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Workshop on Assistance for Subject Teachers for Science Subject Develop A Diagnostic Assessment

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Abstract

School Indonesia Kuala Lumpur (SIKL) has a strategic role and is at the forefront of educational diplomacy in Malaysia in the context of Indonesian human resource (HR) development based on Pancasila and the 1945 Constitution. Since its founding on July 10 1969, SIKL has consistently taken part in providing education services to the Indonesian community in Malaysia which refers to the basis of national education. The service is carried out to answer and solve the problems faced by the partners of the Kuala Lumpur Indonesian School. The solution offered by the service team to partners to overcome the problems encountered is in the form of a diagnostic assessment development workshop. The method of carrying out activities is to use the Technology, Paedagogy, learning model. and Content Knowledge (TPACK) which is the model used in the workshop and continued online. The TPACK model consists of 4 steps, namely: Understanding (P), observation-instruction (O), instruction practice (L), reflection (R). The result of the activity is an increase in science teachers' knowledge and skills in developing diagnostic assessments such as assessment of learning styles, interests and talents, and learning readiness.

Keywords: Assessment, Diagnostic

INTRODUCTION

Indonesian School Kuala Lumpur (SIKL) is one of the Indonesian Schools Abroad (SILN)

in 11 countries spread throughout the world. The Kuala Lumpur Indonesian School (SIKL) was founded on July 10 1969, located at No. 1 Lorong Tun Ismail 50480, federal territory of Kuala Lumpur Malaysia. SKIL consistently takes part in providing educational services to the Indonesian community in Malaysia which refers to the basis of national education. SIKL has a dual role in preserving and promoting Indonesian culture among Malaysian society, even to the people of friendly countries. The Kuala Lumpur Indonesian School (SIKL) is under the auspices of the Indonesian Embassy (KBRI) Kuala Lumpur, which always pursues achievement and quality of education,

Education at school plays an important role in developing students' interests and talents so that they can develop optimally. Every student has various interests and talents in different things. According to Adi Sulistiano (2015), each student has a different level of personality so that each student must have different learning tips and techniques in the learning process. Personality has a positive influence on the learning outcomes that students will obtain. In this way, the information related to learning that students will obtain will be maximized.

Mastery of the concept is needed by students both students and students. Factors forming the concept of students include obtained from daily experience and the educational process. The different experience factors of students make them have concepts that are in accordance with or different from the concepts of scientists (Karniawati, 2019). Concepts that come out of students' minds are often different and different from scientific concepts in accordance with science. Differences in the concepts that students have towards scientific concepts are referred to as misconceptions (Onol, 2012).

Misconceptions regarding basic science ideas and subsequent more complex concepts have a significant impact on student learning processes and outcomes (Kirbulut & Geban, 2014). Students construct concepts in their minds through their own observations and the results are made into scientific truth in a meaningful way. They may demonstrate alternative ideas or conceptions that conflict with scientific facts during this process (Sekerci, 2015). Because physics is a predominantly conceptual discipline with many abstract ideas and formulas, students sometimes develop misconceptions about abstract content in physics learning (Urey, 2018).

Quoting from the website of the Ministry of Education and Culture of the Republic of Indonesia (KEMNDIKBUD, 2023) diagnostic assessment is an assessment carried out specifically to identify students' competencies, strengths and weaknesses so that learning can be designed according to the students' competencies and conditions. Students whose development or learning outcomes are the highest based on the results of diagnostic assessments can be given affirmative

assistance. This is useful so that later all students have the same level of understanding of the material, so that there are no more gaps between students. While assessment is the process of collecting and processing information to determine learning needs,

According to Salma (2016), a diagnostic assessment is used to find strengths and weaknesses. According to Sulastri (2019) Diagnostic assessments are carried out continuously to monitor processes, progress and improve results, but this cannot be implemented due to the impact of the pandemic which requires learning from home where there are many obstacles, including the large burden of the curriculum, lack of lesson hours, as well as a lack of time and effort (Sulastri et al., 2019).

