

Visual material promoting learner creativity and criticality

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This article aims to present a selection of materials rewritten to exemplify activities which facilitate learners' creative and critical thinking (CT) practice in the ELT classroom. Creativity is the 'ability to come up with new ideas that are surprising yet intelligible, and also valuable in some way' (Boden, 2001, p.95). Language creativity can also be defined as the playful use of language to construct new and surprising meaning - a ubiquitous feature of everyday language use (Tin, 2013). The need to say something new makes learners broaden their existing vocabulary and grammar, retrieve less accessible words and phrases, combine familiar words in unfamiliar ways, and develop complex grammar (ibid.). CT refers to the practice of socially-situated reflection and evaluation considering an issue from multiple perspectives, even when these involve self-critique (Banegas & Villacañas de Castro, 2016) and represents an important skill in education (Hare, 1999). Bloom's Taxonomy of educational objectives (Bloom et al., 1956) provides a theoretical framework to enable educators to define critical thinking and analyse data to evaluate socio-cognitive activity in general education classrooms (Aghaei & Rad, 2018). In the ELT classroom, 'CT tends to expand students' learning experience and makes language learning deeper and more meaningful' (Zhao, Pandian, & Singh, 2016, p.14) and is seen to contribute to the formation of responsible citizens (Zhang & Lim, 2018) as well as constituting a key component for individuals' success in our 21st Century world (Zhou, Jiang, & Yao, 2015).

Critical thinking skills

ELT educators need to appreciate the importance of CT skills in language education and understand what each skill requires of learners as clearly detailed in Bloom's revised taxonomy (Krathwohl, 2002). Educators need to recognize what constitutes successful application of these CT skills and sub-skills in relation to language acquisition if they are to provide their learners with focused CT-practice in the classroom. Such recognition and understanding underpin educators' ability to help learners develop their CT skills and sub-skills for use not only in the classroom but out in the real world (Lauer, 2005). Yeh (2009) emphasizes the need for teachers to have comprehensive CT skills if they are to deliver sufficient skills work using explicit

strategies effectively (Abrami, et al., 2008). CT skills are not innate but need to be learned through practice (Schafersman, 1991) and as Alagözülü (2006) suggests, learners need to be supported by teachers, through practice, to realise and implement the notion of how to think rather than simply what to think. To engage with criticality in their learning, learners must acquire and use CT during classroom activities (van Gelder, 2005). Acquiring CT skills enables learners to critically analyse their own learning and supports the development of their expertise in their studies and/or work lives (Phan, 2010) leading to academic/professional success (Lee & Loughran, 2000).

Bloom's revised taxonomy model (Krathwohl, 2002) details the six types of CT skills and groups them under two sub-headings, lower-order thinking skills (*Figure 1*) and higher-order thinking skills (*Figure 3*).

Krathwohl's model (2002) supports educators with the production of materials/tasks and implementation of classroom practice to develop learners' problem-solving and reasoning skills by detailing what the CT skills entail (Himmele & Himmele, 2009). Detailed descriptions of the three lower-order and three higher-order CT skills clarify what each CT skill and CT sub-skill consists of, which can assist educators with the teaching of CT strategies. *Figure 1* sets out the three lower-order thinking skills: remember; understand; and apply. These three skills encapsulate the cognitive process. Then, there are four sub-skills for each of the cognitive process skills labelled as the knowledge dimension: factual; conceptual; procedural; and metacognitive. So, the cognitive skill of *remembering* has four sub-skills representing what the learners must *know*, with *using* being the least challenging sub-skill and *identifying* being the most challenging in ascending order of complexity.

CT is a development process requiring learners to incrementally construct their expertise by actively using relevant CT skills and sub-skills (Simpson & Courtney, 2002) in the classroom and subsequently transferring these CT skills to diverse contexts in real life (Stenberg, 2001). Aghaei & Rad's (2018) study of gender bias, or actually the lack thereof, linked to listening comprehension, affirms the importance of teaching CT skills in tandem with other skills such as reading, speaking and vocabulary learning in the ELT classroom.

While the primary focus of this article is on the higher-order skills, it is interesting to note how the materials and activities presented here afford opportunities to practice the three lower-order thinking skills and the four sub-skills of each one as set out in Krathwohl's (2002) model (Figure 2). This illustrates the range of cognitive activity learners need to utilize while they tackle each activity.

