Integrating Multiple Intelligence Test into Diagnostic Assessment in ELT

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Abstract: English learning in *Merdeka* Curriculum has important role to explore and complete students' competencies to reach the learning objectives which is *Profil Pelajar Pancasila.* By discovering students' interests, character and abilities through diagnostic assessment, teacher will be able to design the learning style which is suitable to maximize students' each ability. Multiple Intelligence Test can analyze and classify students' interests into 8 groups: (1) Visual - Spatial; (2) Musical; (3) Kinesthetic; (4) Interpersonal; (5) Verbal - Linguistic; (6) Logical - Mathematic; (7) Naturalist; (8) Intrapersonal. This is qualitative research by using phenomenological approach. By classifying 3 dominant characters for each students, this test were applied to 32 students in Class 10 SMK Negeri 1 Karangdadap, and based on the result it was found 3 dominant chareacters of the students, they are: (a) Visual 75% (24 Students), (b) Kinesthetic 65,6% (21 Students), and (c) Naturalist 71,8% (23 Students). Based on these result, teacher can develop the learning strategies which suitable for their students. This research also revealed some practical learning method in studying English Language by the teacher to maximize students competences by adjusting their dominant interests.

Keywords: Diagnostic Assessment, Multiple Intelligence Test.

INTRODUCTION

The implementation of Merdeka Curriculum in the education system in Indonesia is currently the main agenda in the government's programme to improve the quality of education after learning loss during the pandemic. The Pancasila Learner Profile is used as a standard of student competence in Indonesia where each educational unit in organising educational activities must reflect the criteria in the Pancasila Profile in Indonesia, English is still considered a foreign language and makes it one of the lessons that are considered difficult and feared by teenage students in Indonesia. In learning English, it is very important to be able to make students interested and interested in the English language (M. Aditama, R. Amelia, 2022). It was very important for teachers to be able to know the characteristics, interests and talents of each student so that later they can design appropriate learning and fulfil the needs of each students who are different.

Assessement

One of the key points in Merdeka Curriculum implementation was the application of assessment in the learning process. Especially in English, there are four basic skills that students must master in order to compete: speaking, listening, reading and writing. Applying appropriate learning and assessment methods is critical to achieving set learning outcomes and goals (Sugiri, W. A., & Priatmoko, 2020)

There are three forms of her application of assessment in learning: (1) diagnostic assessment, (2) formative assessment, and (3) summative assessment. The application of meaningful learning during the Merdeka Berajar era maximizes the relationship between students, teachers and parents (Aditama et al., 2021). These skills are applied while conforming to Pancasila's student profile: faith, piety, noble morals, critical thinking, independence and creativity. The application of assessment is very helpful for teachers to guide their

students to achieve higher academic performance (Ningrum et al., 2021) not only to measure student skills, but to develop them (Fatmadiwi et al., 2022).

Diagnostic assessment

Diagnostic assessment is a form of pre-assessment that allows schools to assess a student's strengths, interests, weaknesses, knowledge, and skills before classes officially begin. Institutions therefore assess students' understanding of a topic to determine where to start delivering learning content. Assessment results also help provide corrective action directly to students who need it, so you can follow the learning of other students.

The diagnostic assessment consists of a series of written questions (multiple choice or short answers) that assess the current knowledge base on the topic/topic under study. Diagnostic assessment can take the form of tasks at the beginning (pre-test) and at the end (post-test) of learning. In other words, diagnostic assessment focuses on the student's understanding of the material before it is presented/taught to the student and after the material is presented/taught (Earl Lorna, 2003).

Multiple Intelligence

In an effort to find out the background, interests, talents and interests of students through diagnosis tests, here researchers use the principle of multiple intelligence designed in a test to map student characteristics. Multiple intelligence is Howard Gardner's term to show that humans basically have many intelligences, not only limited to IQ as it is known so far. According to Gardner, there are at least nine intelligences (as stated above) possessed by humans, namely linguistic intelligence, mathematical-logical intelligence, visual spatial intelligence, bodily kinesthetic intelligence, musical intelligence, inter-personal intelligence, and intra-personal intelligence, naturalist intelligence, and existential intelligence (Syarifah, 2019).

