Abstract
Language learning and assessment are closely associated and often intertwined in practice; however, as teaching writing in Algeria has focused more on the finished product, students’ productions are evaluated by their test scores rather than their writing development. The purpose of this paper was to show how effective the use of self-assessment through portfolios was in developing students written productions in terms of accuracy, grammatical complexity and organization. To achieve this goal, a pre-questionnaire was administered to 100 third year participants at Omar Driss High School, and a pre-test given to an intact group of 30 students from the same population to analyse the situation before the treatment. After having been trained during a semester to self-assess their writing through portfolios, the findings revealed not only a significant improvement in students writing abilities, but also in their attitudes expressed in the post semi-structured interview in addition to the development of meta-cognitive skills necessary for effective learning. The results can provide pedagogical implications for integrating self-assessment through portfolios in teaching and assessing writing in that it fits the tenets of the competency-based approach recently implemented in the Algerian school

Keywords: portfolios, self-assessment, writing abilities
Introduction
Writing plays a vital role not only in conveying information but also in transforming information to create new knowledge in such a demanding life (Weigle, 2002). It is thus of central importance for students in academic, second and foreign language learning. Language learning and assessment are closely linked and often intertwined in practice; however, for decades, teaching writing in Algeria has focused more on the finished product or the product approach, which relies on grammatical accuracy neglecting students’ creativity and language skills and evaluating their writing by their test scores rather than their writing development. This means that assessment was not given importance although it is a crucial aspect of teaching, a formative process closely linked to the planning, design and teaching strategies (Hyland, 2004, p. 212). Formative assessment contributes enormously to the learning of individual students and to the development of an effective and responsive writing course. Thus, this kind of assessment can provide data that can be used to evaluate student progress, identify problems, suggest instructional solutions and evaluate course effectiveness.

In spite of the trend to find alternative forms to increase formative assessment, self and peer assessment are rarely used in the Algerian contexts. Therefore, self-assessment practices need to be investigated as the competency-based approach, used in teaching English in middle and high education, calls for developing lifelong learning skills. In addition, as the role of writing in EFL learning is increasing, the students’ ability to self assess their written productions is also becoming more and more important. Hence, this research was intended to investigate the effects of self-assessment through portfolios on high school students’ writing. The use of portfolios is meant to involve students in developing awareness of their development in a natural and non-stressful context. Their portfolios can include drafts, reflections, readings, diaries, observations of genre use, teacher or peer responses, as well as finished texts, thus, representing multiple measures of student’s writing ability (Hyland, 2004, p. 234).

Forms of writing assessment
Assessment forms were influenced by the change in teaching languages; as a result, there was a shift from traditional forms of assessment to recent ones such as the use of the portfolio, conferencing, peer and self-assessment. Traditionally, teaching has been thought of as transmission of knowledge. The role of the teacher is to tell, to be in control of the pace and content of lessons and to be the purveyor of truth. Traditional approaches to the teaching of writing focus on the final product; in other words, the production of neat, grammatically correct pieces of writing focuses on one-shot correct writing for the purpose of language practice (Cheung, 1999). Writing was viewed primarily as a tool for the practice and reinforcement of specific grammatical and lexical patterns, accuracy being all important whereas content and self-expression given little if any priority. The emphasis was on grammatical correctness and adherence to given models or guidelines. However, imitating models inhibits writers; there is little or no opportunity for the students to add their own thoughts and ideas (Raimes, 1983). The inevitable consequence is that little attention is paid to the ideas and meaning of student writing, what is communicated to the reader, the purpose and audience (ibid., 1983, p.75). This over emphasis on accuracy and form can lead to serious ‘writing blocks’ (Halsted, 1975, p. 82) and ‘sterile’ and unimaginative pieces of work (Mahon, 1992, p. 75).

