Development of Discovery Learning-Based Laboratory Instructions Integrated with Quranic Values for Senior High School Grade XI

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Abstract. This research is based on practicum guides used in schools using textbooks and worksheet (known as LKPD). However, in the package book and LKPD, the substances used are not available in schools. The substances available in schools are not in the guidelines in the package book and LKPD, so practicum cannot be carried out. The aim of this study is to produce a valid and practical Practicum Guide Based on the Discovery Learning Model Integrated with Qur'anic Verses at SMA N 1 Sungai Tarab. This research used Research and Development research methods with a 4-D development model (define, design, develop, and disseminate). But the stages of research with this 4-D model are only carried out from the first to the third stage, namely: the define, design, and develop stages, the results of the initial practicum guide designed followed by validity and practicality tests. Practicum guidance based on the Discovery Learning learning model integrated with verses of the Qur'an has met valid criteria with validation results obtained 87%. The discover-learning-based integrated practicum guide for Quranic verses has met practical criteria with the results of the student response questionnaire of 88.05% and the results of the teacher response questionnaire of 92.68%. The results of this study show that the practicum guide developed can be used as a learning resource for students.

Keyword: Discovery Learning, Integrated with Quranic verses, Guidance, Practicality, 4-D.

1. Introduction
Natural science education, often known as scientific education, focuses on helping students learn about the nature of science to understand it, appreciate it, and form good opinions about it. Natural science is a body of knowledge that includes knowledge such as scientific investigation techniques in addition to knowledge about items. The scientific method in question, for example, involves logical observation, experimentation, and analysis. Learners should thoroughly study and understand chemistry as a branch of natural science. One of the most important areas of natural science, it directly relates to and advances other areas of knowledge such as chemistry (F. Anggraini, 2018).

A set of disciplines known as chemistry can be conceptualized as both a process and a product. The process of chemistry incorporates the skills and mindsets that scientists need to learn and expand their knowledge. Understanding chemistry as a subject includes the facts, ideas, and principles of chemistry, as well as applied science, where knowledge is theoretically supported by laboratory experiments. High school students who study chemistry develop a lifelong awareness of facts, the capacity to identify and address problems, proficiency in the laboratory, and a scientific view of life (Syahrir, 2020).

According to Permendiknas No. 69 of 2013, practicum activities for chemistry classes have been developed in the core competencies of the 2013 curriculum. In this case, instructors are
expected to complete practicum activities to meet anticipated learning objectives. The Big Indonesian Dictionary (KBBI) defines practicum as a component of teaching that seeks to test and apply what is learned in theory in real action. Students learn technical skills through practicum.

In general, quality practicum implementation is closely related to the accessibility of learning resources. Through learning media can help clarify ambiguous content presented by educators, the presence of media has significant significance. The implementation of practicum is also inseparable from practicum facilities and infrastructure, all facilities needed in the practicum process in the laboratory so that practicum can run smoothly, orderly, effectively, and efficiently. In reality, not all schools can conduct laboratory activities properly and smoothly stated from (Alifani et al., 2022). Noted several challenges in the implementation of chemistry practicums. Correspondingly, Mauliza & Nurhafidhah (2018) explained in their research the inadequate availability of tools and materials in laboratories, along with a shortage of laboratory personnel (laboratory assistants). This situation does not align with the educators' prepared lesson plans, leading to disruptions in the practicum process and limiting its execution to only a few materials. Consequently, the practicum's effectiveness is compromised. Moreover, this situation has been linked to declining learning outcomes in some studies, where students' achievements fall below the Minimum Completeness Criteria (KKM) (D. P. Anggraini, 2016).

Based on the issues highlighted in the aforementioned research journal, these circumstances closely mirror the observations made by researchers at SMA N 1 Sungai Tarab. Through observations and interviews with the chemistry educator, Mrs. Dra. Gusneli, it was revealed that the local learning process faced significant challenges. While the lesson plans, teaching materials, and learning media complied with the curriculum requirements, obstacles arose in the laboratory setting. The practical activities were limited to using Laboratory Work Sheets (LKPD), but the substances mentioned in these LKPDs did not align with the practical procedures, rendering the experiments impossible. Furthermore, the absence of a practicum guide compounded the issues, along with inadequate substances in the laboratory. Consequently, maintaining students' focus during the practical sessions became difficult.