The three higher-order cognitive skills (Krathwohl, 2002), (Figure 3, overleaf) are: analyze; evaluate; and create, in ascending order. Each one can be broken

down into four dimensions of knowledge: factual; conceptual; procedural; and metacognitive, also in ascending order. So, the act of analyzing can involve the following sub-skills of selecting, differentiating, integrating and deconstructing information while the highest cognitive skill, creating, involves the sub-skills of generating, assembling, designing and creating ideas, information and possibly artefacts (after Heer, 2012). Informed by detailed knowledge of these higher-order skills, educators will be in a position to select, adapt or produce materials and activities to facilitate practice of each sub-skill (Dunn, 2019a).

The Knowledge Dimensions	<p>Metacognitive</p> <p>Knowledge of cognition in general as well as awareness and knowledge of one's own cognition.</p>	<i>Identify</i>	<i>Predict</i>	<i>Use</i>
	<p>Procedural</p> <p>How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.</p>	<i>Recall</i>	<i>Clarify</i>	<i>Carry out</i>
	<p>Conceptual</p> <p>The interrelationships among the basic elements within a larger structure that enable them to function together.</p>	<i>Recognize</i>	<i>Classify</i>	<i>Provide</i>
	<p>Factual</p> <p>The basic elements students must know to be acquainted with a discipline to solve problems in it.</p>	<i>Use</i>	<i>Summarise</i>	<i>Respond</i>
		<p>Remember</p> <p>Retrieve relevant knowledge from long-term memory.</p>	<p>Understand</p> <p>Construct meaning from instructional messages, including oral, written, and graphic communication.</p>	<p>Apply</p> <p>Carry out or use a procedure in a given situation.</p>
The Cognitive Process Dimension				

Figure 1: Lower-order thinking skills and sub-skills (based on Krathwohl, 2002).

Figure 3 (Kathwohl, 2002), overleaf, sets out the three higher-order thinking skills: *analyze*, *evaluate* and *create*. These three skills encapsulate the cognitive process. Then, there are four sub-skills for each of the cognitive process skills labelled as the knowledge dimension: factual; conceptual; procedural; and metacognitive. So, the cognitive skill of *analyzing* has four sub-skills representing what the learners must *know* with *selecting* being the least challenging sub-skill and *deconstructing* being the most challenging in ascending order of complexity.

So, referring to higher-order thinking skills as outlined in Krathwohl's (2002) revised model (Figure 3, overleaf), an example of material to provide classroom practice of the cognitive process of *creating* might involve learners discussing possible solutions to a problem-

solving task requiring them to generate ideas, assemble some of these into a usable order, *design* a report/instruction pamphlet and create an attractive artefact which other learners would be interested to read/use.

In this way, learners gain valuable practice of all four sub-skills of the higher-order CT skill of creating. This might be done in steps over several lessons and will probably have been preceded by learners having practised each CT skill and sub-skill separately. The time frame for this integrated use of sub-skills will depend on the quality and amount of information to be processed and presented. In this way, learners develop their ability to use these sub-skills incrementally as they build on those sub-skills in the levels below. This type of class work can also combine CT skills with creative practice thereby enhancing learners' abilities

Activity-types	Describing visual information	Use	Recognize	Summarise	Classify	Respond	Provide
		Recall	Identify			Carry out	Use
	Situations requiring domain specific language	Use	Recognize	Summarise	Classify	Respond	Provide
		Recall	Identify	Clarify	-	Carry out	Use
	Using class surveys	Use	Recognize	Summarise	Classify	Respond	Provide
		Recall	Identify	Clarify	Predict	Carry out	Use
Producing information gap activities	Use	Recognize	Summarise	Classify	Respond	Provide	
	Recall	Identify	Clarify	Predict	Carry out	Use	
Problem-solving activities	Use	Recognize	Summarise	Classify	Respond	Provide	
	Recall	Identify	Clarify	Predict	Carry out	-	
Discussion work	Use	Recognize	Summarise	Classify	Respond	Provide	
	Recall	-	Clarify	Predict	Carry out	-	
		Remember		Understand		Apply	
		Retrieve relevant knowledge from long-term memory.		Construct meaning from instructional messages, including oral, written, and graphic communication.		Carry out or use a procedure in a given situation.	
The Cognitive Process Dimension							

Figure 2: Lower-order thinking skills / sub-skills practised during each activity (based on Krathwohl, 2002).

incrementally (Ketabi, Zabihi, & Ghadiri, 2012) for both creativity and criticality. According to Paul & Elder (2014), CT is ‘self-directed, self-disciplined, self-monitored, and self-corrective thinking’ (p.2). Furthermore, systematic inclusion of CT-related classroom work should be planned to ensure activities are ‘graduated [...] including repetition and guidance with timely feedback’ (Van Gelder, 2005, p.43).

