DEVELOPING 21ST CENTURY SKILLS THROUGH THEME-BASED INSTRUCTION AND BY APPLYING MULTIPLE INTELLIGENCE THEORY: TEACHER COMPETENCIES

Abstract: The 21st century skills, such as communication, collaboration, critical thinking, and creativity, are essential when it comes to education for sustainable development and lifelong learning. The aim of the paper is to provide a methodological overview of the 21st century education framework and to contribute to improving the current pedagogical practice in teaching foreign languages in general. Besides the proposal of the framework with concrete aims and principles, interactive methods for teaching, such as the use of digital technologies and project work, are presented in the paper as well. The activities of Theme-Based Instruction thematic units are described and analyzed through the main principles of the framework and by applying Gardner’s theory of multiple intelligences. Each activity develops a certain skill of a young speaker of a foreign language, taking into account the integration with the rest of the curriculum, the development of communication and learning autonomy. Since the innovative approach requires teachers to engage in a self-directed professional development programme, it is concluded that this versatile approach continues to influence the development of teachers almost as much as it affects a child’s development and development of language of instruction. The main pedagogical implications that are drawn include teachers’ need to stay up to date with innovative approaches that satisfy the requirements of current curricula.

Keywords: Theme-Based Instruction, thematic units, Multiple Intelligence Theory, cross-curricular foreign language teaching, the 21st century skills, project-based learning.

INTRODUCTION

Changing the education paradigms starts by redesigning the existing curriculum in order to develop learners’ 21st century skills. Innovative teaching practice represents a bridge between theory and practice. It is necessary that education develops a learning culture that supports teachers to create lesson plans which implement the 21st century skills because guided learning happens only when it is...
planned. For learners to develop 21st century skills, such skills must be developed in teachers themselves.

Innovative teaching must prepare learners to live in today’s world and cope with the information explosion, along with other significant challenges such as conservation issues, global pollution and ethnic tensions throughout the world. Therefore, innovative teaching represents structured activities which are not based on reproduction of information, but on creation and critical thinking. Innovation in education can be seen in many aspects of teaching, from material development, innovation in the learners’ classroom to technological innovation and innovation in assessment. For this innovation to happen, teachers must take action in researching new methodologies and applying reflective teaching in the learning process.

Based on current educational standards in Serbia, a foreign language in primary education is best learned through cross-curricular lesson design, which can be delivered through Theme-Based Instruction (TBI), an approach in which learning is contextualized, and children can learn from authentic materials and develop real-life skills such as problem-solving and creative thinking. To create a more contextualized learning environment, teachers should rely on Multiple Intelligence (MI) Theory, which can serve as a guideline for planning activities and choosing adequate materials according to the subject, learners’ preferences and their current abilities. MI Theory also prompts us to the areas (intelligences) we wish our learners to make progress in.

The paper is based on a framework which focuses on 21st century education, highlighting TBI as an essential teaching method, with a focus on the MI Theory as a rationale for creating diverse learning situations, using various and interactive learning resources.

THE 21ST CENTURY EDUCATION

THE 21ST CENTURY TEACHER

Wedell (2017) lists major teacher roles in the 21st century: a trainer, mentor, coach, observer, evaluator and a facilitator. The role of the 21st century educator implies that educators will reflect upon their lesson design, following the post-method teacher methodology. According to the new learning standards in Serbia, a successful educator is in constant communication with learners, parents and colleagues, collecting feedback and implementing it into the future lesson plans. The designed lessons present a work in progress, and they are never truly finished. In such a classroom setting, the role of the educator and the student changes. Learners are encouraged to ask questions and engage in social dis-
course to find their answers. This makes the classroom setting predominately learner-centered, and educators are paying attention to student’s knowledge skills, attitudes, and beliefs.

Teacher education is crucial because only appropriately educated teachers can improve learning outcomes. Both pre-service teacher education, which occurs during university studies and consists of learning developmental and methodological theories and applying them in practice under the supervision of a teacher educator, and in-service teacher education, which is the basis for continuing professional development (CPD), and it consists of webinars, seminars, conferences, research and most of all self-reflection and observation.