Additionally, interviews with students revealed that only a fraction of the material was covered in practice due to the absence of a practicum guide, leading to confusion among students during the practical sessions. Although the procedures were explained before commencing the experiments, they were sometimes only written on the blackboard. The practical sessions seemed monotonous as students struggled to understand the procedures, resulting in teachers taking on a more active role during these sessions. The unclear contents of the LKPDs further contributed to the teachers' increased involvement in the practical work. These challenges have impacted the students' learning outcomes, consistently falling below the Minimum Completeness Criteria (KKM).

One of the main reasons for integrating Qur'anic verses in practicum guides is to provide a spiritual and moral dimension to students' learning experience. Qur'anic verses often contain ethical, moral, and justice values that can guide behavior and decision-making. By presenting Qur'anic verses in the context of practicum, learning does not only focus on technical or academic aspects, but also pays attention to spiritual and moral aspects that are important in developing student character. However, there are several problems that may arise in this integration. One of them is the diversity of interpretations of Qur'anic verses. Each individual or group may have a different understanding of the verses, which can lead to different approaches in integrating them in the practicum guide. This can lead to conflicts or disagreements in the use of Qur'anic verses as guidelines. In addition, it is also important to note that not all students may have the same religious background or even have specific religious beliefs. The integration of Qur'anic verses in practicum guides may be considered
non-inclusive for students who come from different religious or non-religious backgrounds. This may raise issues in terms of equality and fairness in the academic environment.

Given these circumstances, the author aims to develop an integrated practicum guide incorporating verses from the Quran. This initiative intends to provide students with easily comprehensible teaching materials, fostering independent learning irrespective of their location. Moreover, integrating Quranic verses into the guide serves the purpose of nurturing religious values, steering students away from misconceptions in faith, and cultivating a devout connection to Allah SWT. The integration of Quranic teachings is envisaged to play a pivotal role in shaping students' values and their overall environment. The practicum guide serves as teaching material designed to reduce the teacher's role, promote student activity and meaningful knowledge acquisition, and develop students' creative thinking and practical skills, thereby facilitating educators in laboratory teaching. To ensure the smooth execution of student-led practicum activities, a comprehensible and accessible practicum guide is essential. Beyond the cognitive aspect, the guide is evaluated from a religious (spiritual) perspective, aligning with the principles outlined in the aforementioned studies and journals. These principles advocate for enhancing faith, piety, and cultivating noble character within the curriculum. Thus, the development of a module integrated with Quranic verses becomes imperative. This integrated module, featuring verses from the Quran, supports learning activities without creating a separation between religion and science (chemistry). It's believed that all sciences essentially derive from the Quran. Consequently, the learning material is developed to integrate Quranic verses, packaged as a practicum guide applying the discovery learning model. This guide emphasizes synthesis, following the six-step process outlined by Iwantoro et al. (2022), which includes (1) stimulation, (2) problem statement, (3) data collection, (4) data processing, (5) verification, and (6) generalization. In response to the aforementioned issues, the authors conducted a study titled 'Development of a Practicum Guide Based on the Discovery Learning Model Integrated with Quranic Verses for Grade XI in High School / Madrasah Aliyah'.

2. Method
In this research, the research method used is Development Research or (Research and Development). Research and development is research used to produce certain products, and test the effectiveness of these products. In terms, research and development or Research and Development is a process or steps to develop a new product or improve existing products, which can be accounted for. The research was conducted at SMAN 1 Sungai Tarab, the research was conducted in 1 chemistry local, Data Analysis Techniques used Content Validity and Construct Validity Analysis Techniques and practicality techniques. The results of the analysis of the data on the content and construct validity of the questionnaire will follow. To obtain interval data, different survey responses were converted into quantitative data.

3. Results and Discussion
Research and Development (R&D) research has been completed by researchers. This research was conducted using the 4D model, namely (define, design, develop, and disseminate), but researchers only carried out up to the development stage. The following is a description of the research results:

a. Define
The define stage is the basic stage for developing a Practicum Guide Based on the Discovery Learning Learning Model Integrated with Verses of the Qur'an for SMA / MA Class XI carried out in several steps:
1) End-start analysis
At this stage, observations were made to analyze the problems faced in chemistry learning activities. The following are the steps:

a) Educators Interview
At this stage, an analysis of the chemistry learning process involved discussions with chemistry educators. The interviews included several questions related to the learning tools prepared by educators prior to classroom sessions, encompassing models, approaches, methods, teaching materials, media, and learning facilities and infrastructure.

