



## INTEGRATING ISLAM ON GEOMETRY STUDENT WORKSHEETS TO FACILITATE MATHEMATICAL AND RELIGIOUS LITERACY OF JUNIOR HIGH SCHOOL STUDENTS

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### ABSTRAK

Penelitian ini bertujuan untuk menganalisis tingkat kevalidan, kepraktisan, dan keefektifan Lembar Kerja Peserta Didik (LKPD) Geometri terintegrasi Islam terhadap literasi matematis dan literasi agama siswa Sekolah Menengah Pertama. Metode penelitian yang digunakan adalah Research and Development (R&D) dengan desain pengembangan ADDIE, yaitu *Analyze, Design, Development, Implementation, dan Evaluation*. Validasi produk untuk kelayakan LKPD Geometri terintegrasi Islam pada 4 ahli, yaitu ahli desain pembelajaran dan bahasa, ahli media dan desain grafis, ahli materi matematika dan integrasi Islam, serta ahli praktisi pembelajaran matematika sekolah. Subyek untuk ujicoba produk adalah seluruh siswa kelas VIII MTs Surya Buana Kota Malang. Instrumen penelitian yang digunakan berupa pedoman wawancara, lembar validasi, lembar observasi, angket respon siswa dan guru, tes literasi matematis, dan angket literasi agama. Analisis data kualitatif dilakukan sesuai Langkah Miles & Hubberman meliputi reduksi data, display data, dan penarikan kesimpulan. Data kuantitatif berupa tingkat validitas dan praktikalitas disajikan dalam bentuk persentase dan kategori. Penelitian ini menghasilkan produk berupa lembar kerja peserta didik (LKPD) geometri terintegrasi Islam. Hasil dari validasi menunjukkan bahwa LKPD tersebut memenuhi kriteria sangat valid 89,21%. Respon siswa menunjukkan produk LKPD terintegrasi Islam sangat praktis dengan persentase 86,56%, sedangkan guru menilai LKPD ini sangat praktis dengan persentase 86,67%. Hasil uji efektivitas didapatkan rerata 85,68%, sedangkan hasil uji-t dari pretest dan post-test diperoleh nilai sign. 0.001. Dengan demikian terdapat perbedaan yang signifikan antara sebelum dan sesudah menggunakan Lembar Kerja Peserta Didik (LKPD) Geometri terintegrasi Islam terhadap literasi matematis dan literasi agama siswa.

**Kata Kunci:** LKPD, Geometri terintegrasi Islam, Literasi Matematis, Literasi Agama

### ABSTRACT

This study aims to analyze the validity level, practicality level, effectiveness and influence of the Islamic integrated Geometry Student worksheet on mathematical literacy and religious literacy of junior high school students. The research method used in this study is Research and Development with the ADDIE development design, namely *Analyze, Design, Development, Implementation, and Evaluation*. The subject of the product assessment for the feasibility of the Islamic Integrated Geometry Student Worksheet (students worksheets) is limited to four experts: learning and language design experts, media and graphic design experts, mathematics materials experts and Islamic integration, as well as school mathematics teaching practitioners. The subjects related to the product trial were all class VIII MTs Surya Buana Malang City students. The research instruments used were interview guidelines, validation sheets, observation sheets, student and teacher response questionnaires, mathematical literacy tests, and religious literacy questionnaires. Qualitative data analysis was carried out according

to Miles & Hubberman's steps, including data reduction, data display, and conclusion. Quantitative data in validity and practicality are presented as percentages and categories. This research produces a product in the form of an Islamic integrated geometry student worksheet. The validation results show that the Islamic Integrated Geometry Student Worksheet meets the valid criteria of 89.21%. Student responses showed that the Islamic integrated student worksheet product was very practical, with a percentage of 86.56%. At the same time, the teacher assessed that this student's worksheets were very practical, with a percentage of 86.67%. The results of the effectiveness test obtained an average of 85.68%, while the results of the t-test from the pretest and posttest obtained a Sig value. 0.001 and a Sig value of 0.004 for religious literacy. Thus, there is a significant difference between before and after using the Islamic Integrated geometry student worksheet on students' mathematical and religious literacy.

