“Table of specifications” is a typical test blueprint presented in a two-way matrix with the content areas listed in the table rows and the cognitive processes (Bloom’s Taxonomy of cognitive levels) in the table columns. (Bachman and Palmer, 1996).

- It is a representative sample of:
  - 1. the course content
  - 2. the skills
  - 3. the cognitive levels across content

Why is the table of specification important?

1. It allows the teacher to construct a fair test which focuses on the key areas in the book.
2. It weighs those different areas based on their importance.
3. It specifies the number or proportion of items that are planned to be included on each test form for each content area.
3. It provides the teacher with evidence that a test has \textit{content validity}, that it covers what should be covered. (Wolming and wikstrom, 2010). It helps to ensure that there is a match between what is taught and what is tested.

4. It guides test constructor to the development of the test marking scheme.

\textbf{Steps of constructing a table of specification}

1. Determine the contents or objectives of the unit.
2. Determine the time (hours, or minutes) you spent to achieve each objective.
3. Determine the total number of test items.
4. Write the total number of items in the last cell in the matrix.
5. Determine the number of items per topic or content area.
6. Determine the percentages you need to give to the questions that assess students’ cognitive levels according to Bloom’s Taxonomy.

\textbf{How to calculate the weight of the cognitive objectives?}

1. The number of objectives that measure Knowledge in one lesson divided by the total number of objectives in one lecture multiplied by 100%.

Or

2. The number of minutes given to achieve the objectives at knowledge level of one lesson divided by the time allotted to the whole lecture multiplied by 100%.
How to calculate the weight of the topics in the content?

The number of objectives for a topic divided by the number of objectives of the whole course multiplied by 100.

e.g. Suppose that the unit total objectives are 10, reading comprehension objectives are 5; the objective of teaching infinitive of purpose is only one, so:

\[
\frac{5}{10} \times 100 = \underline{50}\%
\]

Or

The Number of pages of a specific topic divided by the number of the pages of the whole unit multiplied by 100.

Example of calculating the weight of reading comprehension and grammar in the exam:

The time spent to teach a specific topic divided by the total time spent to teach the whole course multiplied by 100%.

e.g. We teach reading and writing for 70 hours (35hrs*2) per term. Almost 45 hours to teach reading, Reading comprehension and vocabulary 25hrs, and 10hrs to teach grammar, so

\[
\frac{25}{70} \times 100 = 35\% \text{ the weight of reading and vocabulary.}
\]

\[
\frac{10}{70} \times 100 = 14\% \text{ the weight grammar}
\]

So could we give the same marks for all the skills?! Do reading comprehension and grammar have the same weight in the exam?!!
Bloom’s Taxonomy of cognitive objectives:

It is a classification of the levels of thinking (low-order thinking skills (LOTS), higher-order thinking skills (HOTS) that determine

1. the objectives of the syllabus, the unit or the lesson.
2. the types of tests questions.
3. the activities used in educational settings.
Bloom’s Taxonomy of Cognitive Objectives: (Source: Internet Websites)

- **Knowledge**: Observation and recall of information, knowledge of dates, events, places, knowledge of major ideas. (who, where, when)
**Comprehension:** Understand information, grasp meaning, translate knowledge into new context, interpret facts, compare, contrast, order and group, classify, and predict consequences.

**Application:** Use information; use methods, concepts, theories in new situations, solve problems using required skills or knowledge.

• **Analysis:** Seeing patterns, organization of parts, recognition of hidden meanings, identification of components

**Synthesis:** Use old ideas to create new ones, generalize from given facts, relate knowledge from several areas, predict, and draw conclusions

**Evaluation:** Compare and discriminate between ideas, assess value of theories, presentations, make choices based on reasoned argument, make judgments and express points of view
Verbs used to write the cognitive objectives/test questions

**Knowledge**: arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce, state.

**Comprehension**: classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate

**Application**: apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.

**Analysis**: analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.

**Synthesis**: arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.

**Evaluation**: appraise, argue, assess, attach, choose, compare, defend, estimate, judge, predict, rate, core, select, support, value, evaluate.