1. Linguistic Intelligence

   Armstrong, (2012) expressed that linguistic intelligence or word smart is an ability to use words effectively. In school learning activities, according to Thomas Armstrong, shows that this linguistic intelligence covers at least two-thirds of teaching-learning interactions that include reading and writing activities. In these two activities (reading and writing), there is a wide range of linguistic abilities because they include spelling, vocabulary, and grammar.

2. Logical-Mathematical Intelligence

   According to Gardner (2017), mathematical-logical intelligence was an ability that is more related to the effective use of numbers and logic, as possessed by mathematicians, scientists, programmers, and logicians. Included in this intelligence is sensitivity to logical patterns, abstraction, categorisation, and calculation.

3. Spatial Intelligence (Visual/Spatial Intelligence)

   Spatial intelligence, according to Gardner (2017) is the ability to provide images and imagery, as well as the ability to transform the visual-spatial world, including the ability to produce mental images and create graphic representations, think three-dimensionally, and recreate the visual world.
   Therefore, the core of this intelligence is the sensitivity to perceive (feel) the spatial-visual world accurately and transform one's initial perception.

4. Kinesthetic Intelligence

   Howard Gardner in Syarifah (2019) bodily-kinesthetic intelligence as the ability to use the body or gestures to express ideas and feelings. This includes coordination skills and body flexibility. Lwin, May, dkk., (2018) stated that this ability is generally referred to as psychomotor skills that combine mental inter-presentation with physical responses. It also refers to the ability to coordinate one's body parts with the brain to function in synchrony to achieve physical goals.

5. Musical Intelligence

The ability to develop, express, and enjoy musical forms and sounds. and sound. In addition, according to Gunawan (2016) musical intelligence also includes the ability to observe, distinguish, compose, and form musical forms, sensitivity to rhythm, melody, and timbre of the music heard.

6. Interpersonal Intelligence
The ability to understand and be sensitive to the feelings, intentions, motivations, dispositions, and temperaments of others. Temperament of others, sensitivity to other people's facial expressions, voices, and gestures. In addition to the ability to understand and predict other people's feelings, temperaments, moods, intentions, and desires, interpersonal intelligence according to Lwin, May, dkk., (2018) also involves the ability to respond appropriately to other people's conditions.

7. Intrapersonal Intelligence
This intelligence includes the ability to reflect and balance oneself, to have a high awareness of one's ideas, to have the ability to make personal decisions, to be aware of one's life goals, and to regulate one's own feelings and emotions. People who have high intelligence in this area are people who are able to be their true selves.

8. Naturalist Intelligence
A person's ability to understand flora and fauna well, to make other consequential distinctions in the natural world; the ability to understand and enjoy nature and to use that ability productively in farming, hunting, and developing other natural knowledge.

There are several studies on multiple intelligences conducted, including Fauzi, H., Yusnita, Y., Sugito, W., Yurnalis, Y., & Santoso (2023). Researching on improving student learning outcomes using multiple intelligence-based learning strategies in elementary school thematic subjects, and Ardiana (2022) which examines Multiple Intelligence-Based Learning in Early Childhood Education. The previous researcher examined the application of multiple intelligence-based learning in basic education and early education. Here the current study expects to discover the application of multiple intelligence as the instrument in conducting diagnostic assessment in the Merdeka Curriculum era.

Taking the basis and phenomena above, the objectives of this study are: (1) To classify the Multiple Intelligence characters of the students in the implementation of Diagnostic Assessment in English Language Teaching. (2) To describe the dominant type of students' charecteristics and the way teacher designed the Learning method.

METHOD

It is a qualitative research approach, a research based on post-positivism that studies natural objects (Sugiyono, 2017). The use of phenomenological methods is gaining increasing recognition in research as it attempts to explain natural phenomena by emphasizing the meanings, perspectives and experiences of participants (Al-Busaidi, 2008). Phenomenological approach tempted to explore the experience of the subject data (M. Aditama, R. Amelia, 2022). This study aims to examine and describe students' Multiple Intelligence characters in the implementation of Diagnostic Assessments in Merdeka Curriculum.

The data collection technique used in this study was a questionnaire, interview and observation aimed at 32 students in Class 10 SMK Negeri 1 Karangdadap. The questionaires which consist of several questions representing each characteristic in multiple intelligences.

