Revue SCIENCES HumaineS Vol 32, n°4, December 2021– pp 663-680

Stimulating Competencies through Problematic Situations

Received: 30/07/2021; **Accepted:** 14/09/2021

Abstract

Teachers have often expressed their frustration when confronted to problematic situations which prevent them from achieving their plans and consequently fulfilling their objectives. This feeling is often due to the fact that these teachers have all developed knowledge and acquired skills in safe and comfortable settings during their training. They have rarely been, if ever, introduced to the development of skills in problematic situations. Their frustration can be avoided if they develop problem solving competencies as part of their training. We believe this is a major role of teacher trainers who should take in charge this issue seriously. This paper aims at suggesting a teaching methodology to stimulate problem solving competencies through problematic situations in teacher education.

Keywords Teaching methodology; Problematic learning situations; Problem solving competencies.

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Résumé

Les enseignants ont souvent exprimé leur frustration lorsqu'ils sont confrontés à des situations problématiques qui les empêchent de réaliser leurs plans et, par conséquent, d'atteindre leurs objectifs. Ce sentiment est souvent dû au fait que ces enseignants ont tous développé des connaissances et acquis des compétences dans des environnements sûrs et confortables au cours de leur formation. Ils ont rarement été, voire jamais, initiés au développement des compétences dans des situations problématiques. Leur frustration peut être évitée s'ils développent des compétences en résolution de problèmes dans le cadre de leur formation. Nous pensons qu'il s'agit d'un rôle majeur des formateurs d'enseignants qui devraient prendre cette question au sérieux. Cet article vise à suggérer une méthodologie d'enseignement pour stimuler les compétences en résolution de problèmes à travers des situations problématiques dans la formation des enseignants.

Mots clés: Méthodologie d'enseignement ; Situations d'apprentissage problématiques ; compétences en résolution de problèmes.

ملخص

كثيرا ما أعرب المدرسون عن شعورهم بالإحباط عندما يواجهون وضعيات تعليمية إشكالية تمنعهم من تحقيق خطط دروسهم وبالتالي بلوغ أهدافهم. غالبا ما يرجع هذا الشعور إلى حقيقة أن هؤلاء المدرسين جميعا طوروا معارفهم واكتسبوا مهارات في بيئات آمنة ومريحة خلال تدريبهم. ونادرا ما تم تدريبهم، إن لم يكن ذلك أبدا، على تنمية مهارات في وضعيات إشكالية. يمكن تجنب شعور المدرسين بالإحباط إذا هم طوروا كفاءات لحل المشكلات كجزء من تكوينهم. نعتقد أن الأساتذة المكوينين لهم دور رئيسي لتجنب ذلك اذ ينبغي أن يتولوا هذه المسألة بجدية. يهدف هذا المقال إلى اقتراح منهجية تعليم لتحفيز كفاءات حل المشكلات من خلال وضعيات تعليمية إشكالية في مجال تكوين المدرسين.

الكلمات المفتاحية: منهجية التعليم؛ وضعيات تعليمية إشكالية؛ كفاءات حل المشكلات.

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Introduction

Teacher education has been facing these last two decades some changes in the conception of what needs to be included in the pre-service teacher training courses. In order to assure quality control and provide schools with teachers who are able to fulfil the current requirements in education and assume their new role, we need to train these teachers to face different situations they may encounter in their classrooms. Once in service, being faced with problematic situations, teachers often claim their lesson plans cannot be fulfilled because of various constraints among which shortage of teaching material available at schools is the most cited. However, they can avoid this situation and find solutions if they were trained to solve problems and innovate in their procedures. The teacher, in this new era, needs to be prepared for any classroom situation that may cause problematic issues by developing the required competencies.

1. Problematic Situations

It is affirmed that a problematic situation is filled with a content that needs to be determined and a task that needs to be implemented. This pedagogic situation includes a group of elements, data, circumstances and factors (teacher, learner, knowledge, external resources, motives, cooperation, individual work, group work, number of learners, working time, nature of the work...) in various domains be it intellectual, spiritual, psycho-motor or related to knowledge. This poses issues that are related to the learning activities and through which we can promote the learners' competencies through improving their knowledge, skills, values and attitudes within an appropriate atmosphere and suitable procedures. Hill (1998) insisted on the creative and interactive processes in real life contexts to foster exploration and reflection through problem solving.

1.1. Definition of a Situation in Education

The situation in education is a confusing setting/context that the learners face and to which they have no plan or solution ready to overcome it. It is also the relations that the person makes with the social and physical environment. It can be simple or complex where it can have one learning item or a collection of learning items. It should be significant respecting the social values and is related to the learners' living reality in the scholastic setting. It tackles new learning if it is a problem situation, and fulfils the construction of a concept. Learning situations are the means that help competency to develop. If the development of a competency requires calling for some prerequisites such as knowledge, skills and attitudes, this would not be enough when it is not included in learning situations. This is mostly meant for the final competence the learner has to achieve according to the curriculum. (Jordan, Carlile, & Stack, 2008)

The situation is, then, the relations that are made by an individual or a group of individuals in a specific context defined by a group of circumstances at a given moment. De ketele (1996) stated that the concept of situation in a learning context indicates the interaction that happens between the teacher and the learner in the framework of learning through the use of documents in a specific context to achieve a task following a precise and unambiguous instruction. Introducing the information in a meaningful context through this procedure makes learning of a value in the learner's life (Roegiers, 2003). To get the learners to develop competencies, we put them in front of a series of learning situations that can take different forms. These learning situations can be case studies, projects, structured debates, simulations or problem solving situations. The latter are situations to construct knowledge and learning. These are situations that target achieving a task by the learners according to a definite methodology which would lead them to formulate an idea, extract a definition, solve a problem, or answer questions. Consequently, it will help to develop new knowledge, skills, behaviors and attitudes through concrete activities that respond to the learners' needs. It will contribute, then, in the construction and the development of their competencies.

