comfortable enough with both OTSM models and the type of tasks offered by the system (typical solutions have been developed), he/she moves to the next stage and decides him/herself what kind of work they would like to do with a given text. Figure 2.3.2. presents a summary of the three stages.

Fig. 2.3.2. Change of Focus in the TT.



As mentioned earlier, a change of focus is directly connected with a change of procedures. At the beginning of working with a system, learners are just getting used to a new type of tasks and are often surprised when the teacher is not happy with their stereotypical and often superficial answers. As a result, they may just respond with a mere “I don’t know” when the teacher poses a new question. Such situations are a good context for introducing an OTSM model which can help learners cope with their problems. The focus on the development of tools and a collection of bank is still missing in this phase. The teacher’s feedback is usually centred on the development of task and showing its potential to learners simultaneously offering them tools for meeting the new challenge.

After some time, learners get used to the new type of tasks. This is the moment when the procedures of working with a task should be changed. It is no longer necessary to spend so much time and effort on going beyond the first answer given by learners (it may still be necessary to occasionally do it, though) and the main focus may move from WHAT is necessary to do in a task to HOW this particular task can be done. This is the time when learners start developing their

models of coping with tasks. As tasks offered in the system are of the same type, once learners have come across a task, it is no longer a novel one. It becomes a typical task for which each learner is expected to develop a set of typical tools. The development of such tools, their test and improvement are the main focus in this phase. The teacher's feedback is centred on helping learners analyse their works by noticing both their pluses and minuses and as a result make changes to their repertoire of tools.

Finally, the learner has developed working tools for an absolute majority of tasks he/she comes across in the system. This is the learner who has good working knowledge of OTSM and in order to continue learning it is necessary to make the next step. The teacher should help this learner see that it is high time they attempted at some new task, something they have never done before. It should also be a complex task as only complex non-typical problems may provide this learner with a context for further growth. Moreover, these tasks should be found by the learner him/herself as they have already reached the level of learner autonomy where all decisions about learning are made independently.

2.3.4. Procedures in the Self-Study Technology

2.3.4.1. Procedures at the level of task

Unlike CGT, TT and FT where systems of tasks are different (a new system to each text or a grammar theme), it is always the same one in the SST. Here learners don't deal with texts or grammar but their own learning. It is usually more difficult as changes that should take place are more apparent – students are expected to change their own learning habits rather than change as a result of acquiring better skills of dealing with different types of models. This is probably one of the reasons why the teacher should be more patient and more tolerant when working with self-study. One more difference about the SST is that tasks proposed to learners already contain the teacher's help at the level of procedures. Most tasks in this technology are forms that are aimed to help learners cope with this or that problem. Thus, procedures we will describe in this section will be connected not so much with helping learning solve a particular problem of learning (e.g. effective planning) but helping them use the proposed tools for solving these problems. Further on we will try to illustrate possible procedures when students

work with one of the elements of the SST, namely the Self-Study General Plan (see Appendix 2.5 for a sample).

It is a general feature of a TA classroom that learning starts with a problem. That is why a problem should first be created for learners. A possible way of doing it is just to ask learners to plan their learning for the coming term. As most learners do not know how to learn, making a plan will usually appear quite a difficult problem. Then, the General Plan could be offered as a possible tool for planning that could help.

A tool however is not a magic wand. It is not enough to just take it out if a problem is to be resolved. One needs to learn to use it for reaching a purpose. In our experience it takes about one-two semesters to learn to use the General Plan as an effective tool for learning. During this time, most learning takes place while students are improving their planning, implementation and evaluation skills.

When filling in the plan for the first time, most learners follow a simple procedure. They ask themselves what they already do in English (e.g. watch MTV, read Cosmopolitan, listen to music, etc) and put these things down in the plan. Then, they fill in other spaces like aims, objectives to make the teacher happy and hand it in. Apparently, such a plan can hardly teach learners anything apart from improving their skills of making an impression of learning.

It is well known that there can be no fair wind if one does not know where s/he is going. This is the first problem of most learners – they are not used to formulating goals, nor do they usually know how to do it. Thus, the teacher's feedback at the beginning of learning is usually centred around helping learners formulate their learning goals and objectives. Table 2.3.5 below gives a possible example of an activity that could be used for such a purpose.

