

Burj Khalifa



SPSE Reading & Writing Test

Question: *Making reference to the points made in texts 1,2,3 outline the situation and problem(s), summarise the solutions suggested and evaluate their effectiveness. Write between 400-600 words.*

Teacher's Notes

Reading & Writing Text - SPSE

Time: 1:30 – 2:00 hours

Level: ***/[B2/C1]**

Lesson Plan

Aim: to develop the students' ability to read three academic texts and highlight key points connected to background, problems, solutions and evaluation. Then to write a 400-600 word SPSE text around those key points using paraphrasing and referencing skills.

1. Lead in

- Name some famous Sky Scrapers.
- Examples: *Burj Khalifa (828m), Shanghai Tower (632m), Taipei 101 (503m), Shanghai Financial Centre (493m), Petronas Towers (451m), Empire state Building (381m)*
- Focus on Burj Khalifa – Where is it? What is it? Any other information?

2. SPSE Revision

- Remind students about what is a SPSE essay.
- Go here: <https://www.academic-englishuk.com/spse> (Models / Language).

3. Question

Making reference to the points made in texts 1,2,3 outline the situation and problem(s), summarise the solutions suggested and evaluate their effectiveness. Write between 400-600 words.

4. Outline

Ask students to use the outline to take notes around the texts and then use that outline to write the SPSE essay.

5. Time

Depends on the level of students (high-level students – 1:30 hours / lower level 2:00 hours) or as an exam 2:00 hours.

6. Feedback

Give students the answer outline & modal answer and/or take in and mark.

Use error correction code: <https://www.academic-englishuk.com/error-correction>

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Burj Khalifa: The Project

Text 1: by Atkinson (2009)

The UAE, located in Middle East, is the third largest oil-producing country in the world. Currently, and over the past few years, a variety of construction projects have been taking place in the UAE. This is especially true of Dubai, [REDACTED] one of the seven emirate states of the UAE. Dubai has become a significant emerging economy in recent years and has also become a popular tourist attraction for visitors to the Middle East. Dubai has also become famous for its many skyscrapers. One of the most impressive of those towers is [REDACTED] period from 2004 to 2009. Originally named 'Burj Dubai', it was renamed 'Khalifa' in tribute to Sheik Khalifa Bin Zayed al Nahayah; ruler of Abu Dhabi, who provided a [REDACTED] of construction projects suffered financial difficulties and bankruptcy.

The Burj Khalifa was designed to be a milestone of ingenuity, inspiration and achievement. An architectural characteristic of the tower is that it represents a flower on the desert to express a sense of national characteristic and Islamic culture. Technically, [REDACTED] and steel frame. This planning phase had to overcome wind resistance at high altitude and this was achieved through adopting a Y-typed plan shape base (Figure 1) and spiralling construction patterns (Figure 2). From a functional point of view, the Burj Khalifa. [REDACTED] and residential use. The project implemented a new construction technology called the "3-day cycle", a method which aims to raise the entire construction one story every three days. [REDACTED] The distinctive features of the build are mainly attributed to the project management team and their efficiency in the fabrication of build quality.

Figure 1: Y-Type Base

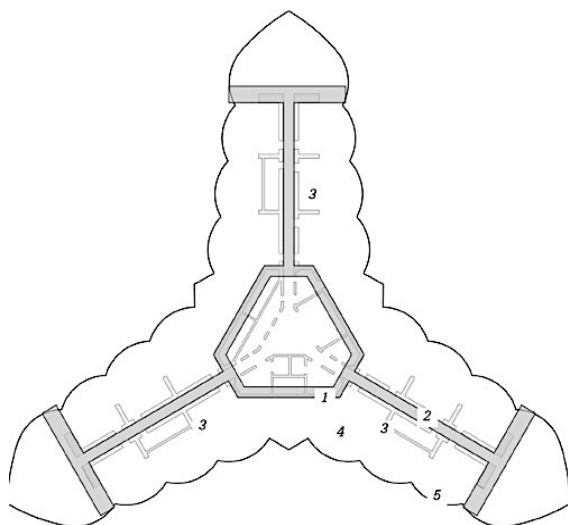
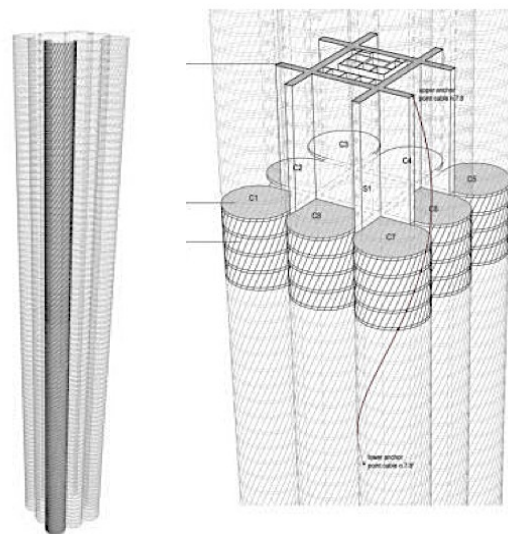