Wedell (2017) states that one of the biggest myths around teacher education is that once a teacher is qualified, that is it, they are done. Only by combining pre-service and in-service teacher education, can we expect the teachers to be empowered to continue their work with a quality that empowers their learners as well.

THE 21ST CENTURY LEARNING FRAMEWORK

New Vision of Education (2015) has developed a framework for the 21st century learning, which describes the foundational literacies, competencies and character qualities that learners need to thrive in today’s global economy. The paper deals with learning gaps in the 21st century education and suggests ways to narrow the learning gaps by using technology. This framework is adapted to fit the 21st century learning in Serbia, and the presented core values are the necessary areas of improvement in theory and practice in Serbia (Picture 1).

THE 21ST CENTURY LEARNERS

When it comes to the 21st century skills in learners, there have been two initiatives which indicate that the concerns for developing global skills began in the 20th century. The initiatives were created by UNESCO and PISA. These initiatives represented the pillars for the development of the 21st century skills and competencies, while also identifying the skills which would help every child to live fully in the modern society.

Collaboration represents one of “the four C’s” of the 21st century skills. This skill implies working with others (not just with learners, but also with teachers, experts, parents, etc.), and sharing responsibility in the process. During the collaborative activities, learners are assigned different roles within a group, and they are monitored while they are immersed in mutual learning. Moreover, learn-
ers are free to approach the given topic from different angles, while also developing their communicational and critical thinking skills. Griffin and Care (2014) define collaboration and problem solving as a joint activity where two or more people work together to contribute knowledge, skills, materials, and procedures and move through a series of cognitive states that involve collection and analysis of information and the formulation of hypotheses that they jointly set out to test.

According to Bloom’s taxonomy, critical thinking is a crucial skill for a young learner to acquire. By thinking critically, the learner will analyze and interpret information, evaluate ideas, make decisions and solve problems creatively. The final stage of development of the critical thinking skills is a critical reflection, where the learner is asked to reflect upon a piece of information, analyze it and support a particular standpoint. Critical thinking skills are not newly invented ability, but, according to 21st Century Skills for Learners and Teachers (2010), what gives these, perhaps traditional, critical thinking skills a twist in the 21st century is the availability of advanced technologies for accessing, manipulating, creating, analyzing, managing, storing and communicating information.

When it comes to creativity in thinking and learning, the learners need to learn how to brainstorm ideas, think “outside the box”, look at an issue from different perspectives and eventually, to learn how to solve a problem with a sustainable and a creative solution. To think creatively, the learners need to have a certain amount of knowledge, experience and proper tools given by their teacher. Innovative thinking is an excellent asset in the 21st century, and it is deeply correlated with other 21st century skills. Lack of development of creativity in learners is often caused by teacher’s misconception that creativity is an innate quality and not something that can be learned. Creativity can, as Triling and Fadel (2009) argue, be nurtured by teachers in a learning environment that encourages questioning, openness to new ideas, and learning from past mistakes.

Last, but not least, self-regulation or learner autonomy is a crucial competence which sets the foundation for later development of leadership and entrepreneurship skills. These skills have become highly valued in today’s society, specifically leadership, and their development should start in the early stages of education. Learner autonomy is developed through the postmethod pedagogy, which presents a new view of the relationship between theory and practice. Kumaravadivelu (2006) discussed the development of language teaching methods throughout the centuries, stating that the methods developed from the language-centered methods to learner-centered methods, and finally to learning-centered methods that are characterised by a lot of learner initiative. Postmethod learners are learning to learn by using different learning strategies. They develop their strategies through communication, research, collaboration and through incorporating learning strategies from more successful learners. These strategies lead the learners to achieving their learner autonomy. Kumaravadivelu (2006:
states that there are two kinds of learner autonomy – the academic and the liberatory autonomy and argues that “If academic autonomy enables learners to be effective learners, liberatory autonomy empowers them to be critical thinkers”.