Table 2.3.5. Activity to Help Learners Formulate Learning Goals

1. The goals below come from the first drafts of your general plans. For each goal put down its pluses and minuses.

- (a) Improve my English skills because I need English in my life.
- (b) Improve my English.
- (c) Improve understanding of language in daily-life situations (talk shows, interviews, movies, magazines)

2. The objectives below come from the first drafts of your general plans. Imagine it's May and you would like to measure whether a person has reached his/her objectives. How would you do it for the following objectives.

- (a) better speaking, better understanding, better reading, better writing
- (b) learn new words
- (c) find interesting materials, meet with English speaking person, do some exercises
- (d) watch television, read books in English, work on my grammar and work with vocabulary

This activity is an example of a collective feedback to learners. Collective feedback is a good solution every time when most learners experience the same problems. In this particular examples, learners are helped to define a list of features of a good goal and good objectives that they could later follow when making their own plans. These features can be summarised by a well-known English word SMART which stands for specific, measurable, achievable, realistic and time bound. If the features themselves can be formulated quite quickly, it will take quite a long time before they become the features of the goals formulated by learners. During this time, the teacher's feedback should help learners see where they can improve.

A similar thing occurs with other elements of the plan. Instead of choosing activities that would be the most appropriate ones, learners choose the easiest ones: read a book they have on the shelf, watch a programme they already watch, etc. And again it is the teacher's role to help learners realise that any activity will not go. We do not plan reading for the sake of reading – it is supposed to help us reach one of the objectives listed in the Plan. This is one of the things the teacher draws learners' attention to when providing them with a feedback on their Plans.

After some time, the teacher will start noticing the first changes. The main factor pointing to changes will be that the learner starts planning for him/herself rather than the teacher. The Plan becomes a tool for learning rather than just another home task required by the teacher.

2.3.4.2. Procedures at the level of system

As well as other technologies, the SST is a system where all parts are interconnected and perform a certain function. One of the roles of the teacher is to help learners see it. The General Plan and the process of self-study are not two separate things united only by the fact that the teacher may check how they are done. At the same time, it would be quite typical for learners to forget about the General Plan the moment it is submitted to the teacher and remember again at the end of the term when the teacher asks if the aims have been reached. It is evident that a good plan is the one that works and is being worked with on a regular basis. This is one of the reasons that the last page of the Plan includes a form for making changes to it and adjusting according to how the process is going on. The teacher should regularly invite learners to be involved in this activity thus contributing to the formation of a useful habit. Being able to stop over and reflect is extremely important for learner autonomy and should be encouraged as much as possible.

Neither learning nor reflections however should be for the sake of having them. The idea of the SST is to change the learner's mind set and as a result educate the learner who wishes and is ready to accept full responsibility for learning and knows how to make learning a success. In other words, it is a fully autonomous learner who has got his/her personal syllabus and sees involvement in any kind of formal learning as a part of the personal syllabus. It is this context where the idea of the SST becomes clear. Being involved in the process of planning, implementing and evaluating one's own work, the learner should see how all these elements are interconnected and contribute to the aims of learning. Thus, the focus of the teacher's feedback is directed at helping learners notice these connections and their impact on the aims by inviting learners to come back to the General Plan and make adjustments after a monthly report is submitted, to analyse their diagnostic tests before goals for the next semester are formulated, to come back to the initial goals for the term and evaluate learning in the context of those goals when final presentations are made at the end of the term, etc.

It is also important to mention learners' portfolio in this context. TA portfolio is a pivot of the SST. Learners work with a portfolio at each stage of independent learning: planning - by analysing current entries in the portfolio and problems