Thus, the only form of assessment in the past relied on the teacher’s correction of the first/final draft. This product approach is often seen as a poor way to approach writing assignments because in applying it, students often use weak writing strategies. According to Flower (1985, p. 87), this approach commonly includes the following weak strategies:
**Trial-Error Strategy:** Students who write using this strategy are trying to use different combinations of words and phrases with the hope that one combination will result in an acceptable one. Using this trial and error method, students work slowly and produce products that contain minimal ideas and content.

**Perfect Draft Strategy:** Using this strategy, students write from start to finish or a single draft. Using this weak strategy, they strive to perfect each sentence before moving to the next one. This strategy is usually used with introductory sentences or paragraphs. As you can guess, this may lead to writer’s block during the beginning.

**Words looking for ideas:** Usually students may use certain words as they hope will trigger ideas as transition words (first, next…). However, using such words to trigger ideas is an unreliable procedure.

**Waiting for inspiration Strategy:** Some students may simply wait until the writing mood strikes them to begin writing. Although effective for some students, it may be a risky procedure. For many students, the deadline itself is the inspiration or the motivation to begin the writing process, however, it may also increase stress levels and actually lead to writer’s block (Boyle & Scanlon, 2009, p. 224).

The failure of traditional forms of assessment gave rise to recent ones such as self-assessment, peer assessment, portfolio assessment, protocol analysis, conferences, learning logs, journal entries and dialogue journals. Self-assessment proponents claim that this kind of assessment can help learners become skilled judges of their strengths and weaknesses and ultimately develop self-directed language learning ability (Chamot & O’Malley, 1994; Oscarson, 1997). This is what is required to monitor learning; therefore, training learners to self-assess their written productions through portfolios can have positive results in the Algerian context as it is suggested in this research work.

**Self-assessment**

Self-assessment refers to the involvement of learners in making judgements about their own learning, particularly about their achievements and the outcomes of their learning (Boud & Falchikov, 1989). It is not a new technique, but a way of increasing the role of students as active participants in their own learning (Boud, 1995) and is mostly used for formative assessment in order to foster reflection on one’s own learning process and results (Sluijms et al., 1998) the fact which develops in them a kind of autonomy and helps them to rely on themselves. Strengths in using self and peer assessment (Sambell & MacDowel, 1998, p. 39) are that:

1. they can foster students’ feeling of ownership for their own learning,
2. motivate students and encourage their active involvement in learning,
3. make assessment a shared activity rather than alone (i.e. more objective),
4. promote a genuine interchange of ideas,
5. lead to more directed and effective learning,
6. encourage students to become more autonomous in learning;
7. signal to students that their experiences are valued and their judgments are respected,
8. develop transferable personal skills,
9. produce a community of learning in which students feel that they have influence and involvement,
10. reduce the teacher’s workload,
11. and make students think more deeply, see how others tackle problems, pick up points and learn to criticise constructively.

From these strengths, we conclude that this kind of assessment as a tool for learning can have a considerable impact on students’ learning and development into reflective and independent learners, and what is most important is that it encourages critical thinking. However, weaknesses of such an assessment lie in the occurrence of possible cheating, stress and time constraints. Thus, goal setting is essential because students can evaluate their progress more clearly when they have targets against which to measure their performance. Their motivation increases when they have relevant learning goals. They also need to be taught strategies related to self-assessment of their written products. The techniques which may be used include the use of rubrics and checklists to guide them in assessing themselves. According to Graham (1996), when students assess their writing with specific criteria, they engage in a focused, thoughtful revision process. Through such an assessment students become aware that a specific feature is present and effective in their writing. They decide whether they must change a sentence to make it clear or correct. Students’ efforts in doing so may result in a piece of writing which is superior to the first draft.

In their commitment to develop students’ ability in the assessment of writing, teachers have posed several related questions (ibid., p.18):

- What general and specific criteria should students use for assessment of their writing
- What instruction is reflective in improving students’ understanding and application of specific criteria
- How do we develop effective assessment forms and procedures for students writing in all subjects
- How to connect student assessment activities to other aspects of instruction-conferences, marking, and use of a computer- in a programme
- How does student self-assessment of writing connect to other assessment initiatives, peer editing, portfolios, and performance assessment among them.