Therefore, it is evident that educators (teachers, trainers, examiners and materials writers) need to have a clear understanding of, and ability to include,

opportunities for learners to practise both creativity and CT skills in the 21st Century ELT classroom. The following examples are presented to hopefully provoke educators’ own creative and CT skills to incorporate English language practice with cognitive thinking skills practice in motivating, effective ways in the ELT classroom. All six of the activities presented here afford learners with extended opportunities to be creative using language, both from their long-term memory and more recently acquired, to participate in and complete the various practice activities combined with CT skills.

The Knowledge Dimensions	<p>Metacognitive</p> <p>Knowledge of cognition in general as well as awareness and knowledge of one’s own cognition.</p>	<i>Deconstruct</i>	<i>Reflect</i>	<i>Create</i>
	<p>Procedural</p> <p>How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.</p>	<i>Integrate</i>	<i>Judge</i>	<i>Design</i>
	<p>Conceptual</p> <p>The interrelationships among the basic elements within a larger structure that enable them to function together.</p>	<i>Differentiate</i>	<i>Determine</i>	<i>Assemble</i>
	<p>Factual</p> <p>The basic elements students must know to be acquainted with a discipline to solve problems in it.</p>	<i>Select</i>	<i>Check</i>	<i>Generate</i>
		<p>Analyze</p> <p>Break material into constituent parts and determine how parts relate to one another and to do an overall structure or purpose.</p>	<p>Evaluate</p> <p>Make judgements based on criteria and standards.</p>	<p>Create</p> <p>Pur elements together to form a coherent whole: reorganize into new pattern or structure.</p>
The Cognitive Process Dimension				

Figure 3: Higher-order thinking skills and sub-skills (based on Krathwohl, 2002).

Describing visual information

Educators can exploit coursebooks' textual or visual material to facilitate learners' practice of individual or multiple CT sub-skills (Dunn, 2019b). *Figure 4* shows which higher-order CT skills can be practised with such an activity. However, educators will need to analyse and evaluate materials and activities to ensure learners are indeed being afforded opportunities for such practice before using them in the classroom.

Describing visual material is a ubiquitous activity in the classroom. Below is an example (*Figure 5*) from a Royal Air Force of Oman (RAFO) course entitled English for Security, which was produced to support military security personnel guarding air force bases. This plan of a military base was designed to enable learners to practise the use of prepositions of location in a military scenario in order to be able to give visitors simple directions to places within the base, thereby lending maximum face validity (Hutchinson & Waters, 1987) to their classroom practice by being

Describing visual information	<i>Differentiate</i> -	- <i>Determine</i>	<i>Assemble</i> -
	<i>Select</i> <i>Intergrate</i>	- -	- -
	Analyze	Evaluate	Create

Figure 4: Higher-order thinking skills for describing visual information.