**Keywords:** Student Worksheets, Islamic Integrated Geometry, Mathematical Literacy, Religious Literacy

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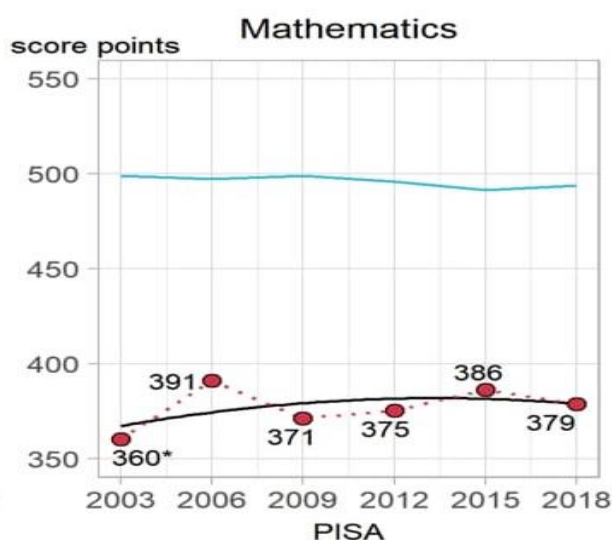
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#### **INTRODUCTION**

Mathematical literacy has become the focus of attention and study by researchers and educators with various problem variants (Lee & Spratley, 2010; Shanahan, 2012; Cassidy et al., 2019, 2020). Mathematical literacy is one of the abilities students must possess to face various problems encountered in everyday life. This ability is not only limited to understanding arithmetic but also requires reasoning, problem-solving, and mastery of logical reasoning to solve various everyday problems. Based on the Organization for Economic Cooperation and Development (OECD) survey results using PISA results in 2000, 2003, 2006, and 2009 showed that Indonesian students were in the bottom seven positions. Then in 2012, Indonesia was ranked 64th out of 65 participants with an average score of 375, while the international average score was 494. In the next three years, 2015, the literacy score of Indonesian students was 386 (level 1) and occupied position 69 of the 76 participating countries.

Meanwhile, in 2018, PISA data showed a decrease in students' scores in reading ability, namely from a score of 397 in 2015 to a score of 371. In addition, students' math scores decreased from 386 to 379 even though the number of test takers in 2018 increased by as much as 85% to 79 countries. Based on these data, it shows that students' mathematical literacy skills are far below the average. The following is a graph of Indonesia's mathematical literacy scores from 2003 to 2018 based on the OECD survey presented in Figure 1.



**Figure 1.** Graph of Indonesia's Mathematical Literacy Score from 2003 to 2018

Based on the results of the PISA, the average score of Indonesian students' mathematical literacy is not satisfactory. PISA uses everyday contexts as mathematical literacy by emphasizing the skills and competencies students acquire at school and applying them in daily life. Various obstacles and difficulties that affect students' mathematical literacy are that students' skills are not yet familiar with reasoning and logic questions but have been trained with procedural questions (Habibi & Suparman, 2020). In addition, the teacher-student interaction factor and students' bad perception of mathematics (Syawahid, 2017).

The interaction of teachers and students is also essential to instil various universal values of Islam in learning mathematics. Mathematics learning with Islamic integration is possible because the Qur'an structure is mathematical (Al-Faqih, 2017). Muslim mathematicians developed various mathematical studies such as geometry, algebra, arithmetic, statistics, and number theory based on the Koran (Hussain and Ramli, 2017) and integrated Islamic thought's character with the people's spiritual needs (Nu'man, 2016). Various studies have been conducted and are increasingly mushrooming with multiple problems related to integrating mathematics learning with Islam (Al-Quran/hadith). Some of them highlight the effectiveness of Islam's integrated mathematics learning in inculcating Islamic religious values in students (Sugilar et al., 2019; Setiawan & Thahir, 2016).