Through observations and interviews with Mrs. Herawati S.Pd, a chemistry educator, it was confirmed that the school's chemistry learning adhered to the curriculum requirements. For instance, educators utilized the Inquiry learning model with a student-centered approach and employed discussion as the primary teaching method. The systematic preparation of a suitable learning model by educators before imparting the material was considered effective in content delivery and aligned with the learning objectives. Educators incorporated various learning media suitable for the taught material, including learning videos, image-based resources, and PowerPoint presentations. Additionally, the school provided adequate facilities and infrastructure that supported the smooth functioning of the learning process.

Regarding practicum guides, educators typically followed instructions from the provided package book. However, limitations in laboratory resources resulted in the unavailability of 2 or 3 required materials mentioned in the guidebook. Moreover, the package book lacked detailed procedural explanations. Apart from the package book, educators also utilized Learning Implementation Plans (LKPD), outlining practicum procedures and required substances. Nonetheless, the discrepancy arose as not all substances outlined in the LKPD were available at the school's laboratory. The mismatch between the substances specified in the LKPD and the actual substances available in the laboratory hindered the successful execution of the practicum activities.

b) Students Analysis
An analysis of the students was carried out through interviews with the 11th-grade students of SMAN 1 Sungai Tarab. The interviews covered various aspects of their chemistry learning, including learning media, facilities, learning models, and teaching materials used. Several students expressed satisfaction with the diversity of learning models, methods, and media employed by educators during chemistry classes.

However, some students reported difficulties in conducting practicums due to the unavailability of substances listed in the practicum guides from the package book and Learning Implementation Plans (LKPD) within the school laboratory. As a result, not all the specified materials were available for practical use during the sessions. Furthermore, students highlighted that only a portion of the material was covered in the practicums due to incomplete substances provided by the school. The procedure was often explained verbally before the practicum commenced or sometimes displayed on the blackboard during the session. The lack of detailed instructions in the package book regarding the practicum's form and precise guidance created confusion among students, making the practical sessions challenging. Additionally, students noted the absence of effective application of the learning model during these practicums.

c) Analyzing Teaching Materials
From the observation of teaching materials used by students is a Chemistry book by Unggul Sudarmo Grade XI Semester 1 and LKPD. The availability of substances in the
guide used in the package book is not available at school and in the LPKD the substances used are also not available at school, so the practicum cannot be carried out.

d) Curriculum Analysis
Chemistry subjects of class XI Phase F based on the independent curriculum are known in Thermochemistry material consisting of Learning Outcomes (CP), Learning Objectives (TP) Flow of Learning Objectives (ATP), Criteria for Achieving Learning Objectives (KKTP). The demands of the curriculum also require that teaching materials in schools be based on the Qur'an. Because the teaching materials in the school have not been based on the verse of the Qur'an, therefore the need for teaching materials integrated with the verse of the Qur'an. The teaching material development approach outlines the methods and approaches that will be used in integrating Quranic verses into teaching materials. Expected results such as increased student understanding of Islamic values. Based on the discussion on the analysis of teaching materials in the curriculum demands also require teaching materials in Quran-based schools. Because the teaching materials in the school are not yet based on the verse of the Qur'an, therefore the need for teaching materials integrated with the verse of the Qur'an. practicum guides can be used for SMA / MA

e) Literature Analysis
The guide developed by researchers uses several sources such as the journal based on Khairunnufus et al (2018) says that practicum guides are some of the tools needed so that laboratory activities run smoothly, the main objectives of learning can be achieved, minimizing the risk of accidents that may occur and others. The guide developed is based on an independent curriculum. The independent curriculum learns to create an active learning atmosphere. The changes in the curriculum also aim to perfect the education system from the previous education system. Although the improvement of students' spiritual education has been implemented in the previous curriculum, in the independent curriculum the learning is made more fun. So that students are easier to accept various things in improving their spiritual education (Nabil et al., 2023; Rohmah et al., 2023).