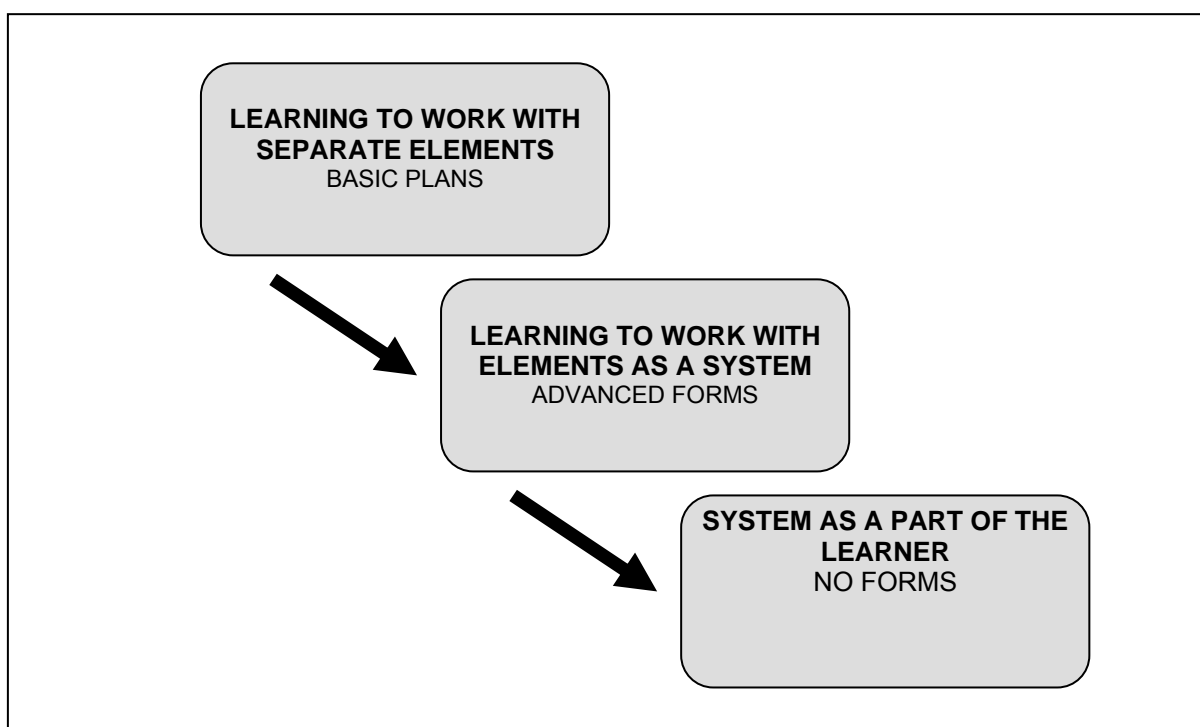
connected with them, implementing – by adding all learning materials to their portfolio and assessing – by reflecting on the process and products of learning and evaluating them in the context of the aims. The teacher's feedback here is focused on bringing learners from seeing a portfolio as a just fashionable alternative to an old note-book to a tool that may help them succeed with each element of their independent work. This is done by inviting learners to assess and re-assess own and peers' portfolios and drawing their attention to the new functions their portfolio could perform.

Another element at the level of procedures that should be mentioned is control. Although we speak of independent learning, control appears extremely important, especially at earlier stages of learning. Forms of control may be different, but it is essential that learners have to report on their learning, thus getting used to permanently reflecting on and analysing their learning which later on leads to the appearance of a useful learning habit.

2.3.4.3. Change of procedures in time

As mentioned above, the SST aims to change the mind set of learners. This is quite an ambitious goal and it usually takes a lot of time before it can be reached. During the first year, the main focus of the technology is normally learning to work with different elements, i.e. learning to plan, learning to take notes of time spent on learning, learning to reflect on one's own learning, etc. When most learners get used to all these elements, it is time they start paying more attention to connections between them. Here we reach the second phase of working with the technology where the main focus is on learning as a system. Finally, the learner sees how all elements of his/her learning are interconnected and all contribute to achieving the main function. This is the phase when the learner no longer needs special help on the part of the teacher. Figure 2.3.3. illustrates all three phases of working with the technology.

Fig. 2.3.3. Change of Focus in the Self-Study Technology



In the first phase, learners are offered the so-called basic forms the main purpose of which is to work out a number of useful skills necessary for approaching a particular problem, e.g. formulation of an aim and objectives, selection of materials, taking account of one's own time, etc. It is necessary to note that plans are necessary when the problem they aim to solve exists. For example, if a learner is able to formulate aims and objectives, effectively plan the time necessary for reaching these objectives and select materials appropriate for learning, s/he probably does not need a special form that will help him/her do it. That is why the TA teacher is always invited to make sure that the problem exists before they offer a tool for its solution.

