

# How it works from different grammar view

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## 1 Review

### 1.1 Question

Please review the following three different ways to express the similar meaning, and give your understanding of the difference.

1. **Writing is how we know what it is that we know**
2. **Writing is how we know what it is**
3. **Writing is how we know what we know**

### 1.2 Solution

According to my understanding:

1. The first one emphasise that writing is **exactly** the thing that we know, this sentence points out the ‘it’ in way so that we can notice the object that followed the word ‘know’. In this way, the reader of this sentence can understand that writing is **just** the way that we express our knowledge to others.

2. The second one is quite similar to the first one except that it misses the “that we know” part, so it not as clear as the first part, because we cannot get the exact meaning of ‘it’, and there is no effect to make it clear what is writing. Because ‘what it is’ just states the real effect, but not include our understanding. So the meaning behind this sentence is a little different from the first one.

3. The third one is more clear than the second one, because it points out that the object is ‘what we know’, but as I pointed out in the first sentence, the 1st one has an emphasis, and this one doesn’t, so I preferred the first one that has better expressing ability.

## 2 Writing

### 2.1 Question

Please write a paragraph that describe your research area and topic.

## **2.2 Solution**

### **2.2.1 Raw**

My research area covers a wide variety of topics, including mobile computing, machine learning and especially the deep learning area. The main task of my research focus is to ingredient the machine learning techniques and mobile system to form a highly efficient system to apply in specific scenarios, like doing food calorie estimation, X-ray nodule detection or other tasks. But the main advantage of my research is that we can use our smart phone or smart watch at hand to perform some complex task to monitor human health and improve the condition of our current infrastructures. The most challenging tasks is that we want to use the complex deep learning methods, especially the neuron network algorithms to achieve the state-of-art precision with the constrain of low computing and power-consumption in the mobile device and high response time and final result from the server side.

### **2.2.2 New**