Therefore, the module developed in the learning material integrates with the verses of the Qur'an which can be packaged in the form of a learning module applying the discovery learning model. This discovery learning-based Quranic verses-integrated practicum guide emphasizes the synthesis. Based on Iwantoro et al. (2022) the developed module contains six syntax (steps) of discovery learning. In general, it consists of six steps, namely (1) stimulation, (2) problem statement, (3) data collection, (4) data processing, (5) verification, and (6) generalization.

2) Analysis of Learning Objectives
The analysis of learning objectives is carried out so that the achievement of the Learning Outcomes (CP), Learning Objectives (TP) / Learning Objective Path (ATP) and Criteria for Achievement of Learning Objectives (KKTP) can be measured. The reaction rate material has one TP/ATP, namely students analyze phenomena in the surrounding environment related to the reaction rate. Then KKTP is developed based on the learning objectives that have been made. Based on CP, TP/ATP, and KKTP, the development of a practicum guide integrated with Quranic verses based on Discovery Learning on reaction rate material can be developed for the achievement of CP, TP/ATP, and KKTP.

b. Design
The Design stage is a stage that aims to produce an initial design for a product. The steps are as follows:
1) Selection of Teaching Materials
Discovery Learning-based Quranic verses integrated practicum guide is a printed teaching material that is selected and then made using the word application. This is in accordance with the needs of educators and students, where SMA N 1 Sungai Tarab is still lacking in teaching materials for chemistry learning. The school has not yet used a chemistry practicum guide.

2) Format Selection
Format selection will fulfill all the components of the practicum guide. The practical guide display also contains images and material related to thermochemistry and also shows examples of the application of thermochemistry in everyday life.

3) Designing a Discovery Learning-Based Integrated Quranic Verses Practical Guide.
4) The research instrument design consists of module validation sheets and response questionnaire sheets. as well as research instrument validation sheets.

**c. Development**
At this stage, it is carried out testing the Practical Guide Based on the Discovery Learning Learning Model Integrated with Verses of the Qur'an for Senior High School Grade XI which has been discussed with the supervisor and will be tested for validity and practicality by three validators.

1) Validation Results
a) Research Instrument validation results
Before validating the Practical Guide Based on the Discovery Learning Learning Model Integrated with Verses of the Qur'an for Senior High School Grade XI, what must be done first is to validate the validity test instrument with a validation questionnaire sheet. (See Table 1. and Table 2.).

<table>
<thead>
<tr>
<th>Validation Aspect</th>
<th>Validator (1)</th>
<th>Validator (2)</th>
<th>Validator (3)</th>
<th>Total</th>
<th>Max Score</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire format</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>11</td>
<td>12</td>
<td>91.66</td>
<td>Very valid</td>
</tr>
<tr>
<td>Language used</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>21</td>
<td>24</td>
<td>87.5</td>
<td>Very valid</td>
</tr>
<tr>
<td>Questionnaire statement</td>
<td>11</td>
<td>12</td>
<td>10</td>
<td>33</td>
<td>36</td>
<td>91.66</td>
<td>Very valid</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>24</td>
<td>21</td>
<td>65</td>
<td>72</td>
<td>90.27</td>
<td>Very valid</td>
</tr>
</tbody>
</table>

**Table 1. Analysis of Module Validity Test Instrument Validation Sheet Results**

<table>
<thead>
<tr>
<th>Validation Aspect</th>
<th>Validation (1)</th>
<th>Validation (2)</th>
<th>Validation (3)</th>
<th>Total</th>
<th>Max Score</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire format</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
<td>12</td>
<td>100</td>
<td>Very valid</td>
</tr>
<tr>
<td>Language used</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>22</td>
<td>24</td>
<td>91.66</td>
<td>Very valid</td>
</tr>
<tr>
<td>Questionnaire statement</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>33</td>
<td>36</td>
<td>91.66</td>
<td>Very valid</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>21</td>
<td>23</td>
<td>67</td>
<td>72</td>
<td>93.05</td>
<td>Very Valid</td>
</tr>
</tbody>
</table>

b) The results of the validation of the Practical Guide Based on the Discovery Learning Learning Model Integrated with Qur'anic Verses, After the validity test instrument is
valid, the next validity test is carried out on the module. The following table outlines the results of the module validation sheet (See Table 3).