1.2. What is a Problematic Situation?

A problem is every obstacle that prevents reaching a goal or making an achievement. It is, also, a task that differs according to its context and must be achieved according to some conditions. It represents a collection of data that must be related to each other and organised to be solved. The problematic situation, then, is a group of data that help reach the solution. It is presented in a context be it scholastic, social, economic, historical, cultural in an integrative way to be used by an individual or more to achieve a task whose solution is unknown beforehand. The problematic situation can be described as being: a task or a group of tasks (discussing a problem situation) + an individual or a group of individuals + a specific context or problem. In an educational setting, it is an artificial construct that the teacher invents to teach the learners starting from disturbing them in their conceptions to help them change them. It is, also, the situation the teacher uses to make the learners search. It is characterized by a special classroom management and is recommended to the excitement of learning new things. Lerner (1986 as cited in Dostál, 2015) stated that a problematic situation needs a creative search of new knowledge, new ways and activities to overcome it.

1.3. The Learning Problematic Situation

When students acquire problem solving as a behavior, they can put into practice the problem solving strategies they developed smoothly. These strategies are best developed when problem solving relies on genuine situations that students encounter in their lives (Kabilan, 2000). The learning problematic situation is, then, a learning situation or a riddle asked to the learners and cannot be solved unless they use a precisely designed conception, or acquiring a competency they did not have before; it represents a pedagogical tool based on the self-construction of knowledge by putting the learner in front of a challenge. It is, then, every task that contains primary data, a final objective and difficulties whose solutions are unknown previously putting them in a mental struggle. We can come to say that it is a concrete task that is achieved in a specific context, under specific conditions. It is, hence, the interaction that takes place between the teacher, the learner(s), and knowledge in the framework of the context in which learning is constructed by putting the learner(s) in a problem that requires a solution. This can be summarized as being: an individual (or a group of individuals) + a context + a pedagogic obstacle or a task to be fulfilled. According to Dostál (2015), "the problematic situation includes circumstances and conditions that cause difficulty, conflict, unrest, feeling of uncertainty, limitation, or a concern over the disorder" (p. 2802). De Ketele (1996) considered the learning problem situation as one of the learning activities that are in association with the pedagogy of integration. The learning problematic situation challenges the learner's educational capacities and puts him in a cognitive and affective struggle which requires the reorganisation of the information. Thanks to the primary resources and the precise organisation in all the phases of preparation, it permits formulating hypotheses, examining their validity, and making conclusions because it is a learning tool and not a result of learning. It aims at acquiring knowledge, skills, performance …, and valuing group work which excites cognitive and social struggles in the learners. The learning problematic situation is related to many objectives in the curriculum since it is didactically meaningful and organised towards the correlation with specific learning. It is meaningful because it requires something already known to the learner and which is in relationship with her/his living. It is organised since it requires the learner to go back to his prerequisites (information, skills, different tools, …) which aim to achieve new acquisitions. (Roegiers, 2000)

1.4. Teaching through Problematic Situations

Teaching through situations is a model of instruction which came as an option that gives the learner a major role and helps develop competencies to overcome the different problems encountered in daily life with one's own capacities and skills without the teacher's help. The role of the latter will be to provide both cognitive and emotional support in case the learner presents a difficulty in solving a problem or

makes mistakes in doing so. According to Schmidt (2012), this approach goes back to the work of Dewey based on experimentalism (Dewey, 1938), and to Bruner's 'learning by discovery' (Bruner, 1961) from which the idea that a problem could be the starting point for learning originated. It developed in the 1950's as a method of teaching in medical education which had a professional orientation and became known as problem-based learning (PBL). According to Arends (2005), the principle of PBL entails providing students with authentic problematic situations that can generate investigations and inquiry. This approach challenges students to learn through immersion in a real ill-structured situation that simulates the kind of problems they are likely to face in their future positions or careers making a shift from focusing on teaching to focusing on learning. Bruce (2007) posited that the resolution of a problematic situation is a process which involves action along with thinking as an integral part of the resolution. This process encourages students to take themselves in charge and be responsible for their learning. This kind of self-directed learning emphasises effective reasoning and promotes the development of problem solving skills through collaboration among students, and between the students and their teacher.

Teaching through problem solving is a procedure that calls for research. It does not only raise in the learner the spirit of the question that needs to be answered, but prepares the mechanisms of thought to build knowledge as well. This procedure is, also, a good environment where learning takes place within situations including authentic tasks, issues, and problems that are associated with real-world matters. Problem-solving must be one of the basic competencies to promote towards the formation and development of students.

2. Problem-solving competencies

O'sullivan and Burce (2014) argued that given that learners have a variety of ways of learning or learning styles, it is important to recognize that competency-based learning requires they actually perform or do, rather than learn by observing. Observation, reflection and listening are important learning activities, but competency demonstration is the expected outcome for Competency Based Education (CBE). It requires high levels of critical thinking and reflection. Such skills are learned best with some form of discovery-based learning or problem-based learning. The goals of such type of learning include helping learners become active participants and take responsibility for their own learning, encouraging the development of critical thinking by supporting learners' efforts to retrieve and retain knowledge and apply it in practice rather than telling them what to think or do, and training learners who develop the habit of life-long learning in order to stay current in their practice. In addition, teamwork is an essential component of this type of learning as many learning activities are structured for groups of learners working together to discover the best solution to a given need or problem in both theoretical and practical work. It is already known that skill development, sooner or later, requires a confrontation with relatively complex, realistic and contextualized problems that can be described as problem situations (Perrenoud, 1995). Moreover, it is a procedure particularly conducive to the development of autonomy in learning because it gives students a very active role in their training. It, also, leaves more room for oral and written communication, teamwork, initiative and creativity. Likewise, it develops a sense of responsibility. Problem solving requires actively searching for sources of information, synthesis and knowledge transfers, and gives meaning to learning through the contextualization of the problems dealt with. The use of problem situations that are similar to the context of the students' chosen university program, improves their motivation greatly. (Cantin, Lacasse & Roy, 1996)