Several studies also stated that the ability of educators to plan and implement integrated mathematics learning is still very limited (Junaidi et al., 2020; Setiawan & Thahir, 2016). Thus, we need a mathematical learning device that can be used to facilitate students' mathematical literacy and religious literacy. Furthermore, mathematics teaching materials integrated with Islam can be designed and implemented because they are very useful (Idris, 2019; Fitriza, et al., 2020). However, existing research studies related to the integration of Islamic teachings (Al-Quran/hadith) with mathematics learning are still very limited to integration models (Mutijah, 2018); principles, theories, and methods of integration (Sugilar, et al, 2019); the perspectives of lecturers and students regarding integration (Idris, 2019). For this reason, the discussion in this study is not only limited to the theoretical level but also to the design and implementation of

mathematics learning integrated with Islam in geometry material to facilitate students' mathematical and religious literacy.

Religious literacy is knowing and finding the connection between religion and other lives, such as political, social, and cultural life, from many points of view (Moore, 2020). The characteristics of religious literacy (Iswanto, 2018) are (1) text-centred (both sacred texts and religious texts); (2) texts used between generations; (3) sacred religious texts (holy books) become part of religious rituals; and (4) religious texts, both sacred and profane, become individual and collective identities. Religious literacy is not a concept that is only meaningful as reading but rather a deep understanding of religion so that it can be used as a basis for thinking and standing in behaviour (Kadi, 2020). Furthermore, one of the things that can strengthen religious literacy is the use and procurement of supporting media. For example, in learning mathematics, what is meant is modules, teaching materials, and students' worksheets.

The Islamic Integrated Geometry student worksheets are expected to facilitate the development of religious literacy and course students' mathematical literacy. For example, in geometry related to religious literacy, it is found in Q.S Al-Hajj verse 29, which discusses tawaf around the Kaaba. Students can imagine that when they surround the Kaaba, students will form a flat shape, namely a circle. Thus, students can also explore and calculate the size of the circumference or area of a shape by utilizing their knowledge of Islamic values. To better understand the Islamic values contained in integrated Islamic mathematics, students need to get used to using their mathematical literacy. There are several categories of mathematical literacy related to Islamic values, namely the ability to formulate problems, use mathematical concepts as problem-solving strategies, and interpret, apply and evaluate the results obtained (OECD, 2013). This study aims to develop and produce an Islamic-integrated geometry Student Worksheet to facilitate junior high school students' mathematical and religious literacy. These students' worksheets support the implementation of mathematics learning and assist students in understanding concepts or materials.

## METHODS

This study is a research and development. The development model used is the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The define stage consists of 5 steps, namely the initial-late analysis, which is used to find out various basic problems in developing students' worksheets; student analysis related to student characteristics, including students' initial mathematical abilities, experiences, and attitudes towards learning mathematics; task analysis is related to the formulation of the competencies that students must achieve; analysis of concepts/materials, relating to the identification of concepts taught and arranged systematically; setting of learning objectives of mathematics, preparation of learning objectives adjusted to the material and tasks to be carried out.

A prototype of Islamic integrated geometry worksheets will be designed at the design stage. This stage consists of four steps: designing tests tailored to the specified objectives; preparing media related to the designed student's worksheets; selecting the students' worksheets design; and initial design, organizing all learning activities that will be carried out and math worksheets. Develop stage, at this stage, modify the initial prototype that was developed at the design stage. The steps in this stage are expert assessments to obtain

suggestions and input from the developed students' worksheets; the development test is where the worksheets that have been prepared are tested on students. Students and teachers' responses, reactions, and comments are the basis for improving students' worksheets.

