Abstract

The prime interest of the present research is in investigating how a test item could be developed so that it elicits a reading performance that allows teachers and language testers to make useful interpretations and generalizations about test taker’s reading ability.

In the field of language testing research, striving attempts have been made in developing the means to effectively elicit different traits that constitute learner’s language ability. A theoretical hypothesis about these traits is called “construct.” Many theories are provided in the research community on how these “constructs” could be illustrated, and it seems that, in essence, there are two ways in which this process of defining construct is approached: one that is “competence-based” and another “performance-based.” (i.e. Messick 1988, Bachman and Palmer 1996, Chappelle 1998) The former approach maintains that the process of designing, developing and using language tests should incorporate both specifying the test items to be included and defining the abilities to be measured (i.e. construct) (Bachman and Palmer 1996; Brown 1996; Alderson 2000; Douglas 2000). The latter approach requires so far as to defining the tasks embedded in the context (i.e. content).

When the reading construct is sought for the purpose of reading test item development, the present research proposes employing the “competence” approach. With the incentive of test item development being in constructing test items that accommodate generalizations of the results and predictions about what sort of reading activities the test taker might be able to do, it is vital that the structure of competence latent under the elicited performance is illustrated in defining the construct.

Wada (2003), inspired by Negishi (1996), in the factor analytic study of reading tests given to EFL learners in Japan, observed that the reading ability could be broken down into components described by the “local/global comprehension” dimension and the “literal/inferential comprehension” dimension, suggesting the validity of “question types” that elicit “local/literal”, “local/inferential” and “global/local” types of reading. As a way to describe an item with respect to “competence” approach, this ‘two-dimensional approach’ to reading ability which was derived from factor analytic studies in Wada (2003) seems appealing.
If different performances of reading which are elicited by different test items were to be termed as a ‘qualitative’ perspective of a test item, the ‘quantitative’ perspective would be their difficulty that are assigned to those performances. In an attempt to cast light on the quantitative side of a test item, it is essential that this is also done from the perspective of competence approach. The interest is posed on the difficulty of each element that constitutes certain performance since it is aiming for an accountability of ‘why’ or ‘how’ the item has come to possess the difficulty indicated. If the difficulty of each element could be specified, then the prediction of difficulty for test items, and thus their quantification, becomes possible. For this end, the search into the difficulty of each ‘element’ becomes requisite.

Therefore, the investigation of the present research was twofold. First, it proposed the concept of “question types” as a possible notion that illustrates underlying components that constitute a reading performance and makes an attempt to validate the idea with respect to test taker’s difference in ability. Furthermore, for the purpose of investigating into how this concept could be implemented in constructing a test item to quantify test taker’s ability, a link between ‘question types’ and item difficulty was sought. The data was collected from EFL learners of senior high school and university in Japan on the ground that these populations exhibit the level of English ability attained in secondary education of Japan.

With regard to the investigation into possible components constituting reading performances, the factor analytic studies revealed three elements. For the group of students who were given test items with the difficulty equivalent to their level, whether it was with lower or upper level students, the “item position” of where an item appears in a test set became the prime influence. This “item position” factor could be attributed to either the “speed” or “concentration” factor of test takers. From this evidence, it was suggested that with level of test takers who are given test items that bear difficulty that are equivalent of their ability level, the aspect of where an item is located in the test set has a greater influence on their reading performance than other components such as question types.

For the group of upper level students who were given items with the difficulty lower than their ability level, “local/global” factor was perceived to be the first factor. This result gave evidence that, for this group, the aspect of whether a test item elicits an integrated understanding or an understanding of a smaller part has a decisive influence on their reading
performance.

For the group of lower students who were given test items with the difficulty equivalent to their level and upper students with items lower than their ability level, the second factor was perceived to be the "inferential" comprehension element of reading performance. For the upper students with equivalent level items, it was termed "local-inferential".

What became evident from these findings along with other evidences that emerged in this part of study was that it is very difficult, and perhaps invalid, to specify types of reading performance an item is expected to elicit in the item construction process, a stage a priori to the actual test implementation. Meanwhile, since the results from the factor analytic studies suggest that it is valid to assume the existence of different reading types such as "local/global" or "literal/inferential", it may be valid to assume "question type" as a component in L2 reading performance if these question types are validated a posteriori in a pilot study with sufficient number of subjects for sufficient number of times, which implies the validity and significance of item banking under the framework of question types.

As for the validity of assuming a certain relationship between "question types" and item difficulty, such relationships could only be found for "literal/inferential" aspect of reading performance. For the group of lower students who were given test items with the difficulty equivalent to their level, "literal" items seem to pose more difficulty than "inferential" items, while, for the group of upper level students who were given items with the difficulty lower than their ability level, "inferential" items seem to pose more difficulty than "literal" items. These evidences suggest that it is relevant to assume the existence of a relationship between item difficulty and question types and that that relationship changes with regard to their level. Furthermore, the fact that such a paradox that, although the two groups were given the same items, the relationship between item difficulty and the question types had turned out to be different leads the present research to affirm the notion that the test takers with different reading ability perform different types of reading performance to solve the same item. Furthermore, though a further research is required to confirm its validity, this could suggest that, for lower students, whether one can make inferences from certain amount of information becomes a threshold in successfully answering items, while, for upper students, that threshold stands as whether they can integrate information take from rather a large amount of
information. In this case, for upper level students, it is granted that they have achieved certain ability in conducting “inferential” type of reading, making this factor the second in its impact. These shifts in question types with regard to groups of different reading abilities could be interpreted to suggest a possibility that a particular sequence could be found in lining the question types as elements of reading performances with regard to test takers’ reading abilities.