This calls for the construction of rubrics or checklists in order to guide student self-assessment and make it more effective. This can be done through portfolios so that students can show their progress and thus take part in their own learning. This gives them the opportunity to assess their written production and to develop critical thinking which can allow them to be life long autonomous learners able to develop their writing competencies necessary in the knowledge society.

**Portfolio assessment**

Paulson, Paulson and Meyer (1991, p. 6) gave an extensive definition of portfolio as ‘a purposeful collection of students’ work not only exhibiting students’ effort, progress and achievement but also demonstrating students’ participation in selecting contents and selecting the criteria for assessment and evidence of students’ self-reflection”. Another definition suggested by (Jones & Shelton, 2006, p. 18) states that “portfolios are purposeful organized documents which represent connections between actions and beliefs, thinking and doing, and evidence through which the builder (student) constructs meaning”. In other words, the portfolio is “a purposeful collection of students’ work that demonstrates to students and others their efforts, progress and achievement in given areas” (Genessee & Upshur, 1996, p. 99). For some teachers,
the portfolio is part of an alternative assessment, for others, it documents the students’ learning process; still others use it as a means of promoting learners’ reflection.

The Portfolio has several benefits. For example, it promotes students’ involvement in assessment, responsibility for assessment, interaction with teachers and students about learning, collaborative and sharing classrooms, students’ ownership of their own work, students’ ability to think critically and excitement about learning (ibid.). Thus, the teacher’s role is to guide them in developing portfolios because “a well-developed portfolio emphasizes what students can do to participate in an ongoing modified instruction in which assessment takes place all the time (Valentia, 1990, p. 76). By planning and organizing learning, monitoring, observing and reflecting on their own learning, students become motivated and more autonomous individuals.

Portfolios have become a desired tool because they provide authentic evidence of what students know, believe and are able to achieve. There is a strong link between portfolios and constructivism as a teaching/learning orientation and human development (Jones & Shelton, 2006, p.13) because the core of constructivism is also authentic learning. It gives us awareness of what we know and how we happen to know it, what it is to know something and how developmental stages in our capacity to learn change from one to another. By fostering the necessary conditions that encourage an active stance toward learning, constructivism represents a means of observing the learning itself. From an educational angle, looking at development is embedded in constructivism which asks for the students’ exact, conscious, purposeful engagement with the world surrounding them (Fosnot, 1996, p. 16). In order to develop a portfolio, students need to follow certain procedures before reaching the final phase. This process includes the following stages:

- **Collection**: save artefacts that represent the day-to-day results of learning.
- **Selection**: review and evaluate the artefact saved and identify those that demonstrate achievement of specific standards or goals.
- **Reflection**: reflect on the significance of the artefacts chosen for the portfolio in relationship to specific learning goals.
- **Projection**: compare the reflection to the standards, goals and performance indicators and set learning goals for the future. (Danielson & Abrutyn, 1997, p.17)

One advantage of portfolio assessment is that it leaves students a chance to reflect upon their development growth and progress over time. It also offers teachers a chance to think about their students’ problems thoroughly (Nolet, 1992, p. 14). It is a good opportunity to give students feedback and advice after having identified their strengths and weaknesses. The overall purpose of portfolios is to enable students to demonstrate to others learning and progress. Their greatest value is that, in building them, students become active participants in the learning process and assessment. Thus, portfolios promote learner-centred learning and make the learning process more visible as they give a more significant picture of the students’ growth.