In the second phase of learning we deal with learners who have already developed separate skills to some extent. At the same time, their learning is still not systematic and connections between various elements are often loose. For example, the learner may be able to formulate aims and select appropriate materials, however what this learner chooses as an aim does not appear to be based on problems this particular learner faces. Advanced forms offered to

learners in this phase are aimed to help them see learning in a more systematic way. The teacher's feedback is centred on helping learners see that a change of one element of the system (learning for two hours a week instead of the planned three hours) necessarily causes changes of all other elements (there will be no time to perform all the activities planned and as a result, there could be problems with reaching objectives and overall goals)

A learner who has acquired necessary learning skills and sees learning in a systematic way has reached a phase when s/he can learn to accept full freedom for learning. These learners no longer need procedural help for coping with separate learning problems, thus they do not need any forms to assist in their learning. Here the teacher's feedback is centred on helping learners notice those separate elements where they still may experience a problem (for instance, feeling of the time). Another vector for feedback is helping learners develop own technologies to help them in the learning process, those that take account of learners' own peculiarities and learning styles.

2.3.5. Procedures in the Research Technology

2.3.5.1. Procedures at the level of task

The RT has an important role in the TA. First, it aims to help learners transfer skills and dispositions they have developed in other technologies to new fields. Second, it seeks to change the mind set of learners in the sense a research project becomes an essential part of one's learning. It is a personal research project that often takes the role of carrier for meta dispositions of OTSM-TRIZ. The RT is similar to the SST as its elements are developed for working with one project over a period of time, usually a term. In this section we will describe procedures of a task that comes relatively late in the RT. That is a presentation of the project.

Presentations are a popular activity in the language teaching classroom and many teachers are eager to work with it. Traditionally, when dealing with a presentation, teachers will be interested in two major components: structure of a presentation and its delivery. In the former case, most attention will be paid to whether a learner has followed a traditional structure (an introduction, a body comprising at least three arguments and a conclusion) while in the latter case key elements of the

delivery will be analysed (involving the audience, eye contact, dealing with questions, etc). Depending on the teacher a certain amount of attention will be paid to language as one of the elements under delivery. Procedures for the type of work described above may differ, however presentations will normally take place one after another during one or several lessons. Peers will then be invited to ask questions which will be followed by an evaluation period, with or without participation of peers but normally led by the teacher.

In the TA classroom, requirements to a presentation are usually much higher. Here it is only an element in the process of working on a project. Unlike in many traditional contexts where a project is done for a final presentation, a presentation here is not a major thing. Learners are usually advised on the 20:80 time ratio, where preparation for a presentation takes not more than 20 per cent of the total time spent on the project. Initially, however, learners report an opposite ratio mentioning that a presentation takes most of their project time. There are several reasons for this. Let us look at these reasons and then consider possible procedures that can help us cope with the problem.

First, there is usually no research behind a presentation – it is just based on one material (worst case) or a complication of several sources (funnily enough, considered to be a characteristic of good preparation). Second, assessment procedures do not usually offer criteria for evaluation of content of a presentation, thus it is more than enough to make quite an empty well-structured presentation delivered in a good language and including a number of key elements (e.g. good eye contact, a joke, a rhetorical questions, etc) to obtain the highest mark. Third, a presentation is hardly ever assessed against one of the most realistic criteria for a presentation in real life – whether the presenter has reached his/her aim. Unfortunately, the only aim that exists in many classrooms is to do the teacher's task.

TA students' work with the RT always starts with reading. The phase of working with a source material with the purpose of defining major problems in the chosen sub-field, with a purpose of their further analysis and resolution is the longest (time-wise) part of the RT. At this stage, students are required to report to the

teacher several times and it is only when this stage is completed, they are allowed to think about a presentation. Thus, a presentation merely becomes impossible if a learner has got nothing to present about.

Content of a presentation, as well as its structure, can only be evaluated if the aim of a presentation is clear. Formulation of an aim is the first step for any presentation in a TA classroom. And it is against this aim that a presentation will later on be evaluated by the teacher, peers and the presenter him/herself. There are certain requirements to how an aim can be defined. Learners are asked to avoid formulations like “to tell people about...” or “to report on...”. Such aims are not measurable and do not give a possibility to evaluate if a presentation has been successful. Moreover, such aims are unrealistic from the point of view of real life – imagine a sales person making a presentation about a new product with the purpose of “telling people about it”. A good aim will bring about a change in the audience. To give a simple example, a presentation about a book should be aimed not at “telling people about a book” but “making them start reading it”.