Table 3. Analysis of the Results of the Validation Sheet of the Practicum Guide Based on the Discovery Learning Model Integrated with Qur'anic Verses

<table>
<thead>
<tr>
<th>No</th>
<th>Validation Aspect</th>
<th>Validator 1</th>
<th>Validator 2</th>
<th>Validator 3</th>
<th>Total</th>
<th>Max Scor</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Content worthiness aspect</td>
<td>19</td>
<td>22</td>
<td>21</td>
<td>62</td>
<td>72</td>
<td>86.11</td>
<td>Very valid</td>
</tr>
<tr>
<td>2</td>
<td>Presentation feasibility aspect</td>
<td>26</td>
<td>30</td>
<td>32</td>
<td>88</td>
<td>96</td>
<td>91.66</td>
<td>Very valid</td>
</tr>
<tr>
<td>3</td>
<td>Aspects of linguistic appropriateness</td>
<td>18</td>
<td>23</td>
<td>20</td>
<td>61</td>
<td>72</td>
<td>84.72</td>
<td>Very valid</td>
</tr>
<tr>
<td>4</td>
<td>Aspects of graphical feasibility</td>
<td>15</td>
<td>18</td>
<td>17</td>
<td>50</td>
<td>60</td>
<td>83.33</td>
<td>Very valid</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>78</td>
<td>93</td>
<td>90</td>
<td>261</td>
<td>300</td>
<td>87</td>
<td>Very valid</td>
</tr>
</tbody>
</table>

2) Practicality Stage Results

After the practicality test response questionnaire instrument is valid, the instrument can be used. Analysis of the results of the practicality response questionnaire sheet of the Practical Guide Based on the Discovery Learning Learning Model Integrated with Qur'anic Verses. The following table outlines the results of the practicum guide response questionnaire sheet.

Table 4. Analysis of the Results of the Learner Response Questionnaire Sheet

<table>
<thead>
<tr>
<th>No</th>
<th>Practicality Aspect</th>
<th>Total</th>
<th>Max Scor</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Covinence</td>
<td>403</td>
<td>496</td>
<td>86</td>
<td>Very practical</td>
</tr>
<tr>
<td>2</td>
<td>Display</td>
<td>686</td>
<td>744</td>
<td>92</td>
<td>Very practical</td>
</tr>
<tr>
<td>3</td>
<td>Learning Material</td>
<td>345</td>
<td>372</td>
<td>93</td>
<td>Very practical</td>
</tr>
<tr>
<td>4</td>
<td>Language</td>
<td>219</td>
<td>248</td>
<td>88.3</td>
<td>Very practical</td>
</tr>
<tr>
<td>5</td>
<td>Benefit</td>
<td>98</td>
<td>124</td>
<td>80</td>
<td>Practical</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1751</td>
<td>1984</td>
<td>88.05</td>
<td>Very practical</td>
</tr>
</tbody>
</table>

Table 5. Analysis of Educator Response Questionnaire

<table>
<thead>
<tr>
<th>No</th>
<th>Practicality Aspect</th>
<th>Total</th>
<th>Max Scor</th>
<th>%</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Covinence</td>
<td>15</td>
<td>16</td>
<td>93.75</td>
<td>Very practical</td>
</tr>
<tr>
<td>2</td>
<td>Display</td>
<td>22</td>
<td>24</td>
<td>91.66</td>
<td>Very practical</td>
</tr>
<tr>
<td>3</td>
<td>Learning Material</td>
<td>12</td>
<td>12</td>
<td>100</td>
<td>Very practical</td>
</tr>
<tr>
<td>4</td>
<td>Language</td>
<td>8</td>
<td>8</td>
<td>100</td>
<td>Very practical</td>
</tr>
<tr>
<td>5</td>
<td>Benefit</td>
<td>3</td>
<td>4</td>
<td>75</td>
<td>Practical</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>64</td>
<td>93.75</td>
<td>Very Practical</td>
</tr>
</tbody>
</table>
The Research and Development phase was completed using the 4-D development model (define, design, develop, and disseminate). However, the research did not progress beyond the development stage due to time constraints, as the dissemination stage requires a considerable amount of time. Additionally, limitations in the researchers' abilities, energy, and funds also played a role. The initial phase of the research involved the define stage. Here, analyses such as the beginning-end analysis, literature review, and learning objectives analysis were conducted. The beginning-end analysis comprised interviews with educators, student analysis, examination of teaching materials, and curriculum review. These analyses, conducted through observations and interviews, aimed to identify the focal points for study development.