**Portfolio assessment in writing**

Portfolios represent one form of assessment which is practically used nowadays. It is defined by Applebee and Langer (1992, p. 30) as “a cumulative collection of work students have done”. In the context of writing and assessment, a portfolio is “a collection of texts the writer has produced over a defined period of time (Hamp-Lyons, 1991, p.262) and the collection may consist of “selected but not necessarily polished or finished pieces” (Privette, 1993, p. 60). According to Applebee and Langer (ibid.), some of the most popular forms are the following:

1. a traditional ‘writing folder’ in which students keep their work
2. a bound note-book with separate sections kept for work, progress and final drafts
3. a loose-leaf notebook in which students keep their drafts and revisions
4. a combination folder and brown envelope where students’ writing- exercises, tests, compositions, drafts, and so on- are kept
5. a notebook divided into two sections: one for drafts and the other for final copies (traditionally called original and rewritten compositions back in the late 1950s and 1960s).

So, the writing portfolio contains the student’s total writing output to represent his overall performance, or it may contain only a selection of works which the student has chosen to be evaluated. In other words, the portfolio shows the student’s work from the beginning of the term or semester to the end, giving the opportunity to the teacher and the student a chance to assess how much the latter’s writing has progressed. But, in order to be effective tools of assessment, they should be made clear right at the beginning; in order to meet the goals of literacy assessment, they must be developed as follows (Farr & Lowee, 1991, p. 5):

1. Teachers and students both add materials to the portfolio.
2. Students are viewed as the owners of the portfolios.
3. Conferencing between students and the teacher is an inherent activity in portfolio-assessment.
4. Conference notes and reflections of both the teacher and the student are kept in the portfolio.
5. Portfolios need to reflect a wide range of student work and not only that which the teacher or student decides is the best.
6. Samples of the student’s reading and writing activities are collected in the portfolios, including unfinished products.

According to Gallehr (1993, p. 29), no system of assessment is as perfect as portfolio assessment because students are required to write, but within this requirement, they can choose the topic, audience, responders in the class, revision strategies, and so on. They are also free to select from their work pieces they want to include in their portfolios. Many teachers find the portfolio the ideal assessment tool because it allows them to act as coaches providing feedback that students can use to revise their papers. Besides, it combines process and product together and ties assessment to instruction (Clark, 2008, p. 214). In addition, Weigle (2002, p. 139) finds that portfolios are of “great interest as they are seen to integrate classroom instruction with performance assessment, representing an overall model of organizing writing processes and products for ongoing reflection, dialogue and evaluation”. This shows that portfolios may be used as a holistic process for evaluating course work and promoting autonomy. They provide a sound basis on which to document student progress because they incorporate a range of assessment strategies over an extended period of time. However, the good use of the portfolio requires careful planning (ibid.) as it should be:

- **Integrative**: combines curriculum and assessment which means evaluation is developmental, continuous, comprehensive and fairer, representing programme goals and reflecting writing progress over time, genres and different conditions.
- **Valid**: closely related to what is taught and what students can do.
- **Meaningful**: students often see their portfolio as a good record of work and progress.
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- **Motivating**: students have a range of challenging writing experiences in a range of genres and can see similarities and differences between these.

- **Process-oriented**: focuses learners on multi-drafting, feedback, collaboration, revision, etc.

- **Coherent**: assignments build on each other rather than being an unconnected set of writings.

- **Flexible**: teachers can adopt different selection criteria, evaluation methods and response practices over time, targeting their responses to different features of writing.

- **Reflexive**: students can evaluate their improvement and critically consider their weaknesses, so encouraging greater responsibility and independence in writing.

- **Formative**: grading is often delayed until the end of the course, allowing teachers to produce constructive feedback without the need for early, potentially discouraging, evaluation.

However, the use the portfolio in teaching writing is a heavy workload for teachers, especially in large classes as it requires not only a good and careful planning, but also a complete involvement in order to guide students and make them progress in writing. In spite of this, it remains one of the best assessment tools because it enables students to understand different writing processes and provides them with an opportunity to demonstrate their abilities in different genres. Using self-assessment through portfolios may foster students writing abilities.

**Method**

The method used in this research study can be considered as both quantitative and qualitative in that it investigated the development of students’ writing abilities using the quasi-experimental design as an experimental group was exposed to a treatment. In addition to this, a questionnaire was administered to a random sample from the same population before having being taught self-assessment strategies through portfolios. Moreover, a post-experiment semi-structured interview was used to serve the purpose of validating the quantitative results.