The Program for International Student Assessment (PISA) 2012 stated that a problem-solving competency is "an individual's capacity to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious" (as cited in Organisation for Economic Co-operation and Development (OECD), 2013, p. 122). They explained that this competency begins with recognising that a problem situation exists and understanding the nature of the

situation. Once this is established, we need to identify the specific problem to be solved, plan and carry out a solution, and monitor and evaluate progress throughout the activity.

According to Murray, Clermont and Binkley, (2005, p. 197), "Problem solving is goal-directed thinking and action for situations in which no routine solution procedure is available… The understanding of the problem situation and its step-by-step transformation, based on planning and reasoning, constitute the process of problem solving." Therefore, a problem-solving competency can be understood as the ability of the individual to implement problem-solving effectively by activating prior knowledge and skills to identify problems and propose solutions. This process is similar to what Gick (1986) proposed. He suggested a problem-solving process that included the steps of constructing a problem representation, searching for solutions, and implementing a solution. A problem-solving competency is now considered as one of the core competencies that need to be built and developed for students. It is argued that this competency is built through the problem-solving process. When training the students for the problem-solving competency, it is necessary to practice each problem-solving skill. When they are able to solve problems, the efficiency of problem-solving will be increased in diverse situations occurring in their life. The most effective organizational measure to use in order to form and develop problem-solving competency is the use of problematic situations in teaching. These situations can also be integrated into lessons on problem-solving for students so that they become aware of their own thinking processes. When students have analysed and discussed their processes of solving problems, you can introduce them to a model of problem-solving which identifies the usual stages in problem-solving. (Brown & Atkins, 2002, p.184). The understanding of the procedure will then be fostered and their competencies will reach their highest potential.

3. Study Design and Methodology

Harmer (2007) supported the idea that planning a lesson is a task that does not finish once the plan is ready but it goes beyond to "the implementation and adaptation of a plan – and the interaction between the plan and ever-changing reality once a lesson has started" (p. 367). It is only at that moment that we can say we could resolve the lesson planning problematic situations. While teaching and conducting action research within a Competency Based Education (CBE) framework in a teaching methodology class, we designed a lesson where the aim was to promote problem solving when student design lesson plans in order to make them prepared for any eventual school environment and to boost their innovative thinking once they become teachers. The problematic learning situation, in which they are put, is a future teaching situation which could be problematic depending on the various environments to which the students would be confronted once they become teachers. Schön (1989) regarded teachers as problem-solving professionals and described how teaching would grow as complex problematic situations were confronted.

In our context, we suggest a methodology for teacher preparation that both develops the real-world base that teachers can draw upon, and that also involves the learners in an active inquiry, problem-solving, and reflection about problematic situations. We believe that organizing and administering a learning problem situation through which the learning act takes place should obey a three-phase process. Phase one (the preparation) is the beginning of the learning act process. It can also be called the departure situation or the mission of departure. This phase is primordial in the process of learning since there is identification of the activity, the questions, and the field of interaction between the different resources. In this phase, the topic of the learning situation is introduced while putting into action the earlier acquisitions and presenting the new information. It is characterized at the first level by: attracting the learner's attention, discovering the knowledge elements in relation with the topic of learning, understanding the objective's significance and identifying what the leaner must do. At a second level, it helps create suspense, awaken motives, and restrict imagination. In this phase, we propose a problem to create a cognitive crisis, and we give the instructions. During phase two, the process of construction of learning, the

learners proceed to the collection of data first and then treating these data. After that, they get to summarising the results of their treatment. For this reason, it is also called the investigation phase. It is characterized by starting the search for the information necessary to reach the objective by collecting, classifying, comparing and organizing data to answer the question and construct concepts. Then, at another level, the learners come to state the results of the research and make comments on them comparing the new concepts and the previous ones. In this second phase, we describe the different tasks and the tools that can help in solving the problem. We make groups or assign roles in order to distribute the tools and the documents. Then, after searching, the learners come to concluding results and debating over them to construct new concepts. At the end of the process, in phase three (the investment), the learners evaluate and integrate the results of their research. This last phase is characterized by the return to the acquired knowledge and skills, and making the relation with the obtained results. In this phase of integration and investment, there is a return to the departure stage to make sure the learners reached the targeted educational objective, the final competencies, and the transversal competencies which are keys for their future teaching career. We consider that, as put by Brown & Atkins, (2002) a powerful way of improving their teaching is to improve the ways in which they learn.

3.1. The population

The population under exploration in our action research is First Year Master Studies "Didactique des Langues Etrangères" (Foreign Languages Teaching Methodology) students at the Department of English, Frères Mentouri – Constantine 1 University. These students take the Methodology of Teaching English as a Foreign Language course in which we introduce the different language teaching methods and provide the students with the current methodology in the field of English Language Teaching. They were a total of 120 students (94 females and 26 males) divided into three groups. The lesson was given to every group separately which permitted to review some elements of organization in group work activities. The number of students who attended the lesson was 104 (81 females (F) and 23 males (M)): Group one (36 students: 28 F and 8 M), Group two (32 students: 22 F and 10 M) Group three 36 (31 F and 5 M). These students were divided into subgroups of four students.