During interviews, issues related to teaching materials emerged as a major challenge in the school's learning process, particularly concerning the procurement of materials for practical sessions. While the school possessed various teaching materials, including Learning Implementation Plans (LKPD) and practicum guides from package books, discrepancies arose between the required substances outlined in these materials and their availability at the school. The lack of detailed instructions in the practicum guide hindered practical sessions. Some available substances in the school were not utilized due to discrepancies between the prescribed substances in the guide and the actual resources, resulting in the inability to conduct the practicum.

The subsequent stage, the design stage, followed the define stage. Its purpose was to formulate the initial guide design and develop research instruments. The instruments included a validation sheet and a practicality response questionnaire. The design of the practicum guide was tailored to align with the Learning Outcomes, Learning Objectives, and Flow of Learning Objectives within the independent curriculum. This was to ensure that the guide's contents were synchronized with the curriculum demands. The designed guide focused on thermochemical material.

The development of a practicum guide integrating the discovery learning model with Quranic verses for Senior High School Class XI adheres to the general module components. The integration within this guide primarily lies in the material section. Here, the explanation of thermochemical material aligns with the six steps of the discovery learning model: stimulation, problem statement, data collection, data processing, verification, and generalization, interwoven with relevant Quranic verses. The creation of modules integrating Quranic verses within the framework of discovery learning aims to enhance competency, optimize cognitive abilities, and foster spiritual development among students. This approach intends to familiarize students with the application of religious values, emphasizing that chemistry, especially thermochemical material, is not solely derived from experts but also from the Quran (Heong et al., 2011).

The subsequent phase is the development stage. Here, the initial module created during the design stage undergoes validation and practicality testing. The practicum guide's validity is assessed through validation tests conducted by multiple validators. Following revisions based on validation feedback, practicality tests are conducted. The validation process involves examining the research instruments and the practicum guide designed for Senior High School Class XI, integrating the discovery learning model with Quranic verses. Prior to use in validation and practicality tests, the research instruments undergo a validation procedure. This involves assessing the format, language, and statements within the questionnaire using a validation sheet. Once the research instruments pass the validation tests for both validity and practicality, they are deemed suitable for use. The practicum guide has also been carried out to the media lecturer.

The validation process of the practicum guide based on the discovery learning model integrated with al-qur'an verses for senior high school / senior high school grade XI,
involved 3 validators, consisting of 2 lecturers and 1 Chemistry educator. 3 validators, namely to the tafsir lecturer to strengthen the verses that are integrated with chemistry so that they are synchronized, then to the media lecturer, to design the chemistry product that is attractive to use and the material validator sees how to guide chemistry material. The validity test instrument is a validation sheet questionnaire with a Likert scale. Before the validation sheet of the practicum guide was filled in by the validator, the validation sheet had been validated and obtained very valid results. There are several things that were analyzed in the validation test, namely aspects: 1) aspects of content feasibility, 2) aspects of language feasibility, 3) aspects of presentation feasibility, 4) aspects of graphic feasibility. The four aspects of validation must be fulfilled so that the teaching materials developed are said to be suitable as learning resources. The four elements of feasibility are measured for validity based on the Likert scale formula with information 61%-80% valid and 81% - 100% very valid (Riduwan, 2013).

When viewed from the content feasibility test, there are three indicators that must be considered, namely 1) the suitability of the material description with, 2) The accuracy of the material, (3) learning support material, so that after conducting a validity test for the content feasibility aspect, it reached a percentage of 81.06% assessment from the validator so that it was included in the very valid category. This is because the material coverage in the module is in accordance with the Learning Objectives.