**Participants**

Third year students at Driss Omar Higher School represented the population used in this research study. The choice of this population was motivated by the fact that they were students who had received an education based on the competency-based approach, we mean in both middle and secondary education. Our interest as a researcher was to apply techniques which comply with the tenets of that approach, which requires the development of autonomous individuals able to face challenges and adopt critical positions in order to adapt to new situations, believing that the accent on the development of competent individuals necessitates a new conceptualization of teaching. The sample who received the treatment consisted of an intact group of 30 third year students tested before and after the experiment. Besides, 100 students have been randomly selected among the four existing groups in that level to be used in the questionnaire and 6 students, from the sample which received the treatment, have been interviewed in order to support the quantitative results.

**Data gathering tools**

This research work relied on the collection of data through pre and post tests, a structured questionnaire and a semi-structured interview. Both tests were assignments in which the
participants had to write argumentative paragraphs as generally given in the baccalaureate exam. The questionnaire was administered before teaching the sample writing assessment through portfolios in order to analyse the situation before the treatment. Cohen et al. (2005, p. 24) argue that questionnaires are useful instruments for survey information, providing structured, often numerical data allowing us to quantify people’s observations, interpretations and attitudes. This questionnaire helped us determine how the participants were trained in assessing their written productions and their attitudes towards self-assessment and the use of portfolios.

The questionnaire used in this research was simple and straightforward to be understood by everybody. The most frequent questions used in this questionnaire were close-ended questions because they were easy to answer for such a level and their coding and tabulation is straightforward and leaves no room for the rater’s subjectivity. This kind of questions is suited for quantitative, statistical analyses. Just few questions were open-ended because they ‘take more time, thought, patience and concentration to answer than closed questions (Sudman and Bradburn, 1983, p. 154) though they are considered as an invaluable tool when the researcher wants to go deeply in a particular topic exploring all its aspects, however, they are generally left unanswered mainly by less proficient students.

The semi-structured interview, called in-depth interview, is the most common qualitative data gathering tool during which the person being interviewed is the expert and the interviewer the student. The interview used in this research involved six open ended questions based on the topic under investigation aiming at knowing students perceptions and attitudes on the effects of the treatment. The open ended nature of questions provided opportunities for both the interviewer and interviewees to discuss it in detail. The former used cues and prompts to encourage the latter to consider a certain question further when the required information was not obtained. We also tried to put the interviewees at ease so as to collect data which truly reflect their opinions and feelings of the the topic under investigation.

Procedures
First, the participants were given written tasks on descriptive and argumentative paragraphs during five weeks and at the same time they were provided with enough instruction about how to select, collect reflect on the paragraphs they produced in portfolios, based on Hamp-Lyons and Condon (2000). They were also trained to fill checklists aiming at developing in them how to assess their writing and what to focus on. Before correcting the students written productions, individual conferences were used to discuss mainly the organization and content of the paragraphs. After Five other weeks of self assessing their work, they were provided with feedback on their portfolios. Finally, they were evaluated in terms of accuracy, grammatical complexity and organization. Accuracy refers to how grammatically correct is the piece of writing while grammatical complexity means that learners write more grammatically and lexically complex sentences as they become more proficient Wolfe et al. (1998, p.8). Organization refers to how the thoughts are logically arranged. It is related to coherence or the way the thoughts flow logically.

Research questions
The present study was an attempt at answering a set of questions related to the topic under investigation, developing students writing abilities by the use of self-assessment through portfolios. The objectives of the investigation were guided by the following research questions:

1. What types of assessment are used in writing in high education?
2. Do teachers encourage students to assess their own written productions?  
3. Do they encourage students to assess their written productions through portfolios?  
4. Does the use of self-assessment through portfolios develop students’ writing abilities in terms of accuracy, grammatical complexity and organization?  