Postmethod teacher possesses the ability not only to teach, but to act autonomously within the academic restrictions posed by the curriculum and the teaching institution. The postmethod teachers can break from such constraints and develop their own eclectic methods. Teacher’s methods evolve through continued development and self-reflection.

THE 21ST CENTURY TEACHING METHOD

The Serbian standard for foreign languages in primary education (2017) uses cross-curricular language learning as a curriculum design and the 21st century skills are deeply rooted in the learning outcomes. The main language outcome is not only to be able to communicate in the target language, but also to develop cross-curricular competences, which will eventually become a part of the collective knowledge of any learner. Collective knowledge, gathered from many seemingly unrelated subjects, proves that didactical principles of holistic learning can impact the methods which are used to develop certain competences, while acquiring the content from other subjects at the same time.

The standards refer to the other side of this lesson design, claiming that even though cross-curricular language learning presents the best learning approach in the primary EFL classroom, there are still many flaws and inconsistencies in its delivery. The educators usually lack proper training for using many innovative methods, and the biggest gap in educator’s knowledge is incorporating ICT into the lesson delivery and achieving teaching autonomy.

The strict application of the class book content in the learning environment is another issue in almost every foreign language classroom in Serbia. The class books usually take over the teacher’s role in the classroom and creative lesson planning is virtually non-existent. According to Serbian standards, the teacher is completely free to organize and plan the lesson delivery, with or without the class book. The learning is measured by the learning outcomes accomplished in a school year and if the outcomes are evident, that means that the learning methods were effective – with or without the support of the class book. With this crucial standpoint in the Serbian standard for learning foreign languages, Theme-Based Instruction as a main lesson design method can be introduced.

Content and Language Integrated Learning (CLIL) is one of the L2 approaches that supports contextualized language teaching the most. This approach relates language learning to the content that is being learned in other classes. By connecting the current knowledge from other subjects to language learning, CLIL
nurtures learners’ academic skills, among other things. Thematic units usually combine several lessons, and there are a few steps which need to be followed while developing a new lesson unit. Firstly, the topic should be selected, or a text chosen. After that, it is important to identify the language focus, content objectives, and learning strategies. Finally, teachers need to develop and properly sequence the activities in the unit. According to Coyle’s 4C curriculum (1999), an effective CLIL lesson includes the following elements:

- content from a specific curriculum subject;
- communication as a means of learning the language and the content;
- cognition and developing thinking skills;
- culture awareness and exposure to different perspectives.

THEME-BASED INSTRUCTION

Theme-Based Instruction can be very effective while teaching young learners, but it requires cooperation with subject teachers and thorough lesson planning. This is one of the “top-down” methods in which learners try to understand the text as a whole and work down to the linguistic forms comprising it. Shin and Savić (2017) described an effective TBI unit. They state that an effective thematic unit integrates stories, games, projects, and activities that link language, content, culture and thinking skills. Thematic units should also be connected to children’s learning and their environment, and they should encourage children to learn. Here are some steps for an effective TBI lesson delivery.

- The demonstration is often used in this method. The teacher may present flashcards or realia and ask the learners about it in the warm-up phase. The learners, not the teacher, will give information based on their previous knowledge. The teacher will help when the children have content or language gap, and in this way, the learners are motivated to learn.
- Multimedia is crucial in this method. The learners will often watch a video or listen to a passage to get acquainted with the topic. The teacher may also present authentic materials.
- Worksheets and language games are an easy way of assessing learners. The teacher will give a worksheet to the learners, and they will need to fill the missing vocabulary.
- Grammar is in use in this method inductively, as patterns to be noticed by learners. The learners will be given a task connected to the covered material. They will need to use the acquired vocabulary and content to complete a task which may be written or practical.
– Task completion is important and in this part of the lesson the learners will practically use the content and linguistic information from the materials.
– Projects are often given for homework. This helps learners be creative, read, discuss and write about content from other fields in English.