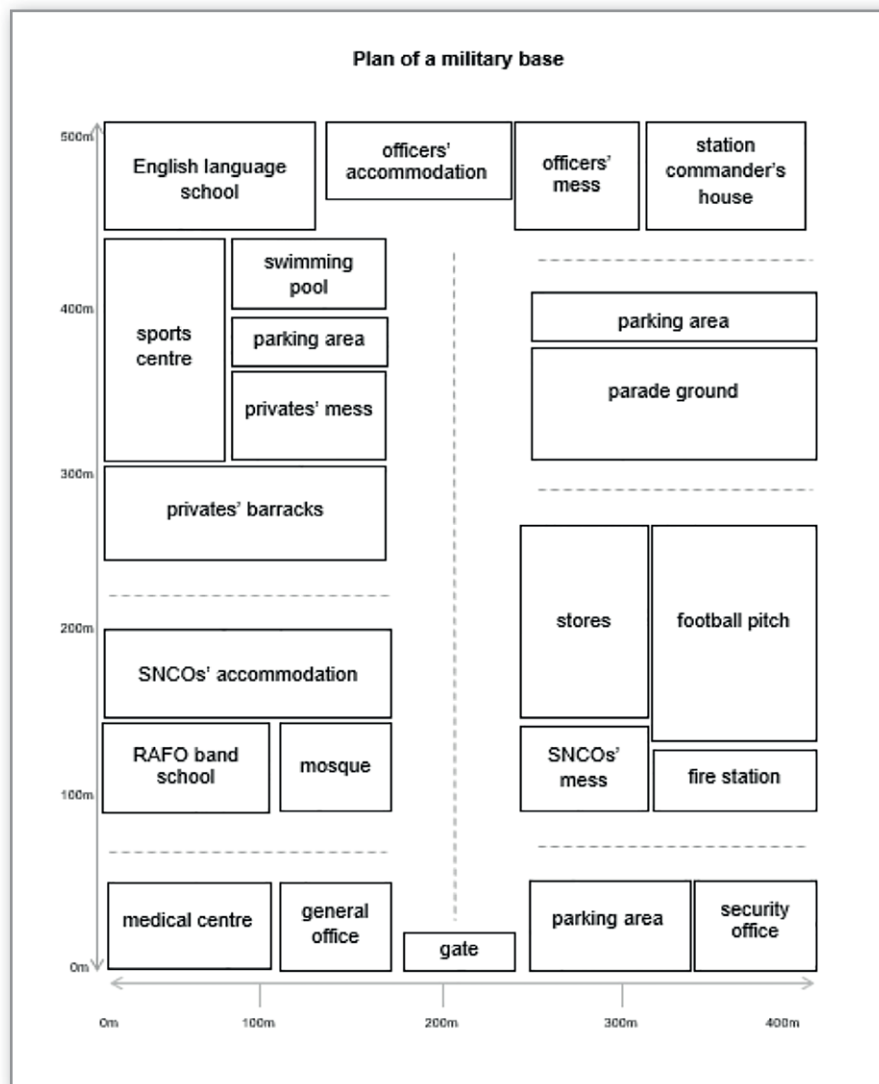


Figure 5: Original version

All the visuals presented here were originally in colour.

clearly relevant to the learners' future duties. However, minimal re-writing of such ubiquitous material (see *Figure 6*) can provide further practice engaging learners' CT skills and combine them with speaking and listening skills work as they tackle the task in pairs or groups. Producing an empty plan for learners to fill in from a list of the various places (*Figure 7*), without recourse to the original plan, presents learners with the challenge of *analyzing* logical locations and selecting particular places for particular locations by *differentiating* types of places best-suited to be near each other. Learners may also need to determine relative size of specific places against areas available and integrate these ideas to assemble an overall plan of a base as some places need to be apart from others (such as the station commander's house being located away from noisy areas such as the football pitch).

Places on a military base	
English language school	privates' barracks
fire station	privates' mess
football pitch	RAFO band school
gate	security office
general office	SNCOs' accommodation
medical centre	SNCOs' mess
mosque	sports centre
officers' accommodation	station commander's house
officers' mess	stores
parade ground	swimming pool
parking area (x3)	

Figure 7: List of places on a military base.