Hypotheses  
This study has been designed to test the following hypotheses:  
1. There will be a significant development in the participants’ writing abilities in terms of accuracy, grammatical complexity and organization after the use of self-assessment through portfolios.  

2. There will be a positive change in the participants' attitudes and feelings after the treatment.  

Analysis and interpretation of the results  
This research study first dealt with a questionnaire to analyse the situation before implementing the experiment, which consisted of training the participants to self-assess their paragraphs through portfolios. Second, descriptive statistics were used to measure the influence of the treatment on the participants’ written productions in terms accuracy, grammatical complexity and organization, followed by inferential statistics to test the hypothesis. For this purpose, a dependent or a paired t-test was suitable as only one group was tested before and after the experiment.  

The purpose of conducting statistical tests is to provide information about the likelihood of an event occurring by chance (Kanji, 2006, p.265). The statistical test is used to determine the probability that the observed results could have occurred under the null hypothesis. If this probability is less than, or equal to 0.05, the null hypothesis is rejected in favour of the alternative hypothesis and the results are said to be significant. Finally, the participants’ attitudes towards the treatment, obtained from the post-semi structured interview, were intended to supplement and confirm the effectiveness of the treatment.  

The results obtained from the questionnaire revealed on the one hand that the writing approach used in high education was the product approach. When the informants were asked whether their paragraphs were scored just after the first draft, all of them answered affirmatively. Most of the written assignments given to them were also used only as homework and evaluated as final products. This means that the final product was evaluated and given a mark. On the other hand, most of them answered negatively when asked whether they have used a folder in their writing classes. All of these data confirm that teaching and assessing writing remained as it was years ago; we mean that no change was undertaken to improve students’ writing abilities and that the emphasis remained on a single product, neglecting all the wide range of methods and techniques that can be used under the competency-based approach, including self-assessment and portfolios.  

When asked about the kinds of errors they make in writing, most of the informants were aware mainly of the big number of errors they make in grammar and in the choice of appropriate words (lexis). They also added that they tend to use simple sentences because they are unable to use complex ones. But in spite of this, they often produce ambiguous sentences difficult to understand as they generally refer to literal translation. The data obtained from the questionnaire were used as situation analysis, confirming that teaching and assessing writing was still traditional and that a treatment was needed. These data were supplemented by those obtained from the pre-test as shown below:
Table 1: Descriptive Statistics of the Experimental Group Overall Pre-test Achievement in Accuracy, Grammatical Complexity and Organization

<table>
<thead>
<tr>
<th>N</th>
<th>Test</th>
<th>Accuracy</th>
<th>Grammatical complexity</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>1.64</td>
<td>0.39</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Table 2: Descriptive Statistics of the Experimental Group Pre-test Overall Achievements

<table>
<thead>
<tr>
<th>N</th>
<th>Test</th>
<th>Means</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Pre-test</td>
<td>1.48</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Table 1 displays all the results of the pre-test, including the mean and standard deviation scores recorded in the variables, followed by table 2 which shows us the average scores of all the variables tested in this research before using self-assessment through portfolios as a kind of treatment. The results revealed that the participants’ productions lacked accuracy because of the big number of errors (1.64 per T-unit, used as a measure), grammatical complexity (1.23) as they tended to use simple sentences most of the time and also organization (1.58). Therefore, a special remedy was required to enable them to write more accurately and also to produce more complex sentences rather than relying only on simple ones or on coordination as it appeared in their production which contained either an overuse of coordination, or clauses joined with the conjunction ‘because’. They also need to be trained to organize their paragraphs.