3.2. The lesson

In language teaching, Brown (2001) drew a distinction between methods as "specific, identifiable clusters of theoretically compatible classroom techniques" and methodology as "pedagogical practices in general" (p. 15). He stated that what we can associate with 'how to teach' is a methodological aspect. Methodology, in our context, can thus be equated to 'procedure', according to Richards and Rodgers (2001), which is the whole ensemble of techniques the students of Master Studies in "Didactique des Langues Etrangères" need to learn about to develop knowledge, skills, values and attitudes in their future learners.

One of the objectives we stated in this subject is to help the students develop competencies that are congruent with the appropriate pedagogical practices in different settings and situations. This objective is worked out in the learner-centered tutorial sessions in which the students put into practice the theory they receive in the teacher-centered lectures. The objective behind is to develop an ability to understand the underlying principles of the existing language teaching methods which will enable the students to develop critical analysis of those they will be confronted to in their teaching. These sessions display ideas on practices consistent with the constructivist view of learning through which the students can develop competencies in a learner-centered context promoting critical thinking and reflective learning. To give a model of how this methodology course can be taught in agreement with CBE, we designed a lesson plan (See Appendix I) in which the core aspect to develop is problem solving in addition to critical thinking and reflective learning. The different steps of the lesson are spotlighted, in the procedure, bearing in mind the trainer's aim of adopting a constructivist approach to teacher training.

3.3. The procedure

The teaching skills that the students would acquire as a result of their learning and which they could perform consistently in the proposed lesson (Appendix I) were coordinated into competencies that can be demonstrated when delivering their proper lessons once they become teachers at any level of education. These metacognitive skills refer to the executive control processes of managing one's problem solving, monitoring one's progress, and evaluating whether one's goals have been met (Schoenfeld, 1985). Metacognitive strategies are, also, important for the goal of developing lifelong learning skills in order to be a self-regulated learner. (Ertmer & Newby, 1996; Zimmerman, 2002)

In the procedure of the proposed lesson, the competencies that have been developed through creating a problem situation to prepare the students for their future teacher's role are as follows:

- The teacher designs tasks that develop cooperative learning and encourages peer help and readiness to exchange with others.
- The teacher gives sufficient instructions and manages the class, so pupils know what they must do.
- The teacher fosters group feeling (cooperation, respect, enjoyment, trust, etc.).
- The teacher varies patterns of interaction within the lesson.
- The teacher works on building the learners' self-confidence.
- The teacher ensures that all the learners find their involvement sufficiently challenging.
- The teacher gives appropriate feedback to the learners.
- The teacher gives learners opportunities to recognize errors and figure out for themselves how to correct them.

Through this problem-based learning procedure, the students have learned through solving ill-structured problems and have worked in collaborative groups to identify what they need to learn in order to solve a problem. Accordingly, they have engaged in self-directed learning; then, have applied their new knowledge to the problem, and have reflected on what they have learned and the effectiveness of the strategies employed. The teacher has acted to facilitate the learning process rather than to provide knowledge. The students have then developed, in addition to flexible knowledge and intrinsic motivation: problem-solving, self-directed learning, and effective collaboration. These organized learning experiences foster students' understanding of concepts through problem-solving activities, and from a situation perspective, social interactions are the source of knowledge construction. The latter perspective acknowledges that social practices support the development of students as capable learners and competent in both their disciplinary knowledge and as problem solvers (Lampert, 2001). These problem solving competencies are mostly concerned with classroom management and foster the role of the teacher as facilitator of learning. Modelling these competencies would help in their acquisition and may lead the students to develop them in their teaching. We believe that the students will integrate these skills and competencies with professional and personal values. This integration will help them carry out their role as teachers in the future.

Believing that the role of training is to develop students' critical thinking through reflection, designing lessons that match up with the students' preoccupations as concerns teaching practices is the appropriate way to put them in a CBE context. This framework would inevitably be suitable for them to experience these procedures with their classmates and solve problems that they may encounter in real life situations. This sample lesson is in accordance with CBE which entails a shift to the constructivist model to remedy the prevailing practices relating to a knowledge-transmission approach. Experiential learning as reflected in CBE is the key to making the students acquire the required competencies to perform the role of the teacher adequately. Therefore, to avoid that our future teachers reproduce the model of teacher as a source of knowledge, we must provide them with an alternative. The promotion of the idea that we have to train teachers to take part in the construction of their knowledge and master skills must be the cornerstone in teacher education. CBE is the appropriate

approach to adopt at higher education to help the students develop and demonstrate competencies and integrate these required competencies to reflect the desired teacher's role.

3.4. The Attitudes Questionnaire

In order to check the validity of our lesson, we collected the students' attitudes towards the lesson's objectives, content, procedure and teaching techniques. We delivered an attitudes questionnaire (Appendix II) which contains fifteen statements: one statement related to the objectives of the lesson, seven statements related to the lesson content and eight statements related to the teaching techniques and procedure applied in the classroom. The students were asked to circle one of the letters standing for their attitude towards the proposed statements. The options were organised according to a five-point scale as follows: A: Strongly agree, B: Agree, C: No comment, D: Disagree, and E: Strongly disagree.

3.4.1. Description of the Attitudes Questionnaire

As the students' opinions matter, we designed an attitudes questionnaire and used an attitude scale. In the design of attitude statements on the lesson, we adopted the Likert Scale to collect data on the students' attitudes towards the methodology in the tutorial session about lesson planning. The questionnaire was delivered online to all the students who took part in the tutorial session (104 students). 100 students responded to the questionnaire and we received failure notices indicating the inability to deliver our message to four student's email addresses.