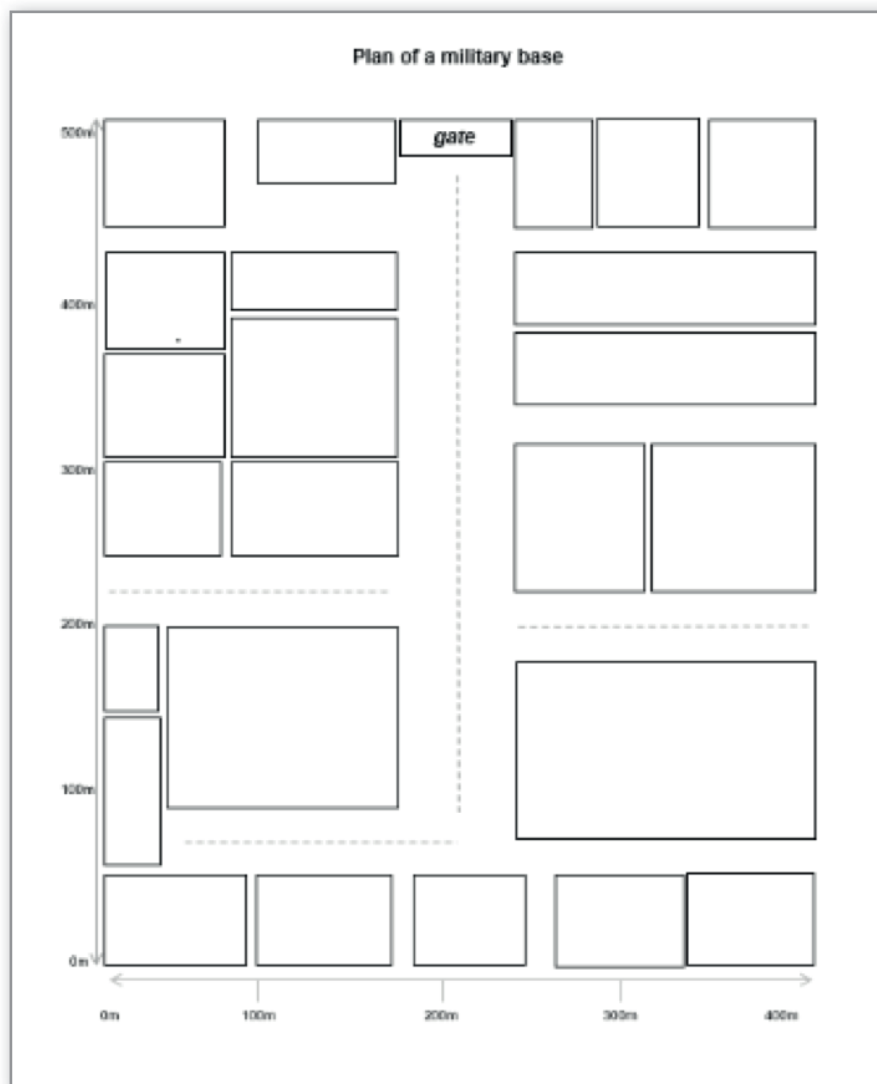


Figure 6: Adapted version.

Any similar type of plan, map, poster/photo of places such as in the park, at the beach, etc can be exploited in a similar way. Additionally, such higher-order CT-practice should also activate learner creativity as they tackle a challenge in pairs or groups, which involves a creative approach to a novel classroom scenario.

Situations requiring domain specific language

In comparison with describing visual information which can provide practice of nominally just four higher-order CT sub-skills, this activity can cover nine of the twelve sub-skills (Figure 8, below).

Course material utilizes visuals to present and practise lexical items from specific language domains. For example, the objects below come from a RAFO officer cadet leadership course (Figure 9 below). Originally,



Figure 9: Situations requiring domain specific language.

these visuals were used to introduce and practise key lexis in the classroom. Then, learners would be required to use the same lexis to solve leadership challenges outside on the leadership training area involving practical exercises such as moving a container full of toxic liquid across a dry river bed safely, all transacted in English. However, with the inclusion of suggested procedures for exploiting this lexis further in the teacher's book, learners can benefit from additional practice of using the lexical items beyond normal descriptions of appearance, construction and specific use, by finding solutions to new challenges while also employing CT skills. For example, group work can focus on using the lexis to plan for, if not actually complete, real world tasks when they are required to combine familiar words in unfamiliar ways (Tin, 2013). These tasks could include repairing objects such as furniture or constructing something such as a tree house, as best suit the wants and needs of the learners and learning context.

By *differentiating* and selecting between the domain-specific lexis and other acquired language, learners *generate* and *assemble* both ideas and the language needed to discuss them in English. Then, they *integrate* these into a potential plan, checking the accuracy of their ideas and language, *determining* the way their ideas and language amalgamate to form a viable plan and judge this plan in terms of the challenge facing them. *Reflection* may follow at this point or, more likely, after the activity has been completed.

Using class surveys

The first survey (Figure 10, overleaf) is a typical example of arguably somewhat unchallenging material taken from a RAFO general English course for personnel in all branches of the Omani military. The activity gives almost no scope for learners to use the recently-learned target language, superlative adjectives, in any creative way. The mechanical and highly-controlled nature of this survey precludes any need for learners to think critically about what language they are producing. The second survey task (see Figure 11, overleaf) offers considerable challenge including CT-skills practice combining both cooperative learning (Slavin, 2011) and collaborative learning (Campbell, 2015).

Situations + domain specific language	Differentiate	-	Determine	Reflect	Assemble	-
	Select	Intergrate	Check	Judge	Generate	-
	Analyze		Evaluate		Create	

Figure 8: Higher-order thinking skills for domain specific language practice.

CLASS SURVEY: BEST / WORST

Ask three class colleagues the questions and write short answers.

		Learner A	Learner B	Learner C
		Name:	Name:	Name:
1	What / best thing about studying English?			
2	What / worst thing about living in Muscat?			
3	What / most interesting thing about your English classes?			
4	What / easiest thing about learning English?			
5	What is the least exciting part of your typical day?			
6	What / most beautiful place in Oman?			

Figure 10: Original survey.

CLASS SURVEY

First, in pairs, choose a topic (for example: holidays; sport; evenings; films) and prepare questions orally about this topic using the adjectives below and your own adjectives (Q5-6). When you are asking your questions, write details in the table for two students.

	Name:	Name:
(good)		
(bad)		
(exciting)		
(happy)		
()		
()		

Figure 11: Re-written survey.

Using class surveys	- Deconstruct	- Reflect	- Create
	Select Intergrate	Check Judge	Generate -
	Analyze	Evaluate	Create

Figure 12: Higher-order thinking skills for using class surveys.