The results of the validity test for the feasibility aspect of the presentation in this practicum guide are to reach an assessment percentage of 88.17% of the validators so that it is included in the very valid category. There are tables and pictures supporting the presentation of the material. Images that support and clarify the content of the material are a substantial component in the design of practicum guides because they can increase interest and reduce boredom for students when studying them (Gustinasari et al., 2017). When viewed in terms of language feasibility, there are seven indicators that must be considered, namely (1) communicative; (2) dialogical and interactive; (3) straightforward; (4) order of thought; (5) coherence; (6) conformity with correct Indonesian language rules; and (7) use of terms and symbols or symbols that are in accordance with the development of students (Arifin et al., 2023).

The language aspect of the practicum guide underwent a validity test, achieving an assessment percentage of 91.66% from the validator, thus confirming its validity. The guide employs language adhering to Indonesian language rules, a crucial aspect for effective teaching materials. Language intricacies or multiple meanings within the subject matter section can lead to student misinterpretation and hinder comprehension. Consistent usage of terms and symbols throughout the guide ensures clarity, further supported by a glossary at the module's end, aiding students in understanding the guide's terminology (Mailani & Wulandari, 2019).

Assessing the graphic suitability involves considering indicators like book size, cover design, and content layout (Ranti Gusti Rahayu & Yerimadesi, 2022). The validity test for graphics reached an assessment percentage of 81.25%, indicating a 'very valid' categorization. This validation was attributed to the guide's appropriate and appealing cover design and layout. The font size, set at 14 pt, aligns with readability standards, a pivotal factor in attracting students to the teaching materials' appearance (Wahyuningtyas et al., 2016). Following validation and revisions as per validator suggestions, a practicality test was conducted on the practicum guide involving one teacher and 31 students. Researchers interviewed the teacher regarding the developed product's usability, while questionnaires were distributed among the 31 students. Subsequently, the product was tested in the laboratory setting.
In conducting the practicality test, the researcher also conducted a practicality test on the teacher. In this case the teacher seen in the practicality is only one. Then the researcher conducted an interview on the developed product, regarding the effectiveness of the product, the design of the product, and how to use the product. The teacher conveyed that the developed product was good and could be used. The design of the product is also attractive, and the use of the product can be used effectively. However, the practicum guide can add more theory about thermochemistry.

The results of the practicality test for the ease of use aspect were categorized as very practical by students with a percentage of 85.28% and educators 86.11%. This assessment is categorized as very high because the product developed by students is very practical. Make it easy for students to read it and interesting to carry. The guide can support students to learn in balance with their learning speed. The use of practicum guides during learning also supports the role of educators as facilitators, educators do not have to repeat explaining the material, thus facilitating the work of educators, and educators can observe the activities of students more closely (Yerimadesi et al., 2017).

The results of the overall practicality test of the practicum guide were 88.05% in the student response questionnaire and 92.85% by educators. The teaching materials developed are declared practical when the teaching materials can facilitate educators during learning and are easily understood by students. The practicum only uses LKPD, but the substances in this LKPD are not in accordance with the practicum procedures so that the practicum cannot be carried out. There is no practicum guide and the substances in the laboratory are also lacking. Difficulty in focusing students’ attention on the quality of the practicum. Thus, the question in problem formulation number 2 has been answered, where the practicum guide based on the discovery learning model integrated with the Qur’anic verse for senior high school grade XI is practical. Practical practicum guides are expected to help students and educators when learning in the laboratory and learning in the local.

4. Conclusion
Practical Guide Based on Discovery Learning Model Integrated with Quran Verses for Senior High School Grade XI developed by researchers discusses material about thermochemistry class XI Phase F, research conducted at SMA N 1 Sungai Tarab. Based on the research and the results of data analysis that has been done, it is concluded that the results of the validity test of the Practical Guidance Based on the Discovery Learning Model Integrated with Quranic Verses for Senior High School Grade XI on thermochemical material meet the criteria very valid based on the validator validation sheet with a percentage of 87%. The results of the practicality test of the Practicum Guide Based on the Discovery Learning Model Integrated with Al Quran Verses for Senior High School Grade XI on thermochemical material meet the criteria very practical based on the student response questionnaire with a percentage of 88.05%.

5. References
Terintegrasi Discovery Learning (Pembelajaran Penemuan) Pada Materi Kimia Unsur. *Jurnal Dialog*, 6(2).