Theme-Based Instruction has many communicative and linguistic benefits for young learners. This method requires multiple activities which are taken from other singular methods, and this is why TBI represents a very well-balanced teaching approach. We should aim to create as many lessons as possible using TBI and focus on the communicative and content functions, rather than just on the language function. Project-Based Learning (PBL) is usually incorporated in TBI, and it is often regarded as primary teaching method in TBI among practitioners.

MULTIPLE INTELLIGENCES THEORY

The goal of Multiple Intelligences Theory is to explain that the human potentials span beyond the IQ score. Its creator, Howard Gardner, wanted to describe all the different aspects of human perception connected to the performance in specific areas. His theory implies that there are several intellectual competencies (or intelligences) that influence our understanding of the world. As Gardner himself states, the intelligence is based on the content, to be more specific, on the informational content that exists in the world, like numerical information, spatial information, etc. They are explained as types of intelligences which express the ability to receive information in a certain way, and the ability to perform actions based on them (Armstrong 2009). They have been defined multiple times, but the basic ideas behind each of them are presented in this list (Fleetham 2014):

– **Verbal/Linguistic** – the ability to verbalize thoughts and emotions, and to understand how language is used effectively;
– **Logical-mathematical** – the ability to think logically and make relations between objects, actions and ideas;
– **Visual/Spatial** – the ability to critically observe images and to understand how objects fit and move together in the real world;
– **Bodily-kinesthetic** – the ability to observe and interpret movements and to use your body;
– **Musical/Rhythmic** – the ability to interpret sounds and to understand how music is made, performed and appreciated;
– **Naturalist** – the ability to think about and understand the natural world;
– **Interpersonal** – the ability to observe other people’s behavior and to understand the relationships you have with them;
Intrapersonal – the ability to think about ourselves and to reflect on our thoughts, feelings and actions.

There is a meaningful connection between learning styles and intelligence, which has been backed up by empirical evidence (Gardner 1983). Therefore, we can adapt the activities according to the needs and preferences of our learners, making the lesson more efficient and purposeful in building student’s competencies. The reasons for including the MI theory in our daily practice can be expressed through four general statements (Armstrong 2009: 17).

- Each person possesses all eight intelligences.
- Most people can develop each intelligence to an adequate level of competency.
- Intelligences usually correlate in complex ways.
- There are many ways to express intelligence within each category.

Taking this into account, it can be concluded that the MI theory is specifically significant during the critical age of development. If guided properly, the learners’ abilities can develop in any area, by nurturing each of their different intelligences. Using the TBI approach, innovative teaching techniques and materials that are crafted according to MI implications can be implemented thus creating better learning outcomes.

GUIDELINE FOR APPLYING TBI AND MI IN TEACHING ENGLISH

The research is based on a framework which aims to develop 21st century skills in educators and learners, using an intercurricular design method and the Multiple Intelligence Theory as a rationale for using various lesson resources, while nurturing the Multiple Intelligences at the same time.

The 21st century skills for learners have been adopted following the New Vision of Education’s (2015) framework. The teacher competences in the 21st century are analyzed following the Cambridge English Teaching Framework (2018) and through the given activities. Most activities presented (Table 1) have been developed in preservice and inservice courses for primary teachers of English. The learning outcomes are based on the Serbian EFL curriculum and the activities will be analyzed using the framework we have developed. Our goal is to support the claim that TBI, along with the MI Theory presents a seamless eclectic lesson design method for introducing the 21st century skills, while also redefining education paradigms by creating a 21st century learning environment (Picture 2).

1National Geographic Educator Certification Capstone project https://natgeo.novoed.com/#!/courses/educator-certification-winter-2019/reports/994631
TEACHER COMPETENCES

On the basis of Table 1, it can be concluded that even seemingly simple activities require educators to possess certain qualities and competences which need to be developed through professional development and post-planning reflection. When it comes to developing new skills in learners’, the conclusion is the same – even the simplest activities can have an enormous impact on student learning if delivered properly. The following three factors have been found to be the most important for redefining the classroom setting for meeting the needs of the 21st century education.