The learners' preparation to the presentation starts with filling in a content form where they define the goal of a presentation and then organise content into a most appropriate structure. The next step is planning a delivery. Successful delivery is more than good language, eye contact with each member of the audience and well-done power-point slides. Delivery should also help reach the goal of a presentation. Thus, a good speaker will think of possible problems they have to resolve to make it happen. The cause of problems may be different: present opinion of some members of the audience, psychological peculiarities of the audience (some people may simply wish to interrupt you any minute to attract attention to themselves), your strong and weak points as a presenter (eg not always intelligible language which is difficult to understand or, alternatively, a very good language difficult to follow for some members of the audience). All these things have to be analysed in advance. Students are offered a procedures form for the given purpose.

It is necessary to note that work with presentation preparation forms is not of lesser importance than a presentation itself. As well as when making a

presentation, here learners are involved in the process of developing their language skills (a certain type of writing) and inventive thinking skills (formulating and resolving problems they are going to face). It is only when learners have filled in the forms, received feedback from their peers and the teacher and made necessary changes, are they allowed to make a presentation. Moreover, after a presentation, each speaker receives feedback from their peers which helps them to evaluate how successfully they have performed. While peers are writing their feedback, the presenter has a short discussion session with the peer – one person who has performed the role of a critical friend throughout all phases of work with a project – and receives a more focused feedback. The teacher often joins this session and can draw the presenter's attention to certain aspects of the presentation.

2.3.5.2. Procedures at the level of system

As we have already mentioned, one of typical problems with the RT is that it tends to be substituted by the process of preparing and making presentations. While making presentations is not bad in itself, it is a much narrower type of work and does not allow reaching of the goals set for the RT. Thus, it is essential that the research part is present and not given up by the teacher on the reasons that it is too difficult for his/her students.

It is important that learners start the reading phase of their project from the very beginning of the learning period. The Project Application Form is aimed to facilitate this process. Learners are asked about materials they are going to read and as a result have to select sources for their research. As the Application Form asks for a full reference information about each source, it usually means that materials have to be found and borrowed from the library or downloaded from the internet. The learners' self-study plan we described in the section 2.2.3.3.1 should include how much reading is planned each month.

At the same time, it is necessary to remember that reading is not for reading's sake – this is work with sources which is supposed to provide learners with data for further research. Here learners are provided with the Research Content Management Form. This form helps learners present the chosen field as a set of contradictions. As a result, learners move to a new level of dealing with the theme

and operate with problems typical of this particular area rather than just separate facts. This is a key moment of research which may take quite a lot of time and effort on the part of learners, especially when they deal with it for the first time.

When learners have reached a new vision of their research theme (and this was the function of the Research Content Management Form), they need to specify their research aim. At this stage, the aim may change as learners already see many things in a different way. When the aim has been specified, learners start working towards the development of a product of their research. Products can be different, starting from proposing a solution to one of the specific problems that appeared at the previous stage to a classification and evaluation of existing solutions. The Product Description Form is aimed to help learners in this process.

It is necessary to note that a description of a product of the research should not be mixed up with a presentation. A presentation is not understood here as a product of learners' research projects. The role of the presentation is to affect⁷¹ the audience by presenting them with products of research. Thus, first products should appear and only then a decision should be made about the most efficient presentation. As a rule, a number of different presentations of the same product are possible and the learner should decide what would be the most appropriate in the context of his/her project. As well as with previous stages, this is done in consultation with the peer and then the teacher's feedback is taken into account.

We described the process of preparing and making a presentation in the previous section. This process is followed by self-assessment where the learner is invited to reflect on the process and products of his/her project. As a result of this process, conclusions should be made for the next project. In this respect, the RT is similar to the CGT and TT and FT as here learners are also collecting banks of tools – the instruments that can help them conduct an effective research project in any field.

We would like to note though that the RT is still less developed in comparison with other TA technologies. That is why not all forms mentioned in this section are presented in the Appendix, not enough empirical data has been collected to

⁷¹ As we mentioned earlier, specific goals of a presentation may differ. What is essential though is that the audience is affected and a change follows.

provide a more technological description of all the steps. Most probably this technology will undergo a number of changes during the current academic year when it is put to test with various groups of learners.