The questionnaire includes three sections each collecting attitudes towards a specific aspect of the lesson. The three sections, which comprise fifteen statements, tackle the most important components of a lesson specifically the objectives, the content, and the teaching techniques and procedure used by the teacher.

3.4.2. Analysis of the Results of the Attitudes Questionnaire

We analysed the attitudes questionnaire section by section. The statements were examined one by one and then in relation to each other. We analysed the answers of the students expressing their attitudes towards the lesson concerning three aspects: the objectives, the content and the teaching techniques, and the procedure. Of course, there are other aspects we could tackle; however, these three, we believe, are the primary aspects we should focus on in teacher preparation especially when designing a lesson plan and teaching how to design lesson plans.

- **Objectives**

The students had to respond to only one statement (Statement 1) about the relation between the objective of the lesson and their potential career as teachers:

1. *The objectives are about teaching competencies to be developed by the end of the course.*

Out of the 100 students, only 6 students gave no comments. Though not a significant percentage, this result indicates that the six students were hesitant to agree or disagree with the statement. These students may have difficulties in identifying the objectives of the lesson or could not recognize the competencies to be developed. The great majority, representing 44% who strongly agreed and 43% who agreed, mentioned that the objectives of their training were about teaching competencies to be developed in order to fit their role as teachers. The students have exhibited their satisfaction as regards the connection of the objectives with their needs and interests and agreed with the fact that the objectives included the development of teaching competencies. This shows that they are aware of the objectives which fulfil their needs and expectations. This awareness was a good asset to the success of the lessons since the students were engaged in the lesson with great enthusiasm. Five students disagreed with the statement

and two others strongly disagreed. This disagreement may be due to misunderstanding of the objectives or dis engagement or simply unwillingness to participate in the lesson on the part of these students. We, sometimes, can encounter situations when some students do not feel the lesson because of many reasons like anxiety, stress, lack of motivation. These situations could, also, be problematic for us as teacher trainers and we have to consider them in our future lesson by revising and restructuring our lesson plans.

- **Content of the Lesson**

To examine this aspect, we put forward seven statements (statements 2,3,4,5,6,7,8):

2- The lesson content met my interests.
3- The lesson content related to my future job as teacher.
4- The lesson focused on the knowledge/ understanding I must acquire by the end of the course.
5- The lesson focused on practical skills I will develop by the end of the course.
6- The lesson focused on the attitudes I will develop by the end of the course.
7- The lesson focused on real classroom situations.
8- The lesson was student-centered.

The results of the attitudes of the students who responded to our questionnaire are organized statement by statement as follows:

2- *The lesson content met my interest.*

We did identify a vast majority in the responses towards this statement. This majority is of 88% of the respondents who expressed their agreement (49 students strongly agreed and 39 agreed) while 3% mentioned they disagreed and 3% strongly disagreed. These results confirm that the majority of the students were aware of the content of the lesson and could relate it to their interest as far as methodology and classroom management are regarded. This of course comforts the responses towards the previous statement. One students, who disagreed with the statement on the objectives, agreed with the fact the content met her interest. This supports our assumption that some students could have difficulties in identifying the objectives of the lesson or could not recognize the competencies to be developed. The undecided respondents reached 6 %. These students are the same students who gave no comments as concerns statement 1. They did neither agree nor disagree. Because they may have difficulties in identifying the objectives of the lesson, this would, also, have some influence on their decision on the content. Another reason could be their interests which could be very different from the expectations of a future teacher. In the first session and while discussing the syllabus of the course on Methodology of Teaching English as a Foreign Language, some students indicated that they did not choose to fulfil studies in the field of "Didactique des Langues Etrangères" (Foreign Languages Teaching Methodology) at the Master level but found themselves obliged to do so because of their marks which did not permit them to register in one of the two other options namely, Linguistics and Applied Languages or Literature and Civilization.

3- *Lesson content relates to my future job as a teacher.*

73% of the respondents, a percentage which reflects a representative majority, agreed with this statement. They approved that the lesson's content related to their future job as teachers. In other words, they agreed that this content was about teaching them the different competencies required in a competent teacher and that it relates to the content they may teach as teachers of English. When asked about their negative attitude towards this statement, the seventeen students who disagreed or strongly disagreed expressed the fact that they are mostly interested in pursuing an academic carrier in research rather than in teaching. They could not imagine themselves as teachers. This is the case of many students who enrol in this field of study because of their average or

their interest in a specific subject other than teaching methodology or simply because they did not want to enrol in the two other available options of study at the Master level. The ten undecided students are those students who enrolled in this option not because they projected themselves in a future career but they only did so because their marks permitted them to do so. It was not an objective choice for them but a pragmatic one. This is what explains their reticence towards this statement.

4- *The lesson focused on the knowledge/understanding I must acquire by the end of the course.*

An absolute majority (91%), among the respondents, confirmed the statement. Only five students expressed their disagreement. They may have expected some knowledge which they did not receive. Four other students were undecided. These are the students we can describe as without profile students. Their choice of a field of study is according to their marks and not to their expectations or future objectives. However, developing knowledge and understanding as a cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially is only propositional knowledge; "knowing", "knowing that" or "savoir" is only part of the competence as a construct. The other types of "savoir": "savoir faire" (know how) and "savoir être" (know how to be) are rarely emphasized in lessons for different reasons; among others the primacy of theory and academic content over practice. Since the students are used to focus on knowledge as the main component in their studies, they most of the time forget about other aspects like skills, values and attitudes.