Factor 1 – 21st century skills educators need to possess in order to apply innovative teaching methods

In order to apply innovative teaching methods, teachers need to develop their practice in many aspects. When it comes to learning and learners, teachers need to be acquainted with various learning theories, language-teaching methodologies, and most importantly, they need to develop deep understanding of the learners themselves. Educators also need to be able to plan activities using many language-learning resources and materials, while teaching all language systems and skills, and assessing learners’ knowledge properly. Finally, all educators need to develop their own language skills (according to the CEFR standard) and continue in-service education in line with their professional values. These framework competency statements for teachers, developed by Cambridge Assessment English2 highlight the most important competencies which teachers need for developing and delivering the analyzed activities:

- use creative strategies to implement content from other subjects into language lesson;
- understand learners’ needs and difficulties and link activities across lessons to support learners and their learning;
- select and adapt appropriate and engaging materials, including web-based materials;
- respond appropriately to almost all unforeseen classroom events;
- monitor learner performance and encourage interaction between learners;
- support groups and individuals at different levels within the class;
- provide clear individualized feedback;
- use strategies to encourage learner autonomy;
- reflect critically on teaching, and take action as a result;

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– apply psychology principles for classroom management;
– create and use different assessment methods.

In order to determine the most crucial skills that every 21st century educator must possess, Google Forms questionnaire is used to connect each activity with the skills necessary for planning and delivery.

The descriptive analysis of the questionnaire results (Table 2) highlights the following competences: monitoring learner performance and encouraging interaction between learners as well as the use of creative strategies to implement content from other subjects as the most important teacher competences in the Theme-Based Instructional lesson design.

**Factor 2 – 21st century skills developed in learners**

When it comes to the 21st skills developed in learners, it can be concluded that the skills which are needed in all above activities are communication and critical thinking. Creativity and learner autonomy are present in almost every activity, and the only 21st century skill which is not a focus in every activity is collaboration. This leads to a conclusion that teachers of young learners should implement more Project-Based work in their lesson design, to assure that a proper collaborative environment exists in their classroom.

**Factor 3 – Multiple Intelligences developed in learners**

Developing Verbal/Linguistic Intelligence is the primary goal in a language class. Still, since the 21st century teaching requires integration of skills for developing skills applicable in real life, TBI activities presented above develop several intelligences, with Visual/Spatial, Interpersonal and Logical/Mathematical being the most frequent ones. This further supports development of 21st century skills, primarily Critical Thinking, Collaboration and Learner Autonomy.

**CONCLUSION**

The 21st century learning environment requires a learning community in which teachers and learners function together and develop equally. The 21st century educator is there to create a proper learning environment, where all the learners are engaged in the learning process, and the teacher acts as a guide and a facilitator. This innovative educator also enables effective relationships between learners and teachers, distributed learning, cross-curricular links, diverse grouping, and diverse broad-based assessment. This standpoint presents the rationale for developing the 21st century skills in learners, along with developing 21st
21st century skills in teachers. Using MI as a tool for planning effective TBI lessons, teaching can be made easier and more purposeful while nurturing multiple intelligences and developing the full potential of each learner.

In view of innovative approaches in the 21st century, educators focus on redesigning learning in order to develop 21st century skills and to deepen understanding of 21st century curricular goals. Facilitating educators to use new learning designs within their own teaching and to analyze the impact on student learning is a very important aspect of innovative education as well. Last but not least, it is essential that educators share new learning activities locally and globally, supporting each other through the process.

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РАЗВОЈ ВЕШТИНА ЗА 21. ВЕК ПРИМЕНОМ ТЕМАТСКЕ НАСТАВЕ И ТЕОРИЈЕ ВИШЕСТРУКИХ ИНТЕЛИГЕНЦИЈА: КОМПЕТЕНЦИЈЕ НАСТАВНИКА

Резиме: У раду је дат методолошки преглед оквира образовања за 21. век, који има за циљ усавршавање наставника енглеског језика од првог до четвртог разреда, као и побољшање педагошке праксе у настави страног језика уопште. Принципи које би иновативни наставник енглеског језика требало да примењује током планирања тематски базираних наставних јединица, у корелацији са садржајем осталих предмета, јесу развијање вештина 21. века и бирање средстава за рад примењујући Гарднерову теорију вишеструких интелигенција. Поред предлога оквира са конкретним принципима, присутне су и интерактивне методе рада, као што је употреба дигиталних технологија и пројектни рад.