Each criterion is represented by 10 questions, then students are asked to answer each question with a range of 1 - 5. After completion and calculation, the 3 criteria that have the highest score are classified which can be considered as the 3 characteristics of the individual. To support the results of the questionnaire, interviews were conducted with students, as well as observations of student behaviour during learning.. the source of the data is recorded in the form of a form that are applied by the subject. Data analysis was carried

out through the following steps: 1) data reduction, 2) data presentation, and 3) drawing conclusions (Sugiyono., 2019)

RESULTS AND DISCUSSION

The implementation of Multiple Intelligence test as diagnostic assessment for students in SMK Negeri 1 Karangdadap was done by using questionnaire which representing the criteria in the multiple intelligence. Based on the result of students' answer in the questionnaire, it was found the students' character and interest in doing something.

Classification of Students' Multiple Intelligence Character

Based on the result, from 32 students of the subject data, it was found the result:

No	Character	Number of Students	Percentage
1	Visual – Spatial	**24**	**75%**
2	Musical	15	46,87%
3	Kinesthetic	**21**	**65,6%**
4	Interpersonal	16	50%
5	Verbal - Linguistic	12	37,5%
6	Logical – Mathematic	17	53,12%
7	Naturalist	**23**	**71,8%**
8	Intrapersonal	9	28,12%

Table 1: Classification Multiple Intelligence Character of the students

Based on the Table 1, we can find the 3 dominant characters own by students, they are : Visual 75% (24 Students), Kinesthetic 65,6% (21 Students), and Naturalist 71,8% (23 Students).

The dominant Characters own by students.

Based on the result of implementation of Multiple Intelligence test in the diagnostic assessment which applied to students' class 10 in SMK Negeri 1 Karangdadap, there are 3 most dominant criteria own by students, each of them had different treatment and way of teaching. The dominant criteria own by students are:

1. Visual

   There are 24 of 32 students who have this criterion. It means the ability to think 2 or 3 dimensionally, including an understanding of shape and space as well as the relationship between objects in a room, having a sense of direction or specific location (Fauzi, H., Yusnita, Y., Sugito, W., Yurnalis, Y., & Santoso, 2023).

   Visual-spatial intelligence allows people to imagine geometric or three-dimensional shapes more easily because they are able to accurately perceive the spatial world and transform these perceptions including the capacity to visualize, to present visuals with graphs or spatial ideas, and to orient oneself in space appropriately.

   Supported by the interview result to the teacher, the learning strategy which applied to the students with this criterion is with learning using teaching aids. The use of problem-based learning and project-based learning methods are very effective in providing learning to students with visual interest.

2. Kinesthetic

   There were 21 students who has interest in moving their body. The ability to use gestures or move with great precision and express ideas or feelings through specific movements (Ardiana, 2022).

   Children with above-average movement intelligence love to move and touch. They have control over movement, balance, agility and grace in movement, and explore the world with their muscles.

   Based on the teacher's interview result, the use of adventure type of learning method was very effective to stimulate students in developing ideas and ideas in learning. Project based Learning method which the topic of observation and doing experiment project were some effective learning strategies.

3. Naturalist

The 23 students who have Naturalist Character enjoy to do their activity in the nature. the ability to understand the natural world, identify and classify similarities and differences in the characteristics of flora and fauna, effectively interact with nature (Syarifah, 2019).

Children with high naturalist intelligence at a very early age already have a great fascination with the natural environment, including animals. At an older age, such children are particularly interested in biology, botany, animal science, geology, meteorology, planetology or astronomy.

Uniting with nature is a basic concept in developing the potential of students who have high naturalist intelligence. Observing in nature, exploring and solving phenomena that occur in the surrounding environment is a fun challenge that can be done by students as an effective learning strategy (Aditama & Sugiharto, 2021).

CONCLUSION

The multiple intelligence test which classifies human character and interests into 8 criteria can map human habits. Diagnostic assessment is carried out as a form of initial observation to find out the basic character possessed by each individual, providing results and an initial picture to plan strategies and future steps. The results of the assessment using the multiple intelligence test on grade 10 students of SMK Negeri 1 Karangdadap provide results where there are 3 dominant criteria possessed by students, namely visual, kinesthetic, and naturalist. With the results and description of the data, teachers can design learning plans with the right strategies and methods. Project based learning is considered to be the most effective method to maximize the potential of students in the class where there are 3 dominant characters. adjusting concepts, topics and strategies with the surrounding environment that is familiar to students can have a positive influence on the level of understanding of the rest in learning. With the right strategies, methods and steps learning becomes fun and empowering.

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