The results of the diagnostic assessment can be used as a basis for providing follow-up in the form of appropriate treatment (intervention) that is appropriate to the student's weaknesses. Diagnostic assessments have characteristics, including low variability and flexible working times. Accompanied by interpretation and follow-up plans. Not only that, diagnostic assessments can also help teachers plan efficient learning. Obtain complete information about students (strengths, learning difficulties) and help design a baseline for further learning assessment (Ismail, 2015)

Experience when conducting interviews with the principals of the Indonesian Kuala Lumpur school showed that science teachers did not understand what a diagnostic assessment was. Teachers have not been able to develop diagnostic assessments because in general teachers only make evaluation questions in the form of multiple choices at levels C1 to C3 only. The results of interviews with the headmaster of the Indonesian Kuala Lumpur school, obtained information that they had never received a workshop on how to develop a diagnostic assessment. Apart from that, an interview with the principal of the Indonesian school in Kuala Lumpur managed to reveal some information. Teachers do not understand the importance of diagnostic assessment. Teachers do not yet understand how to teach diagnostic assessment. Information was disclosed that so far the assessment conducted by the science teacher at the Indonesian Kuala Lumpur School had not used a diagnostic assessment, and had not developed a diagnostic assessment. Several research results show that students' learning motivation is still low (Keziah, 2010; Chotimah, 2016; Chiang & Lee, 2016). One of the factors causing low motivation is that students' target achievement is only limited to graduating.

The facts show that the assessment of learning styles, interests and talents, and learning readiness in the learning process in Indonesia is still low, especially at the Indonesian School of Kuala Lumpur. Middle school students from elementary school to university in Indonesia are less able to develop their interests and talents. Learning styles, interests and talents as well as student

learning readiness which are still low are indirectly the impact of the learning process which does not empower diagnostic assessments.

The problem faced by partners is that they have not yet developed a diagnostic assessment. Science teachers at the Kuala Lumpur Indonesian School have never participated in and received material on how to develop diagnostic assessments so they do not know the importance of empowering diagnostic assessments for junior high school students, do not know what diagnostic assessments are like, do not know the benefits of diagnostic assessments, are not able to prepare diagnostic assessments, and have not know the form of diagnostic assessment. The priority problem that has been agreed upon is that teachers when participating in this workshop program are being able to create and compile diagnostic assessments.

The benefits that participants get after participating in this workshop are that they can increase their knowledge about diagnostic assessments carried out in classroom learning; Accepting the technical aspects of Diagnostic assessment so that it can be applied in daily learning, at least the reference is clear enough; can understand current curriculum changes, and get teaching tricks according to the applicable curriculum. Participants thought that the activities held really helped me in dealing with learning and that I could apply it to students in the independent curriculum to better understand what the independent curriculum is. After completing this activity, participants will try to apply it in learning, and will continue to learn to better understand the independent curriculum(Supriyadi et al., 2022).

The service will be carried out to answer and resolve problems faced by Kuala Lumpur Indonesian School partners. The service team will provide several solutions to partners to overcome the problems they face. The solution offered is a diagnostic assessment development workshop. The expected outcomes from the implementation of this workshop are that science teachers at the Indonesian School of Kuala Lumpur can understand the importance of empowered diagnostic assessments for junior high school students, know diagnostic assessments, know the benefits of diagnostic assessments, are able to compile diagnostic assessments, and know the forms of diagnostic assessments.

Method Implementation

This service activity took place on Monday 19 June 2023. The place where the service was carried outat the Indonesian school in Kuala Lumpur. This service uses the Technology, Pedagogy, and Content Knowledge (TPACK) learning model, a model implemented in workshops. The model includes 4 steps, namely: Comprehension (P), observation-instruction (O), instruction practice (L),

Reflection (R) (Sutrisno 2012). Using the Technology, Pedagogy, and Content Knowledge (TPACK) learning model, the service team formulates steps according to the solution and expected activity outcomes. Following are the stages of implementing this service activity:

1. The workshop will involve science teachers at the Indonesian School of Kuala Lumpur. This activity will involve Lecturers from the Biology Education Study Program, University of Muhammadiyah Makassar and 2 presenters, namely presenters in the field of diagnostic assessment development.
2. Mentoring. Implementation of guidance regarding diagnostic assessments assisted by lecturerslecturersupervise science teachers at the Kuala Lumpur Indonesian School in implementing diagnostic assessments in every learning process.