5- *The lesson focused on practical skills I will develop by the end of the course.*

A large number of respondents (92/100), representing a dominant majority, agreed that the lesson they had focused on practical skills they would develop by the end of the course. "Skills" or "know-how" as functional competency are those things that a person should be able to do when they are functioning in a given area of work, learning or social activity. They are about practical knowledge, doing, or savoir-faire. In that psychomotor domain, the students learn presentation and demonstration skills. Even the students who seemed uninterested in the lesson and did not relate the lesson content with the career of a teacher agreed with the fact that it was about developing skills. When It comes to skills, learners get involved easily and engage in the process without difficulty. This explains the low percentage of disagreement among the respondents (3%). The undecided students representing 5% of the population, could not recognize these skills and how they are practical for a future teacher. These students were undecided, as well, when expressing their attitudes towards the previous statements.

6- *The lesson focused on the attitudes I will develop by the end of the course.*

There was a majority of respondents (74%) who expressed agreement with the statement. Even if a considerable number of respondents (17/100), nearly a quarter, mentioned they were undecided because they may not have understood what is meant by attitude and whether this attitude is towards the lesson or the teacher. The same case can be associated with the respondents who showed disagreement. The lesson focused on the development of the learners' attitudes as one component of competency related to the quality of a person or a state of being or the quality and characteristic attributes that are to be identified in the person. We observed some attitudes development relating to knowing how to conduct oneself in a specific situation. This constituent of the construct of competency related to procedural knowledge and identified as "knowing how to be", "savoir-être" or "being" is what the student should acquire as subject attitudes and values in the affective domain. Likewise, the students who always depend on their teachers did not understand the term and have developed none. In fact, the only component of competency focused on at higher education is the knowledge and understanding of the students which is part of the cognitive development.

7- *The lesson focused on real classroom situations.*

Nearly three quarters of the respondents showed agreement with this statement (32% strongly agreed and 41% agreed). This aspect was investigated because real-world experiences require microteaching which is practiced to develop competencies.10% of the population did not agree that the situations focused on in the lesson were genuine. These students could not according to us dissociated themselves from the theoretical background they always receive in similar content subjects. They were not really engaged in the different steps of the lesson because they have rarely taken in charge the responsibility of their own learning and they have never taken decisions as per reflecting upon their training and how to solve problems practically rather than using imagination and theory. The same number of respondent as for the previous statement were undecided. It seems that they could not, also, project themselves in their future carrier and are not yet aware of what it could be like and the environment they would work in. We believe that these students chose this field of study, Methodology of Teaching Foreign Languages, not because of the job opportunities it offers or the challenges they may encounter but mainly because of their prerequisites, their marks and their identification of the theoretical subjects taught in this field. There would be a lot of work on the part of the teacher to bring these students to understand that this field is more practical than theoretical.

8- *The lesson was student-centred.*

The participants who affirmed that the lesson was student-centred represented 67% of the population. This represents a majority but this majority is not absolute though an acceptable one. The statement was to check the students' understanding of the roles of the teacher and the students in a learner-centred environment. It seems that not all the respondents could identify such an environment and did not recognize the primacy of their role over that of the teacher in the classroom. This is mainly the case of the students who disagreed (10 students) or strongly disagreed (3 students) with the statement. It could also be that the students do not know what is a leaner-centred lesson because they have rarely, if never, been exposed to such an environment. This is represented in the percentage of the students who were undecided and could not identify such an approach in teaching. The learners are rarely put in situations where they are completely responsible for their learning and where they participate in the learning process all the time. We consider that when the students would get accustomed to such an approach and that all their teachers would be aware about implementing it in their teaching, we would surely reverse the situation and get the learners not only to recognize learner centred teaching but move forward to implement learner centred learning within a competency based education.

- **Teaching Techniques and Procedure**

This section explores how the students have interpreted the teachers' practice and the typology of the lessons. Every statement includes a number of options that put forward ideas in association with teaching techniques and procedure in the lesson. They all treat of the techniques the teacher used in the process of presenting the lesson. It includes seven statements:

9- The teacher assigned tasks and assignments that match the lessons objectives.
10- The teacher managed to match my background knowledge with new content.
11- The teacher stimulated critical thinking and problem solving through reflective activities.
12- The teacher involved me actively in the learning process.
13- The teacher created a lively atmosphere in the classroom through interaction.
14- The teacher encouraged discussion with us and among us.
15- The teacher assigned tasks that meet our different learning styles.

The responses of the students to the seven statements on the teaching techniques and procedure followed during the lesson were as follows:

9- *The teacher assigned tasks and assignments that match the lessons objectives.*

Nearly all the respondents (91%) agreed with the statement that the teacher assigned tasks and assignments that matched the lesson's objectives. This highly matches the results for statement one where the respondents have shown their awareness of the objectives of the lesson. This agreement shows, also, the responsiveness of the students to the tasks since they could identify the objectives and responded to the tasks positively. This understanding and receptiveness are very important aspects in any lesson because they increase the students' motivation and engagement and lead to the success of the lesson. The students who did not agree or were undecided representing only 9 % of the population may not have been involved in the classroom tasks and assignments the teacher designed. In each of the subgroup there may exist at least one student who could not get his/her place in the group or could not cope with the rhythm of the other members. We can, also, associate this disagreement with the statement to the fact that these tasks and assignments did not match the learning styles of these nine students. It is important for teachers to think out these results in order to consider their grouping where it is necessary to create balance in terms of styles, ability and sometimes motivation and willingness to work. Providing the group with a team leader who gives importance to both the task and the relationships within the group is, likewise, an important factor in the group because this type of person influences the members of the group by positive examples and always encourages them to reach their highest potential.