Figure 2: Spiral Construction Pattern



Burj Khalifa: Project Failure

Text 2: by Dobson (2011)

The internal measure of project success may be whether the project has accomplished what it was supposed to accomplish. The important aspect is that an evaluation of the project should focus on the whole process from the planning phase to the outcome. [REDACTED], a criterion which measures the project based on three perspectives: cost, time and quality. Using this evaluating criterion it deems the Burj Khalifa as a failure as a project. From the point of view of cost, [REDACTED]. The final cost, however, was approximately \$1.5bn. This rise was attributed to the prices of raw materials had gone up significantly due to the downturn of the global economy in 2008. According to the report of Global Informinel (2008), [REDACTED]. In addition, changes in design were also responsible. The final height of the building was reconstructed becoming 100 meters higher than the original design. Also, the Armani hotel chain demanded interior design planning changes to be more luxurious. These alterations decreased the project's earned value compared to initial plan and cost. The project's cost management was a significant failure.

Regarding time, originally the duration of project was set for forty-seven months, starting from February 2005 to December 2008, although excluding excavation time. However, the Burj Khalifa project was completed nine months later, on September 2009. [REDACTED]. This was called the "Dubai shock", and was caused by the bubble in real estate investment. As a result, this economic decline halted construction for four months in 2008.

With regards to quality, the main constructor, Samsung engineering and Besix, introduced new technologies based on previous experiences with tall building construction. [REDACTED]. To achieve this successfully, the engineers did a multitude of practice tests prior to the construction of the tower. This testing phase was important because it allowed engineers to plan according to successful test-case studies. If these tests were not carried out, and problems were found later during the construction of the building, [REDACTED] the cost of the project might have increased significantly. From the point of quality, the project is successful.

Burj Khalifa: Project Planning

Text 3: by Barkley (2012)

It is a well-known fact that increasing the duration of the project increases the probability of risk. There was a serious economic deterioration from 2008 in Dubai. It therefore seems questionable on the rationale to raise the height of the building as Burj Khalifa already reached the world's tallest building at September 2007. [REDACTED]

[REDACTED] This would also include meeting Armani's demands too. A much more pragmatic, and certainly much more affordable decision, would have been to stay with the original plan.

Although this project was successful in meeting many parameters, it failed the two objectives of time and costs. In other words, the project was not able to meet the expectations of the shareholders' and criticised as a failure. [REDACTED]

[REDACTED]. It is argued that even though the concept of the project is right, if a planning and execution is not adequate, this can still diminish its profitability. Thus, fully negotiated planning is recommended because repeated changes of plan eventually increase risk to customers. Indeed, a continuously reviewed project plan [REDACTED] in raw materials can maximize the effectiveness of the project. Of course, world economic dips, recession and price fluctuations are incredibly difficult to predict and balance.

Success should not be solely measured through Project Evaluating Criterion [REDACTED] [REDACTED] impressive architectural ingenuity and innovative engineering in succeeding such a flamboyant project, which in turn has greatly influenced construction technology. At present being the world's tallest building, breaking eight world records, encourages tourism [REDACTED] [REDACTED] to the area resulting in significant socio-economic prosperity and proclaiming to the world that Dubai is a major emerging economy. A final point is the Sydney Opera House (Figure 3) went sixteen times over budget and took 12 months longer to complete but no one ever says this was a failure. Only time will tell.

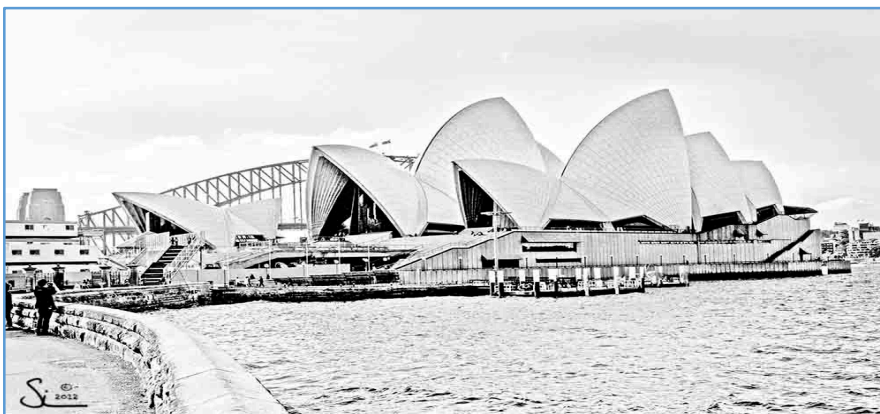


Figure 3:
Sydney Opera House

SPSE Outline

<u>Situation</u>	
<u>Problems</u>	<u>Solutions</u>
<u>Evaluation</u>	
<u>Conclusion</u>	