Вештине за 21. век су есенцијалне када је у питању образовање за одрживи развој и целоживотно учење. У раду се појављују као развој комуникације, колаборације, критичког размишљања и креативности. Гарднерова теорија вишеструких интелигенција представља основ за коришћење разноврсних средстава у настави. Та средства имају за циљ не само учење језика, већ и укупни когнитивни, физички, емоционални и социјални развој ученика.

Описane активности тематски базираних наставних јединица анализирane су кроз главне принципе оквира образовања за 21. век. Свака активност развија одређену вештину код ученика као говорника страног језика, уз примену интеграције са остатком курикулума и доприносу развоју комуникације и аутононим учења. У раду се закључује да овакав свестрани приступ настава утица на развој наставника готово у истој мери колико утица на наставника и њихов развој језика. Кроз иновативне курикулуме, наставници индиректно и ненаметљиво примењују програм самосталног професионалног усавршавања, управо кроз побољшање саме праксе. Педагошке импликације овог рада огледају се у његовој улози да мотивише наставнике у изради наставних јединица на вишем нивоу.

Кључне речи: интегративна (тематска) настава, тематске јединице, теорија вишеструких интелигенција, интеркурикуларна настава страног језика, вештине 21. века, пројектна настава.
APPENDIX 1

*Picture 1.* Areas in need of improvement in theory and practice in Serbia.

*Picture 2.* Guideline for applying TBI and MI in teaching English.
Table 1. Descriptive lesson analysis according to the guideline for applying TBI and MI in teaching English

<table>
<thead>
<tr>
<th>21st century skills developed in learners</th>
<th>Multiple Intelligence developed in learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration – working in a group and creating in cooperation; Communication – using language to navigate and assess their work; Critical thinking and problem-solving skills – observing the work of others and giving constructive criticism; Creativity – creating new objects and role-playing within their roles; Self-regulation – correcting mistakes based on the feedback and adapting to the primary project outcome.</td>
<td>Verbal/Linguistic – using language for collaboration and reporting; Logical/Mathematical – using geometry and spatial relations to create shapes for building an object; Visual/Spatial – matching design elements, making a unique piece out of smaller parts; Interpersonal – collaboration, acting based on a feedback.</td>
</tr>
</tbody>
</table>

Each student has a worksheet with a map of the town and a set of questions. They need to draw their house on the map next to the road and themselves on the other part of the map. They discuss their position in relation to other objects and check answers in pairs.

| Collaboration – they decide who makes which moves and when; Self-regulation – learners need to help their pair to match the mutual choreography; Communication – learners need to give precise feedback to each other and show understanding during the performance. | | Verbal/Linguistic – using language for singing; Musical/Rhythmic – singing and matching the rhythmic response; Bodily/Kinesthetic – TPR activity; Interpersonal – learning to point out to mistakes politely, giving constructive criticism and acting based on a feedback. |

Song review - learning choreography in pairs. Each student has a number (one or two). First, "one's" learn their moves with the teacher and the "two's" with a student demonstrator. Practicing together while singing the song.
Communication – using language for describing results and explaining conclusions; Critical thinking – understanding the impact of pollution, comparing samples and reporting, interpreting the conclusions from the experiment results; Learner autonomy – individual conducting of an experiment.

Verbal/Linguistic – using language for describing changes and discussing conclusions; Logical/Mathematical – understanding relations, observing changes and making conclusions based on facts; Visual/Spatial – observing visual changes in water in controlled environment; Naturalist – understanding how bacteria make changes in water, how pollution affects our environment; Intrapersonal – understanding effects of individual actions;

Communication – using language for dialogue, reporting and reflecting; Creativity – suggesting solutions for reducing the use of plastics; Critical thinking and problem-solving skills – creating report based on results, making calculations for predicting outcomes, reflection and project execution; Learner autonomy and self-regulation – autonomous correcting of mistakes, making conclusions based on facts.