10- *The teacher managed to match my background knowledge with new content.*

The respondents (80/100) who were in agreement with this statement represented a great majority. This is confirmation that the teacher played his role plainly. He acted as a team leader who was not content with supervising the students but who also directed the student to understand new content and associate it with their background knowledge. The students who disagreed were 7 (3 disagreed and 4 strongly disagreed). These students may not have been able to associate the theory they received in the lecture with the content in this tutorial session. We noticed that this is the case of many students, unfortunately, and in many subjects. Though successful with 80% of the population which confirms the attainment of the objectives set by the teacher, the later needs to make more effort to reach these students who disagreed with the statement and conduct them towards a good understanding of the objectives in order to accomplish the tasks successfully. Similarly, the other 13 students who were undecided, require more attention and should be assigned to groups where, as followers, they can find support and guidance from the other members of the group who can coach them. A student who lacks motivation requires a different approach than one with a high degree of motivation. As mentioned for statements one and two, some students could have difficulties in identifying the objectives of the lesson or could not recognize the procedure the teachers adopted to reach them. This category of students should be taken into account when deciding about the objectives and the content of any lesson by choosing the right techniques that meet the various learning styles and by analysing the different needs in the group.

11- *The teacher stimulated critical thinking and problem solving through reflective activities.*

There was agreement among the respondents with a majority of 79% (28% strongly agree and 51% agree). In fact, they are referring to the procedure that stimulated their thinking through the introduction of a problem solving activity. The approach followed was learner-centred while the design focused on the role of the students and the activities were simulations of real-life situations. In a microteaching activity, this procedure can only be beneficial for the students who are prepared to face similar situations during their future carrier. The remaining 21% of the participants are divided almost equally between the students who disagreed with this statement (2 students disagreed and 9 strongly disagreed) and those who were undecided (10 students). The percentage of the students who disagreed is quite similar to those for statements 7 and 8 where there was focus on real classroom situations, which are most of the time

problematic, and student centred teaching in which the students take themselves in charge. We can advocate the same reasons for their disagreement and add that students are not quite accustomed to discuss these two subjects. The undecided students were of a lesser number and we assume that asking them about the techniques and the procedure was more suggesting than enquiring about the content.

12- *The teacher involved me actively in the learning process.*

The great majority of the participants (49% who strongly agreed and 35% who agreed) confirmed this statement. Since the students were actively involved in the learning process, this confirms the learner-centred approach applied by the teacher which the students could not identify in statement 8 because they are not used to either such a procedure or terminology. The number of the students (11) who either disagreed (7 students) or strongly disagreed (4 students) is quite similar to those who did so as concerns statement 8 (13 students). These students could not have identified the role of the teacher and expected that the teacher would have acted actively but not themselves. The number of undecided students diminished significantly as compared with statement 8 and this comforts our belief that it was a matter of terminology and that the students could not identify what a learner centred lesson was. Now that it was explained in terms that reflect the technique and the procedure involved in a learner centred approach, the students who were undecided in statement 8 are much lesser in number as regards statement 12.

13- *The teacher created a lively atmosphere in the classroom through interaction.*

The vast majority of the respondents (90 %) agreed with this statement (66 % strongly agreed and 24 % agreed). This is absolutely correct as we can observe it in the procedure of the lesson. Another reason for that can simply be the respondents' familiarity with the terminology used in this statement compared with the technical one used in the previous statements. This is proof that the lesson was learner centred since the interaction was mainly among the students themselves. A minority of the students representing 10% of the participants were either undecided (4 students), or in disagreement (only 1 student disagreed, and 5 students strongly disagreed). Their number is much lower than for the previous statements indicating that the other participants responded positively to the environment created by the teacher due to the techniques and procedure introduced. The negative attitude, they had, can be due to the fact that they did not like the interactive activities, or were not fully involved or they are not extrovert students who are willing to take part in such interactive, lively environments.

14- *The teacher encouraged discussion with us and among us.*

The procedure adopted by the teacher shows clearly that discussion was at the centre in the lesson. The majority of the respondents (84%) agreed on that. The students' agreement on this statement supports the results obtained for statements 8, 11, 12 and 13 overtly and confirms the objective mentioned at the beginning of the lesson. When proceeding to help students develop teaching competencies, the teacher acted as a coach when involved in discussion with the students and was a participant when the students discussed among each other the different lesson plans displayed on posters. In a competency based education framework, this should the core of a lesson. However, the statement must have been understood otherwise by the other participants (7 undecided students, 5 students disagreed and 4 strongly disagreed). We assume that they did not get the meaning of "with us and among us". This phrase was introduced to emphasize the learner-centeredness of the lesson and to help the students determine the teacher's role and recognize their role in the procedure proposed.

15- *The teacher assigned tasks that met our different learning styles.*

A large proportion of the respondents (82%: 44 % strongly agreed and 38 agreed) recognized the teacher's assignment of tasks that took into consideration their learning

styles. We can conclude, then, that since this majority expressed their satisfaction in relation to this statement, the instructions in the procedure suited the different learning styles and the activities introduced were in harmony with the learning styles and strategies used by the students. We can understand that some students were not aware of what a learning style means or could not associate their learning style(s) with the techniques used in the lesson. These students represent 18% of the population (7 undecided students, 6 students disagreed and 5 students strongly disagreed). Most of the time, when the students are engaged in an activity or task, they do focus only on the task and do not identify some aspects related to the procedure. This inattention is mostly due to their education where they have always been in teacher centred environments not having opportunities to reflect upon how they would best learn and what strategies helped them attain success. When working on these aspects in a lesson through planning tasks that meet learners' learning styles and strategies, we would assure the promotion of competencies necessary for the students and at the same time raise their attention to recognize their styles and strategies.