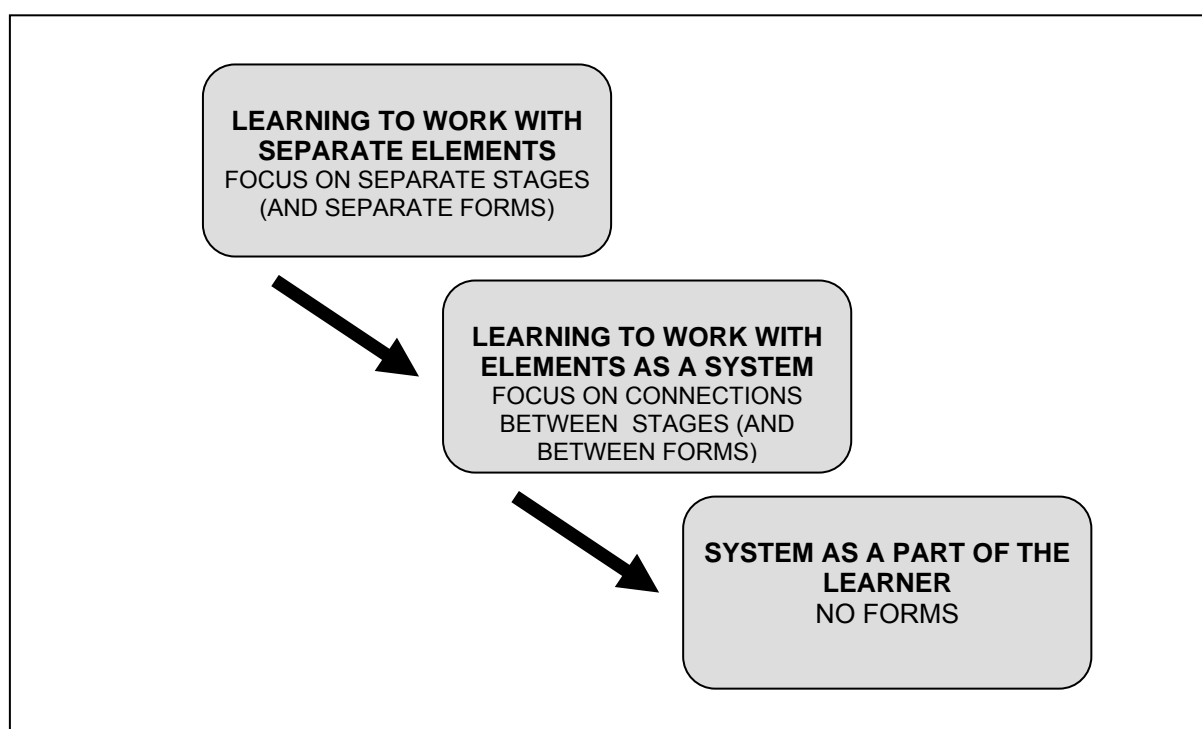
2.3.5.3. Change of procedures in time

Research project is treated very seriously in the TA classroom, therefore initially it appears very difficult for learners who are used to simple and often superficial projects widely spread in school contexts. At this stage, the main emphasis is on separate elements of the technology. The teacher makes sure that learners start reading something for their project. Then, a lot of effort is put into making learners work with sources, i.e. select information that is necessary for further research. This stage, as well as a further organisation of information as a set of connected problems are probably most difficult problems at this stage. Learners still think that this is all done for a presentation and it does not appear reasonable to do so much work for the purpose of a ten-fifteen minutes presentation. At the same time, preparation for presentations themselves is seldom serious and learners make most of mistakes one could make when making a presentation. Finally, self-assessment is rather superficial as it is done for the teacher rather than for learners themselves. The teacher's procedures at all these stages are centred around forms they offer to learners and working on various elements of forms trying to help learners see their purpose.

It is usually not earlier than after the first projects are completed when learners start noticing that the RT is not about presentations only. All the forms they have been offered are aimed at a higher level goal. At this moment, learners move to the second phase when the main emphasis is on establishing connections between elements. This is the time when more attention is paid to consistency of aims in the course of the project. It is also at this time when learners start consciously collecting tools for their research by noticing more effective ways of dealing with this or that task. As a result, the time ratio of project presentation starts changing, first reaching 50:50 and then slowly moving towards more time being spent on the project. The length of this phase may be different, but in our opinion learners should do at least two-three projects to go through it.

As well as in other technologies, the final phase is when the learner has reached quite a high level of autonomy. We already have a good researcher. This person can choose a field, formulate the initial aim, select information, present the area as a problem network, choose a sub-area for personal contribution, develop a product, effectively present the result and draw conclusions about more effective ways of doing all of the above steps when undertaking the next project. Moreover, this person can do all these without any forms as procedures have already become a part of him/her. Figure 2.3.4. presents changes in the procedures of the RT with time.