After having been trained to write descriptive and argumentative paragraphs, how to organize their written productions in portfolios and how to assess them, on the belief that “we cannot get a trustworthy picture of a student’s writing proficiency unless we look at several samples produced on several days in several modes or genres (Elloward & Belanoff, 1991, p. 5), the participants were tested to measure the effectiveness of the treatment. The posttest results recorded are displayed in the tables below:

Table 3: Descriptive Statistics of the Experimental Group Overall Post-test Achievements Accuracy, Grammatical Complexity and organization

<table>
<thead>
<tr>
<th>N</th>
<th>Test</th>
<th>Accuracy</th>
<th>Grammatical Complexity</th>
<th>Organization</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
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</table>
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Table 4: Descriptive Statistics of the Experimental Group Post-test Overall Achievements

<table>
<thead>
<tr>
<th>N</th>
<th>Test</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Post-test</td>
<td>2.51</td>
<td>0.71</td>
</tr>
</tbody>
</table>

Table 03 displays the overall post-test results obtained in the experiment in all the areas measured in this research, (accuracy: 17.81, accuracy: 0.65, grammatical complexity: 1.93 and organization (4.95). The overall results of the experiment displayed in table 4 indicate that the post-test overall mean score of the whole test was 2.51. A difference of 1.03 in the means and 0.25 in the standard deviations (table 5) between the two tests shows the efficiency of the treatment used in this research. In order to test the hypothesis formulated in this research that self-assessment through portfolios will help learners develop their writing abilities, a dependent t-test was used to compare the two means (the pre-test and post test means).

Table 5: T-test Results

<table>
<thead>
<tr>
<th>N</th>
<th>Tests</th>
<th>Mean</th>
<th>Std deviation</th>
<th>T-test value</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Post-test</td>
<td>2.51</td>
<td>0.71</td>
<td>2.18</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>1.48</td>
<td>0.46</td>
<td>0.05</td>
<td>0.25</td>
</tr>
</tbody>
</table>

As observed in the results of hypothesis testing, the value of t (2.18) is greater than the critical value (1.69) for t required for twenty-nine degrees of freedom. This proves that the treatment implemented to the experimental group was efficient in that students’ productions realized in the post-test were better if compared with those recorded before the experiment mainly in terms of accuracy and organization. However, they need more training to be able to write more complex sentences.
In addition, the participants’ attitudes and perceptions about the use of self-assessment through portfolios in developing their writing abilities, obtained from the semi-structured interview, were used in conjunction with the post-test results to supplement the findings and to provide an in-depth insight into the experiment results. This is based on Wallace (1998: 124) who argues that these techniques are classified as ‘introspective’ since they involve respondents reporting on themselves, their lives, their beliefs, their interactions and so on and can be used to elicit factual data. Triangulation from this perspective should be understood as a strategy that attempts to add more vigor, breadth, complexity, richness and depth to the research study (Silverman, 2006, p. 291).

The participants reported that their paragraphs were more organized and that they did not write anything related to the topic as they used to do, but they had learnt that the selection of the most important ideas and their order is primordial in writing. They added that writing paragraphs in English was better clarified for them and that their cognitive abilities were better developed than before the experiment. All of them benefited from the use of portfolios in that they allowed them to witness the progress of their paragraphs. They also became able to identify their strengths and weakness through the use of rubrics and checklists as supported by Joslin (2002) who stated that when students use criteria in the form of rubrics that describe development towards success, they are able to identify strengths and areas needing improvement.

Most interviewees reported that they were anxious about their situation because in spite of the improvement they achieved in writing in terms of organization and accuracy, they still need to write more complex sentences. When asked about the reasons, most of them of them found that they always think in Arabic and then translate their thoughts. Therefore, they need to be more exposed to the language in context to be able to develop this competency. All of this shows how involved they were in their learning and how their desire to learn and to succeed increased. This positive attitude can encourage them to develop their written productions and ultimately lead them to autonomy which is required for lifelong learning, necessary in the knowledge society. Moreover, this study also indicated positive effects of the teacher’s feedback throughout the different sessions and in individual conferences which allowed the students to communicate with the teacher, discussing their strengths and weaknesses. This developed in them positive attitudes towards being given remarks about their writing progress and helped them accept criticism and be more self-confident.