3.5. Discussion of the Results

Through the questionnaire, we have gathered information about an important aspect in educational practices: attitudes. Based on the belief that students represent the most crucial element in any educational system, we have analysed their attitudes towards the tutorial on lesson planning and using technology in the classroom by studying the attitudes questionnaire they filled in. The fifteen statements designed to collect the attitudes of the students in terms of objectives, content, teaching techniques and procedure used by the teacher have proved an important connection between the teacher's objectives in developing competencies with focus on problem solving learning and the students' attitudes which were all the time positive; either strongly agreeing or agreeing. The disagreement displayed, though not very significant, was mostly due to the students' ignorance of the CBE teaching and learning characteristics. It could, also, be due to their inability to cope with the unusual techniques the teacher adopted through an innovative procedure they were not used to encounter in the classroom. In addition, they were not used to receive knowledge while focusing on practical skills in relation to real life situations and solving problems in association with their potential career as teachers. Jones (2007, p. 2) posited that a student-centred classroom is "a place where we consider the needs of the students, as a group and as individuals, and encourage them to participate in the learning process all the time." It, also, requires viewing learning and competencies development as the result of mental construction. In other words, learning, surely, takes place when learners build new understanding and add it onto their own structure of knowledge, skills and attitudes/values. As concluded by Pritchard (2009, p. 17), "we learn best when we actively construct our own understanding." Consequently, we can claim that owing to the procedure taking into account problem solving situations in the classroom, the teacher was able to train his students for their potential role as teachers adopting a CBE approach; and hence, was helping them develop teaching competencies. The four components of a competency namely knowledge, skills, values and attitudes were all emphasised throughout the lesson. This coordination of knowledge, skills, and attitudes/values would, definitely, lead to developing the ability to carry out a task effectively. (Fadel, 2017)

In the light of these results, we can say that the principles and practices that underlie CBE were clear to the teacher. The consideration of these principles and practices would undoubtedly lead to great understanding of the competencies on the part of the students in order to be prepared to teach in an educational system characterised as being competency based. However, even if we believe that learning is the students' responsibility, this does not mean that the teacher is to be disengaged. The latter has a great role in planning and providing instruction, engaging the students in the lesson and providing guidance whenever there is need for that. Often an indirect but powerful way of improving your teaching is to improve the ways in which students learn (Brown & Atkins, 2002). The teacher has to act as a partner in a caring relationship and an initiator of learning experiences. This entails a teacher who does

not feel superior to his/her students, and who believes in their abilities and competencies. The teacher should have the attitude of a team leader who gives importance to both the task and the people in the group. The tasks can be included into lessons, in a microteaching context, based upon problem-solving where students would develop their own processes of critical thinking and analysing problematic situations to find solutions and overcome the obstacles they may face. As regards the people in the group, the teacher should be leading by positive example and trying to nurture a team environment in which all team members can reach their highest potential, both as team members and as people (Fadel, 2011). This stimulation of problem solving competencies taking into account both the students' styles and the problematic situation would be of great benefit in the preparation of the future teachers not only teachers of English but those of any subject by nurturing their personality traits and competencies.

Conclusion

The belief prevailing in teacher education/training, nowadays, is to give importance to both the academic and the professional knowledge necessary for the development of the competent teacher. We should, therefore, recognise the concept of competency as a construct which include in addition to knowledge which is much emphasised by students, skills, values and attitudes. This construct is much required to effectively perform in different teaching contexts mainly to overcome problematic situation. Since, at higher education, we should not only pursue existing knowledge but generate new knowledge and apply it to have an impact on a global scale, we should think about introducing innovative procedures which are not limiting and which do not get in the way of teachers and students learning how to learn together. Problem solving has proved to be an innovative classroom procedure that can help develop learning in a lively interactive and challenging environment. It stimulates the students' knowledge and skills in addition to the promotion of different values and attitudes necessary for the development of their personality at the individual level and at the group level. Hence, to reach their objectives and make from the classroom a better place to learn, teacher trainers need to do some kind of 'context analysis' before they start teaching. This way, they can develop new procedures from the range of methodological knowledge and techniques available to them. They should act at as resource persons, rather than as sources of knowledge. They, then, have to reflect on and evaluate what has happened in order to improve their techniques and meet their learners' styles and strategies. These teaching procedures, when well organised and implemented, will inevitably have an impact on the students' future careers as teachers stimulating in them competencies through solving problems in different challenging teaching situations.

- Appendix: The results of the attitudes questionnaire

Statements	Scale				
Objectives	A	B	C	D	E
1. The objectives were about teaching competencies to be developed by the end of the course.	44	43	06	05	02
Lesson Content					
2. The lesson content met my interest.	49	39	06	03	03
3. The lesson content related to my future job as a teacher.	57	16	10	05	12
4. The lesson focused on the knowledge/ understanding I must acquire by the end of the course.	43	48	04	03	02
5. The lesson focused on practical skills I will develop by the end of the course.	34	58	05	01	02
6. The lesson focused on the attitudes I will develop by the end of the course.	29	45	17	04	05
7. The lesson focused on real classroom situations.	32	41	17	08	02
8. The lesson was student-centered.	29	38	20	10	03
Teaching techniques and procedure					
9. The teacher assigned tasks and assignments that matched the lessons objectives.	46	45	03	02	04
10. The teacher managed to match my background knowledge with new content.	36	44	13	03	04
11. The teacher stimulated critical thinking and problem solving through reflective activities.	28	51	10	02	09
12. The teacher involved me actively in the learning process.	49	35	05	07	04
13. The teacher created a lively atmosphere in the classroom through interaction.	66	24	04	01	05
14. The teacher encouraged discussion with us and among us.	48	36	07	05	04
15. The teacher assigned tasks that met our different learning styles.	44	38	07	06	05

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