Learners are now tasked to prepare their topics and questions, working in pairs, and then ask their questions of unsuspecting learners in a mingling task, the latter have to listen carefully to these novel questions and respond with real, personal answers. The survey now presents learners with a meaningful purpose to prepare and complete the activity as well as opportunities to practise a number of CT sub-skills (Figure 12).

During the preparation phase, learners gain valuable practice of selecting topics and questions and *integrating* lexis to generate questions which they need to check for accuracy as well as *judge* their appropriacy and relevance to other class members before using them with their peers. After learners have completed their surveys, they return to their initial partner to produce a report based on the responses collected. They engage in *deconstructing* and *reflecting*

on their prepared questions and the responses they noted down and *generate* sentences to *create* a class report for other pairs to read.

Producing information gap activities

Information gap activities, usually done in pairs, can offer learners considerable class time speaking / listening to their partners, be that face-to-face, side-by-side, or back-to-back.

The teacher's notes (Figure 13) include scaffolding of prepositions of location which learners may, or may not, need together with simply-worded instructions for teachers to follow if necessary. However, the main focus of this activity is to re-cycle the recently-covered

Task Twelve – Speaking / listening Teacher's notes

This activity is designed to recycle a large amount of vocabulary in an information gap-fill activity to find the differences between the two picture sheets (AB).

Suggested procedures:

1. Introduce the concept of differences between AB sheets.
2. Elicit / cover the following essential vocabulary on the whiteboard:

The diagram illustrates prepositions of location. A central rectangle is divided into four quadrants. Arrows point from labels to these quadrants: 'at the top' (top), 'in the middle' (middle), 'at the bottom' (bottom), 'on the left' (left), and 'on the right' (right). To the right of the rectangle, a vertical stack of boxes shows 'above' pointing down to 'x', 'x' pointing down to 'x', and 'below' pointing up to 'x'. Below the rectangle, a horizontal stack shows 'x' pointing left to 'between ... and', which points right to 'x'.

3. Give out the sheets in pairs as follows: A-A, B-B, A-A, B-B.
4. Pairs describe their pictures (same sheets): where they are and what they are.
5. Re-group pairs face-to-face: A-B, A-B, A-B
6. Pairs describe and mark the differences between their sheets while the teacher monitors for effective use of language / problems to be dealt with on the spot, after the activity or in a future review session.

Figure 13: Teacher's notes for an information gap activity.

domain-specific target language for RAFO personnel in the ESP course entitled English for Operations. While they have learned, or already know key lexis such as the types of aircraft and individual models, learners are presented with a wide range of aviation-related information which they are required to describe in detail if, working together with their partner whose information sheet they cannot see, they are to complete the activity successfully (Figures 14 and 15).

The aim with this material is to provide a complex set of visuals to push learners' spoken output and intensive listening practice, hopefully compelling them to be both creative with their descriptions and consider their own and their partner's language critically (Figures 14 and 15).

The material provides layers of challenge with some

visuals in differing positions, some completely different visuals in the same position and some showing similar, but not the same, information to be described in pair work sitting back-to-back.

In terms of CT skills (Figure 16), this activity requires speakers to select items for descriptions in a logical way to assist their partners effectively and to *differentiate* between types of visual information. This will necessitate speakers fine-tuning their detailed descriptions if their partners are to receive sufficient detail to differentiate if the visuals are the same or different. Moreover, listeners are required to check description details they hear to *determine* which visuals are the same or different. Once the pairs have completed the activity, they can either compare their different worksheets (A+B) or return to their original partner, particularly if the option to describe the

Task Thirty-nine – Speaking / listening Student A

Look at the pictures and diagrams below and, working with a partner, be ready to describe what you have and write a cross (X) if there is a difference between your pages or a tick (✓) if there is no difference. The first few have been done for you as examples.

Figure 14: Information gap worksheet A.

visuals with a partner with the same worksheet was used as preparation (A+A, B+B). During the comparing stage, learners may engage in *deconstructing* the way they described and/or what they heard, the better to *reflect* on the importance of factual accuracy of theirs and their partner's performance during the activity.

Problem-solving activities

Problem-solving activities are sometimes represented using visuals but they can also be expressed in text alone. The example here (*Figure 17*, overleaf) comes from a RAFO English for Leadership course and

Task Thirty-nine – Speaking / listening Student B

Look at the pictures and diagrams below and, working with a partner, be ready to describe what you have and write a cross (X) if there is a difference between your pages or a tick (✓) if there is no difference. The first few have been done for you as examples.

Figure 15: Information gap worksheet B.