Verbal/Linguistic – using the language for expressing opinions, describing solutions; Logical/Mathematical – calculating possible outcomes, observing changes over the week; Visual/Spatial – observing effects of plastic waste; Naturalist – observing relation between the amount of waste and possible effects on environment; Interpersonal – discussing conclusions and suggestions; Intrapersonal – discussing conclusions and suggestions; Intrapersonal – reflecting on impact which our actions have on environment;

Collaboration – respecting the rules of the game, agreeing on mutual choice; Communication – using language for dialogue, reporting and reflecting; Creativity – suggesting solutions for improving our lives and reducing waste; Critical thinking and problem-solving skills – deciding based on facts what is replaceable and what is essential; Learner autonomy and self-regulation – making conclusions based on facts, taking responsibility for reducing waste.

Verbal/Linguistic – using language for discussion; Logical/Mathematical – determining which features essential things possess; Visual/Spatial – comparing properties of objects; Naturalist – making distinction between recycled, composted and reused objects; Interpersonal – exchanging opinions based on facts; Intrapersonal – shaping personal attitudes based on facts;
Collaboration – sharing experiences with peers in other countries;  
Communication – using language for discussion and written correspondence;  
Creativity – making anti-pollution plan with concrete solutions;  
Learner autonomy and self-regulation – presenting ideas and correcting mistakes.

Verbal/Linguistic – using language for exchanging experiences and project ideas;  
Visual/Spatial – understanding similarities with Egyptian environment;  
Naturalist – comparing our environment with Egyptian, understanding pollution effects in both countries;  
Interpersonal – discussing similarities/differences between environments, culture and preferences;  
Intrapersonal – understanding the value of preserving our environment and exchanging solutions;

Table 2. Descriptive analysis of the activities with the skills necessary for planning and delivery

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>using creative strategies to implement content from other subjects</td>
<td>55.6</td>
<td>5</td>
</tr>
<tr>
<td>understanding principles and techniques for teaching discourse</td>
<td>22.2</td>
<td>2</td>
</tr>
<tr>
<td>creating and maintaining a constructive learning environment</td>
<td>11.1</td>
<td>1</td>
</tr>
<tr>
<td>incorporating ICT in the lesson design</td>
<td>77.8</td>
<td>7</td>
</tr>
<tr>
<td>monitoring learner performance and encouraging interaction between learners</td>
<td>77.8</td>
<td>7</td>
</tr>
<tr>
<td>supporting groups and individuals at different levels within the class</td>
<td>66.7</td>
<td>6</td>
</tr>
<tr>
<td>understanding concepts such as multiple intelligences, special needs, etc.</td>
<td>11.1</td>
<td>1</td>
</tr>
<tr>
<td>selection and adaptation of appropriate and engaging materials, including web-based materials</td>
<td>77.8</td>
<td>7</td>
</tr>
<tr>
<td>using strategies to encourage learner autonomy</td>
<td>33.3</td>
<td>3</td>
</tr>
<tr>
<td>understanding learners’ needs and difficulties and linking activities across lessons to support learners and their learning;</td>
<td>22.2</td>
<td>2</td>
</tr>
<tr>
<td>reflecting critically on teaching, and taking action as a result</td>
<td>33.3</td>
<td>3</td>
</tr>
<tr>
<td>being able to respond appropriately to all unforeseen classroom events</td>
<td>22.2</td>
<td>2</td>
</tr>
<tr>
<td>responding appropriately to almost all unforeseen classroom events</td>
<td>33.3</td>
<td>3</td>
</tr>
<tr>
<td>providing clear individualized feedback</td>
<td>44.4</td>
<td>4</td>
</tr>
<tr>
<td>creating and using different assessment methods</td>
<td>44.4</td>
<td>4</td>
</tr>
<tr>
<td>applying psychology principles for classroom management</td>
<td>22.2</td>
<td>2</td>
</tr>
</tbody>
</table>