Fig. 2.3.4. Change of Focus in the Research Technology



2.3.6. Procedures in the Yes-No Technology

2.3.6.1. Procedures at the level of task

Traditionally, the more questions students ask during a yes-no game in the language classroom, the happier the teachers are. This is easy to explain, more questions mean more language practice. However, if our purpose becomes twofold, i.e. teaching both language and inventive thinking skills, it is essential that

students think what kind of questions they ask. Otherwise a game may be a mere guessing activity.

Thus, one of the main rules for yes-no games in the TA classroom is that students are supposed to ask as few questions as possible. In other words, the faster one can solve a problem, the better it is. In fact, this is a skill students need for real life.

In the TA context, there are five answers possible during a yes-no game (N. Khomenko, 1992-1994):

- *Yes*
- *No*
- *Yes and no* – an important answer as it brings students to contradictions. Identifying a contradiction is seen as an important step in a problem-solving process, thus arriving at such an answer should be seen as an advantage.
- *It's not essential* – this answer helps the teacher control the problem-solving process. He/she may provide information which is not essential and, thus, make the process more difficult to students. On the other hand, he/she may say that this is not essential, i.e. stop the process of searching a solution in this direction, thus, helping students.
- *There is no information about it* – the teachers may really have no information about it or may choose not to share this information to make the process of problem solving more difficult. In the real problem solving process, we often have no information about certain things connected with the problem, thus, it may be useful to teach students to get used to it.

At the level of procedure there are several techniques that may help the teacher make the process of using yes-no games more efficient. We will describe the three we use most often. The first two aim to help the teacher reach the main aim when dealing with yes-no games, i.e. focus on work with a problem. The last technique is more about class management procedures.

- *The cost of the problem (Kucharavy, Personal Communication)*

At the beginning of a game, the teacher says that the cost of this problem is ten questions. When students start asking weak questions, the teacher may inquire whether he/she should answer it. As a result, students start talking to each other and select questions.

The teacher may also choose not to share the key answer if students have not arrived at it after the questions allowed.

- *Competition between groups*

The class is divided into several groups and each group asks questions in turn. After each question, the teacher evaluates it by giving a mark from 0 (for the weakest question) to 2 (for the strongest question). When one round of questions is over, the students are invited to explain why some questions were evaluated higher. As a result, a context for the development of students metacognitive skills is created. For an additional motivation, a group can be given an extra point for explanations.

The group with the highest number of points is the winner.

- *Several groups solving different problems*

The teacher may delegate the role of the leader to some students. It is especially efficient if these students have prepared their own yes-no games. Then, the class may be divided into several groups with a separate leader each, and work on various problems at the same time. After this, leaders may change the groups.

Both 'cost of questions' and 'competition between groups' techniques may be used by the leaders to enhance the efficiency of the work.

2.3.6.2. Procedures at the level of system

There is no system of tasks in the YN Technology in the same sense as it is offered in other TA technologies. Thus, distinguishing procedures at this level is done only for the purposes of convenience as all the procedures we will describe in this section are also characteristic of work with a separate problem.

The main problem the teacher faces when dealing with yes-no game is a common feature of people's approach to problems – they start brainstorming or randomly choosing possible variants. While this technique may bring results with simple problems, its efficiency will be extremely low when the problem is a complex one – we may remember Edison who reported to have made tens of thousands of trials (and errors) when working on some of his inventions. Thus, the teacher's task is to help students realise the low value of the trial and error method and offer a set of OTSM models as an alternative. After several yes-no games, learners start seeing the potential of the new tools and spend less and less time on uncontrolled

brainstorming which usually comes to an end when someone offers to “think” and apply some of the models. Thus, the process of working on a problem becomes the content for practising and sometimes introducing new tools for working with problems. Moreover, learners have a chance to test tools at once and see how they could work together.

At the same time, it is necessary to note that the process of introducing tools and applying them to a specific problem is not as easy as it may appear. First, the teacher does not always know which tool he/she will have to introduce with this or that task, as the process of working with a task may look very different with different groups of learners, thus different tools will need to be introduced. Second, application of tools requires a much more serious intellectual work than brainstorming and people tend to choose easy ways. The first problem requires the teacher to be ready to deal with any aspect of OTSM when working with any task⁷² while the techniques we described in the previous section could help the teacher with the second problem.