Outline Answers

<p><u>Situation</u></p> <p>Middle East / UAE. Dubai / Burj Khalifa. [redacted] skyscraper. 160 stories / leisure / business / residential. (Atkinson 2009) Construction technology. (Atkinson 2009) [redacted] - failure on cost & time. (Dobson, 2011)</p>	
<p><u>Problems</u></p> <ol style="list-style-type: none"> 1. Money – [redacted] 2008 economic crisis. (Dobson, 2011) 2. Wind resistance (Atkinson 2009) 3. Concrete [redacted] (Atkinson 2009) Project Failure – (cost / time) 4. <u>Cost:</u> (\$876m = \$1.5bn – raw materials / 2008 crisis / [redacted] change / Armani Chain. (Dobson, 2011) 5. <u>Time:</u> (9 months over 2005 – 2008 = 2005 – 2009. [redacted] = 4 months no work. (Dobson, 2011) 	<p><u>Solutions</u></p> <ol style="list-style-type: none"> 1. Sheik Khalifa [redacted] package. (Atkinson 2009) 2. Y-shaped base / spiralling. (Atkinson 2009) 3. Worked at night. (Atkinson 2009) 4. Better plan (a plan that predicts changes in world economies) changing [redacted] and adding luxury was a mistake in 2008. (Barkley, 2012) 5. Same as 4.
<p><u>Evaluation</u></p> <p>Failure in project design properties but not necessarily [redacted]. (Barkley, 2012)</p> <p>Sheik [redacted] = finish build (Atkinson 2009)</p> <p>Could you predict financial crisis? (Barkley, 2012)</p> <p>Y-shape base structure & spiralling help wind resistance. (Atkinson 2009)</p>	<p>Well-managed project team. (Dobson, 2011)</p> <p>Tallest building: [redacted] & influenced construction. (Barkley, 2012)</p> <p>Increase in business & tourism (Barkley, 2012)</p> <p>Economic benefits / [redacted]. (Barkley, 2012)</p>
<p><u>Conclusion</u></p> <p>Time [redacted]. (Barkley, 2012)</p> <p>Sydney Opera house example. (Barkley, 2012)</p>	

Burj Khalifa Model Answer

Dubai, in the UAE, has recently built the tallest skyscraper in the world called the 'Burj Khalifa'. It aspires to a height of 828m, has 160 stories and its innovative construction has changed construction technology, paving the way for a future of impressively high skyscrapers.

when constructing such a high building that included using reinforced concrete, a y-shape base and spiraling constructive patterns (Atkinson, 2011). However, Dobson (2012) argues under the theory of the 'Iron Triangle', which analyses cost, time and quality. This essay will discuss the main problems of failure, offer suitable solution and then evaluate their effectiveness.

There are two main problems with the construction of Burj Khalifa, which are cost and time. The first problem of cost was that the initial was projected at \$876m, however the final cost was \$1.5bn. According to Dobson (2012), 75% (Global Informinel as cited in Dobson, 2012). Nevertheless, changes in design were also responsible, when the plans were changed mid-project to make the skyscraper 100m taller, and more luxurious (Dobson, 2012). It is important to highlight that these changes at a time of economic downturn placed the project into financial difficulty and Sheik Khalifa, (Atkinson, 2011). The second problem was the project went over time by nine months. Dobson (2012) highlights that the 'deteriorating economic conditions caused delay' and as a result 'halted construction for four months'. Barkley (2012) claims that increasing duration can incur further costs and the probability of risk.

There are a number possible solutions that could have been implemented to prevent the building project from failure. According to Barkley (2012), the financial crisis of 2008 was difficult to . Barkley (2012) asserts that if the planners had stayed with the original plan and not raised the height or met Armani's luxury demand, then it is probable the project would have stayed in budget and not gone into near bankruptcy. Another clear solution is the , follow prices of raw material and look for economic instability, this in turn will guide the project in buying materials and maximising efficiency (Barkley, 2012).

With better project management, adhering to the original plan in times of economic uncertainty and a range of planning parameters in place there is the possibility the project would have been a success in project criterion of the Iron Triangle. and in depth planning and review may still not indicate volatile changes. Overall, it is debatable whether the Burj Khalifa was a failure (Barkley, 2012). To evaluate success on three main criteria is The project was completed, has improved tourism and economic prosperity (ibid) and shown the world that Dubai is at the forefront in engineering construction technology. It would be important to highlight that the . [553 words]