RESULTS AND DISCUSSION

This service activity took place on Monday 19 June 2023. The place where the service was carried outat the Indonesian school in Kuala Lumpur. This service uses the Technology, Pedagogy, and Content Knowledge (TPACK) learning model, a model implemented in workshops. The model includes 4 steps, namely: Understanding (P), observation-instruction (O), practice instruction (L), Reflection (R) (Sutrisno 2012). Using the Technology, Pedagogy, and Content Knowledge (TPACK) learning model, the service team formulates steps according to the solution and expected activity outcomes. The teachers who participated in the Workshop were very optimistic about following the series of activities carried out by the international collaboration service implementation team. This workshop aims to minimize student boredom in the learning process, so that there will be no students who feel bored and isolated in the learning process who just follow the process without making any effort to maximize the process. The fact is that all students have their own talents, but that talent will sleep when it is not provoked to wake up from sleep. This is why the teacher has an important role in the learning process. In the diagnostic analysis the teacher can find out how students are in their cognitive and non-cognitive ways. The results achieved in the Workshop activities are as follows: In the diagnostic analysis the teacher can find out how students are in their cognitive and non-cognitive ways. The results achieved in the Workshop activities are as follows: In the diagnostic analysis the teacher can find out how students are in their cognitive and non-cognitive ways. The results achieved in the Workshop activities are as follows:

1) Increasing the knowledge of partners, more precisely science teachers at the Indonesian School of Kuala Lumpur, through a workshop on the importance of diagnostic assessments, is empowered for student progress in the learning process.
2) Middle School science teachers at the Indonesian School in Kuala Lumpur know the form and

method of implementing diagnostic assessments, assisted by guidance from biology lecturers or related staff.

3) Science teachers at the Indonesian Middle School Kuala Lumpur, through workshops and guidance, can see the benefits of a diagnostic assessment.
4) The workshop was held as a bridge for partners or parties involved in improving the learning process by implementing diagnostic assessments. In this Workshop, Science Teachers at the Indonesian School of Kuala Lumpur Middle School gained knowledge on how to find out whether students have a better understanding of the material being taught in the learning process. The next activity is to accompany the teachers in implementing or implementing Diagnostic Analysis in the learning process, the following are the steps for the next activity:

a. Routine monitoring and assistance of the Diagnostic Assessment application process
b. Monitoring and mentoring during the learning process
c. Evaluation of diagnostic assessment results on learning
d. Publications in online mass media and the Sinta-accredited Devotion journal

Diagnostic assessments that have been prepared in joint mentoring activities with the International Collaborative Service team which are media that can collect data and information to identify, understand and evaluate student problems or conditions in the context of education or the learning process. Diagnostic assessments function to provide an accurate picture of an individual's condition so that an appropriate diagnosis can be determined, as well as assisting in planning interventions or media, models and strategies that suit the student's character.

Documentation 1. Workshop

The enthusiasm of the teachers as participants in the workshop and guidance on this

diagnostic assessment can be seen in the picture above. Apart from that, the International Collaboration Service team also provides several diagnostic assessment media as examples for teachers as tools to simplify and clarify how the form of the diagnostic assessment is. This was conveyed by the Workshop participants that the media helped us to quickly understand what was explained by the presenters and supervisors of the diagnostic assessment, different from what we can get on social media which might explain more complicated and difficult to understand.

Figure 2. Guidance and Preparation of Diagnostic Assessments

Facts how that the assessment of learning styles, interests and talents, and learning readiness in the learning process in Indonesia is still low, especially in the Indonesian School of Kuala Lumpur. Middle school students First Elementary schools to tertiary institutions are less able to develop their interests and talents. Learning styles, interests and talents as well as student learning readiness which are still low are indirectly the impact of the learning process which does not empower diagnostic assessments. This is one of the reasons for providing an innovation to teachers who make a reference and additional innovation information in the learning process.

CONCLUSION

The conclusion from this activity is that all stages of Collaborative Service activitiesInternational at SIKL (Kuala Lumpur Indonesian School) produces a diagnostic assessment instrument that can improve the quality of learning and can facilitate students' interests, talents and learning styles in line with the differentiated learning applied to the independent curriculum. International Collaborative Service will produce output from the Sinta Accredited Service Journal and has been published in several online mass media.

SAYING THANK YOU

We, the International Collaborative Service team, express our gratitude and appreciation to our partner schools Indonesia Kuala Lumpur who has enthusiasm in participating in this workshop and mentoring from start to finish. We also do not forget to thank LP3M Muhammadiyah Makassar University for providing facilities for this International Collaboration Service activity so that it runs smoothly without any problems.

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