Both self-assessment and portfolios facilitate experiential learning which stresses personal involvement, self-initiation and evaluation by the learner. It makes students reflect, discuss, analyse and evaluate their experience either individually or with the help of the teacher in face to face conferences. Besides, students experience writing through different phases during which they write more than one draft, receiving feedback from either their peers or the teacher seeking improvement. In this way, they are fully engaged in self-assessment which activates their ability to revise and correct their errors. All of this not only motivates them to think harder, analyse and reflect deeper, but also enable them to exercise a variety of learning strategies and higher order-thinking skills which provide direction for future learning (Chamot & O’Malley, 1994, p. 119)

**Conclusion and implications**

In the context of this study, it has been noticed that learners face problems both at lower and higher level skills; i.e., they are not equipped with the necessary skills of writing in grammar, spelling, organization, planning, monitoring and reviewing. They also lack motivation for the writing skill which is considered as the most difficult one. It is worth noting that people
may acquire writing through reading, imitating, experiencing and getting feedback. They need to
learn the skill through hard work and the help of experienced teachers. This research was
intended to contribute to the development of learners’ writing by making them self assess their
productions through portfolios as part of the change in teaching and assessing writing with the
belief that this would also affect positively students’ attitudes towards writing.

This study investigated the effects of self-assessment through portfolios in developing
students’ writing ability in terms of accuracy, organization and grammatical complexity. The
results revealed that most of the participants developed their paragraphs in the first variables.
However, the slight increase in grammatical complexity at this level indicated that they were in
need to be trained in writing complex sentences. The use of self-assessment through portfolios
developed in them an awareness of their strengths and weaknesses. It also enhanced their critical
thinking through the different stages of the writing process during which students gained much
self-confidence and developed different writing strategies enabling them to be effective problem
solvers in future life.

An assessment of this kind involves the assessment of both the process and product. Thus,
on the one hand, it helped the students gain strategies enabling them to assess their paragraphs
based on selected criteria through checklists and rubrics. On the other hand, this developed in
them meta-cognitive skills which enabled them to reflect on their written productions. This also
increased the students understanding of where their formal language structures breakdown and
willingly they tried to produce paragraphs acceptable in terms of accuracy and organization.
However, the results showed that grammatical complexity needs to be developed in future. The
most positive thing in this study is that that the use of self-assessment seemed to encourage
reflective attitude allied to the willingness to learn, and in this way learners can develop
intellectual responsibility, necessary for the individual’s growth and leading to success in the
knowledge society.

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Appendix A: Students’ perceptions of writing questionnaire
1. Do you believe that writing is
   a. a gift
   b. a skill that can be developed through practice
2. For you, why is writing important as a language skill?
3. How would you rate your level in writing?
   a. highly proficient
   b. proficient
   c. adequate
   d. weak
4. If you find that your level in writing is not acceptable, can you say why?
5. What are your main difficulties in English writing?
6. Do you want to improve your level in writing?
   a. Yes
   b. Of course
   c. not really
   d. No
7. How often do you use to write?
   a. Sometimes
   b. Rarely
   c. Never
8. Did you learn about the types of writing?
   a. descriptive
   b. narrative
   c. expository
   d. persuasive
9. How do you use to write?
   a. individually
   b. in pairs
   c. in groups
10. Did you use to write the assignment given by the teacher?
    a. in the classroom
    b. at home
    c. sometimes in the classroom and sometimes at home.
11. Did you use a folder?
    a. Yes
    b. No
12. Did the teacher turn round to help you with his/ her remarks to improve your writing?
    a. yes
    b. no
13. Did you use to read your paragraph (first draft) again, trying to make it better after having received remarks either from your teacher or your peers?
    a. Yes
    b. No
14. If yes, who assesses your drafts?
    a. the teacher
    b. your peer or peers
    c. by yourself
15. If you want to add anything concerning writing assessment, please do (comments, suggestions)

Appendix B: Semi-structured interview
1. What is your attitude towards self-assessment?
2. How did you find the use of portfolios in writing?
3. In which way did it help you?
4. Did self-assessment through portfolios enhance your writing abilities?
5. In which areas?
6. Were conferences with the teacher helpful for you? In which way?