2.3.6.3. Change of procedures in time

Unlike in other TA technologies, procedures change in time relatively fast when dealing with the YN technology. In the first phase, this is usually when the game is introduced for the first time and a couple of weeks after that⁷³, the teacher’s focus is on the main task of the problem solving process, ie narrowing solution search space (N. Khomenko, 1997-2000). Before students accept this idea, it is useless to move to the next stage, as learners will simply not need all the tools offered by OTSM. Simple games dealing with defining values of features are usually used in this phase.

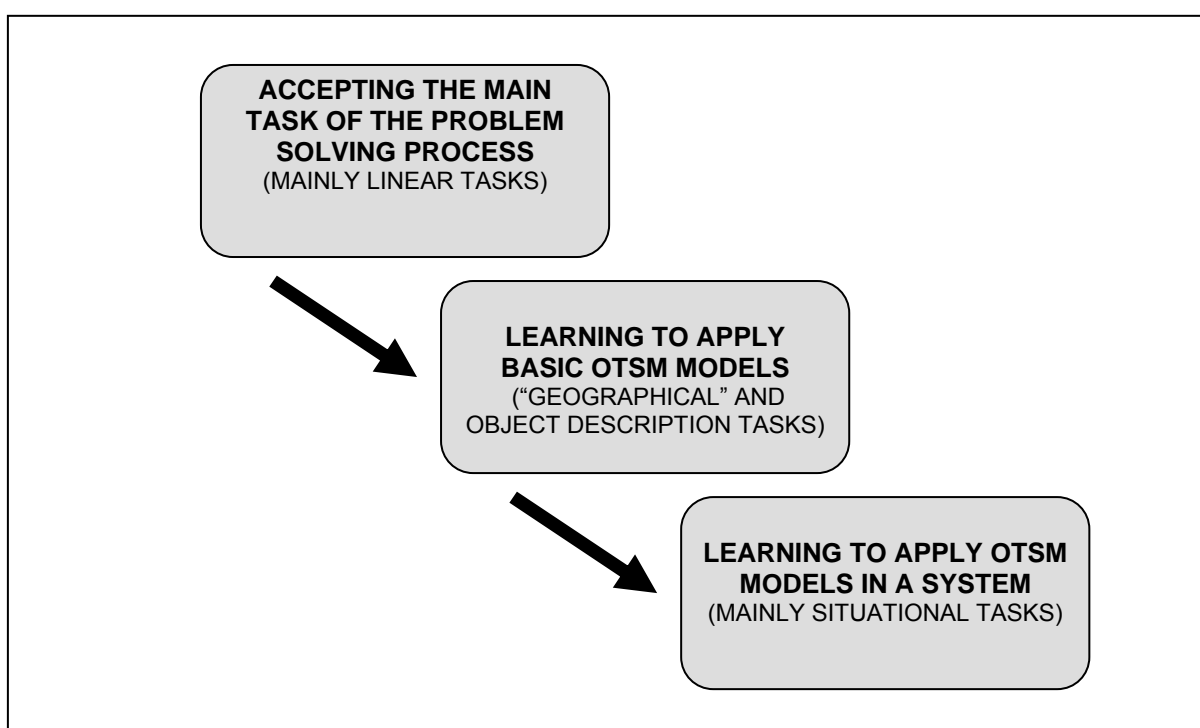
When the main idea of the problem solving process is accepted, the teacher stops dealing with linear games and introduces more games with “geographical” features as well as those dealing with description of objects. Here learners start getting acquainted and applying main models of OTSM: the ENV model, the multi-screen model, the resources model, etc. This phase may take one or several months.

⁷² Apparently requirements the TA puts on the teacher are one of the main disadvantages of the approach.

⁷³ Assuming that it is approximately once a week that learners deal with a new yes-no game.

Finally, learners move to situational yes-no games and continue dealing with them throughout the rest of the course⁷⁴. Here they have a chance to work with all types of OTSM models and also get acquainted with elements of various OTSM technologies. Here the teacher is interested not only in separate models and their application but working with models as a system which is essential for using OTSM for solving real life problems. Figure 2.3.5. presents a change of focus in the YNT.

Fig. 2.3.5. Change of Focus in the Research Technology



⁷⁴ It does not mean that other types of games are never used – their role is more restricted though.