Producing info. gap activities	<i>Differentiate</i>	<i>Deconstruct</i>	<i>Determine</i>	<i>Reflect</i>	<i>Assemble</i>	-
	<i>Select</i>	-	<i>Check</i>	-	-	-
	Analyze		Evaluate		Create	

Figure 16: Higher-order thinking skills for producing information gap activities.

mirrors problems set for air force cadets to tackle as part of their officer leadership training, all in English. The cadets studied the English course first before embarking on their leadership training with uniformed training personnel and were introduced to key language they would need on their subsequent military-focused leadership course. The example here shows lexis for objects available to help cadets scale various obstacles carrying tyres. Learners will be encouraged to use functional language of agreeing/ disagreeing together with interrupting and choosing the best option.

Best done as a group activity, problem-solving can cover any number of scenarios relevant to specific domains of study to provide productive practice of the target language (TL), giving learners opportunities to be creative and employ a wide range of higher-order CT skills (Figure 18) as they share ideas, either working in pairs or groups, and agree on a workable solution to the challenge they have been set.

Such group work may engender a number of CT sub-skills. Cadets need to evaluate the requirements of the training scenario by *judging* how they can

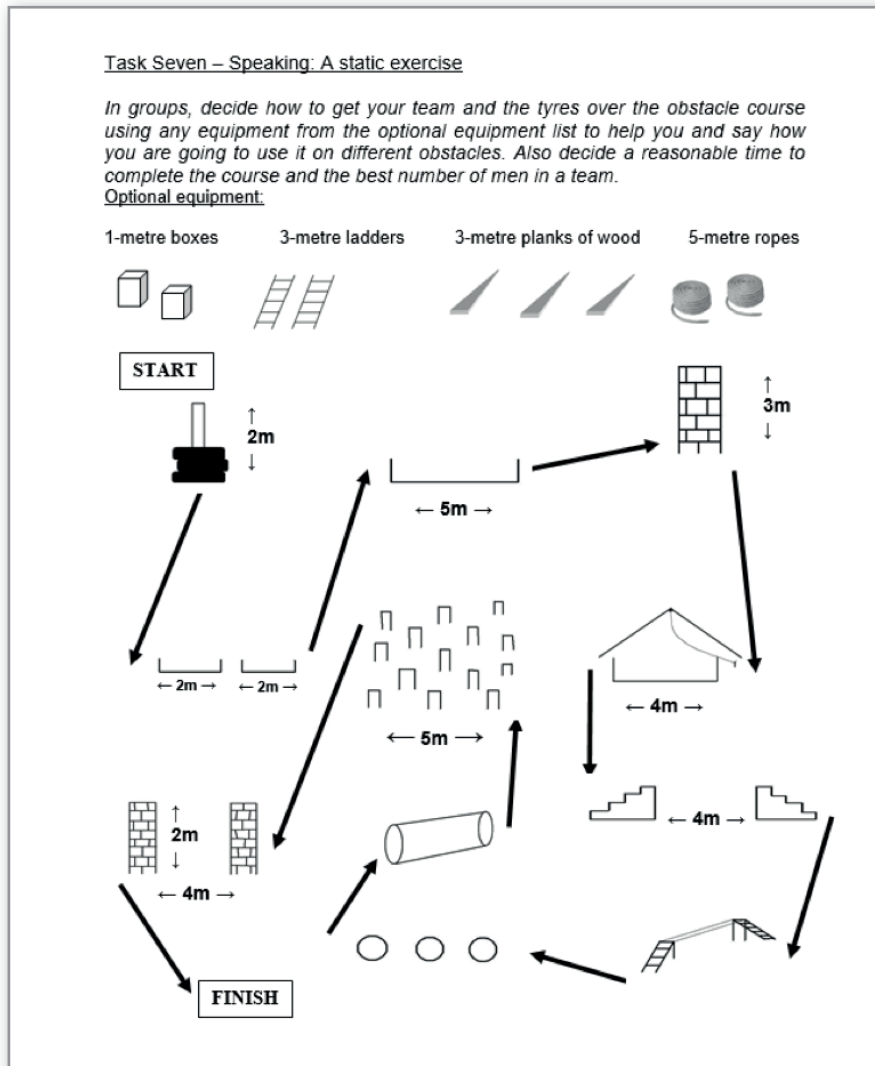


Figure 17: A military training exercise practising problem-solving.

Problem-solving activities	Differentiate	Deconstruct	Determine	Reflect	Assemble	-
	Select	Integrate	Check	Judge	Generate	-
	Analyze		Evaluate		Create	

Figure 18: Higher-order thinking skills for problem-solving activities.

achieve the aim of the exercise in an effective and safe way. They need to *determine* how they will use their manpower and equipment to achieve success and they need to ensure they are checking both the progress and safety of their group throughout the exercise. The cadets will also *select* which group members do what using which pieces of equipment and *integrate* a range of skills, mental and physical abilities, and dispositions of their colleagues to best approach the problem thereby *differentiating* between ideas, objects and people to *generate* and *assemble* an effective solution to the challenge set them. Post-activity feedback may include both *deconstruction* of the effectiveness of the learners' plan and *reflection* on the implementation of the plan together with language used, depending on the teacher's aims at this stage in the activity with the potential for a linguistic review of problematic areas of language used to follow.

Discussion work

Discussions require learners to evaluate, express and clarify their ideas and opinions, as well as appreciate the perspectives and insights of their peers (Dallimore, Hertenstein & Platt, 2008). Discussions are often popular with learners and can provide a highly effective activity to practise CT skills (Zhao et al., 2016), *if* every learner takes part. Consequently, having learners work in groups of 4-6, rather than whole class discussions, increases the opportunities for individuals to voice opinions and actively take part using relevant language and CT skills (Figure 19). Scaffolding such activities with content input about the topic under discussion and relevant language of discussions can support learners' own ideas.

Discussions require learners to prepare content and language about the topic to be discussed, *selecting* and *differentiating* between potentially useful, relevant and interesting ideas which then support the *generation* of initial points supported by detailed descriptions of pertinent facts or opinions. Working in preparatory groups will entail the *assembling* of such content with *judgements* being made as to which ideas offered are seen to be more effective. Once the discussion is under way, various learners may be able to express their ideas by *creating* new and surprising meaning (Tin, 2013) while using recently-learned language in new ways (Boden, 2001). Learners will also be checking their own and their peers' language for subsequent

review and discussion of unusual language produced in a post-activity feedback stage.

Giving each member of each group a secret discussion role card (Figure 20) can also add both challenge and fun to the activity and push the output of the learner holding the role card and also listeners who have to respond appropriately to this unconventional and surprising behaviour, thereby encouraging creative language production. In this way, learners can be encouraged to check their own and their peers' language for potential review of unusual or potentially incorrect language used in a post-activity feedback stage.

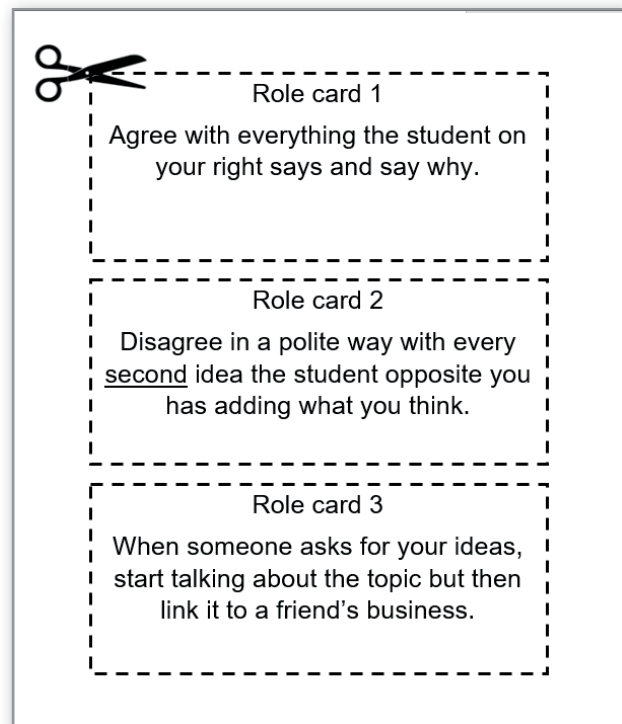


Figure 20: Role cards for more challenging discussion work.

Conclusion

As 21st Century educators, we should be exploiting, adapting or producing materials to give classroom opportunities for our learners to exploit their creativity and CT skills. This means we not only need to be creative ourselves but to also think critically about materials to provide effective practice which augments

Discussion work	Differentiate	-	-	Reflect	Assemble	Create
	Select	-	Check	Judge	Generate	-
	Analyze		Evaluate		Create	

Figure 19: Higher-order thinking skills for discussion work.

learner performance with greater engagement and increased motivation leading to enhanced learner success. There needs to be greater awareness amongst ELT educators not only of the full range of CT skills and what they entail but how both lower- and higher-order CT skills can be practised in the classroom, either by adapting existing materials or producing dedicated materials/tasks to ensure repeated and incremental practice of these essential 21st Century skills.

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