Implementation stage. At this implementation stage, the students' worksheets that have been validated integrated Islamic geometry in mathematics learning will be tested on students. The trial was carried out in two stages: a small group limited test and a field test. This stage will analyze the accuracy of the design or learning design, which includes the attractiveness, efficiency, and effectiveness of the worksheets developed for students. Evaluation stage. Evaluation activities are carried out on the product quality developed by the Islamic integrated geometry students' worksheets. Based on the results of the questionnaire responses of teachers and students and the opinions of experts (validators). After the evaluation, the final revision of the Islamic integrated geometry students' worksheets product was carried out.

The data is categorized into two clusters: qualitative data (interviews, concept/curriculum analysis, and observation) and quantitative data (validity, response questionnaire). Qualitative data were analyzed by following the steps of Miles and Huberman, which included data reduction (coding and classification), display, and conclusions. Meanwhile, quantitative data were analyzed using percentages and criteria, as shown in [Table 1](#).

**Table 1.** Criteria for Validity / Practicality

Skor (%)	Criteria
81 – 100	Very valid / Practical
61 – 80	valid / Practical
41 – 60	Quite valid/Practical
21 – 40	Less Valid/Practical
0 - 20	Invalid/Practical

Modificated from [Riduwan \(2021\)](#)

Meanwhile, to find out how mathematical literacy and religious literacy after using Islamic integrated geometry worksheets in learning mathematics were analyzed using statistical inferential t-test.

## RESULTS AND DISCUSSION

This study was conducted to analyze the process of developing Islamic integrated geometry student worksheets in facilitating the mathematical literacy and literacy of junior high school students. This study uses the ADDIE development model, which includes five stages: Analysis, Design, Development, Implementation, and Evaluation. The results of each stage are as follows.

### Analysis Stage

This analysis stage begins with an analysis of the problems experienced by students and teachers in learning mathematics at the junior high school level. Teachers in mathematics develop their student worksheets from the main source, namely textbooks from the Indonesian Ministry of Education and Culture. The teacher designed the students' worksheets to help make it easier for students to achieve mathematics learning goals. However, the students' worksheets

the teacher has developed are not integrated with Islamic students' worksheets since the worksheets developed are ordinary. While in the learning process, the teacher inserts integration with Islam (Al-Quran/hadith) when motivating every meeting. To determine integration with Islam, the mathematics teacher must consult with teachers of other subjects in the Islamic religious education family. The aim of integration is not merely affixing Al-Quran verses to the material that has been prepared. However, the intended integration is by the religious lessons that students are taking.

Based on the results of interviews with teachers, information was obtained that students' academic abilities were in a good category. However, students' scores were still below the average, especially in geometry. Students have been taught to learn in groups and collaborate with other friends. It's just that the mathematics material presented by the teacher in the discussion has not been integrated and has context. Contexts such as local wisdom, the Qur'an, and hadith texts have not been widely used in learning mathematics or teaching materials. Curriculum analysis was conducted to determine the madrasa curriculum oriented to developing student creativity and meaningful learning with a full-day school-based learning system. The curriculum of MTs Surya Buana has its peculiarities: flagship programs, namely Triple R, Reasoning, Research, and Religious; another excellent program is the integration project, namely project-based learning by combining it with cognate subjects. So the integration project intended in the madrasa curriculum is oriented towards combining related subjects in a special project. Analysis of the concept: After observations, it was found that the ongoing material was building a flat side space based on student score data. Student scores did not meet the Minimum Completeness Criteria (KKM) standards from year to year. Thus, it is determined that the material to be studied is flat plane geometry integrated with Islam and Malang local wisdom used to facilitate mathematical literacy and religious literacy for students of MTs Surya Buana Malang in particular, generally for all students who study flat plane geometry.

### **Design Stage**

After the Analysis stage, the next is the design stage. This stage begins with systematically compiling the material; determining an attractive student worksheet format, including the introduction, content and closing; collecting students' worksheets oriented to the standard content of the 2013 curriculum and predetermined templates. The introductory part of the students' worksheets is designed with a cover order, front page, introduction, table of contents, guidelines for using students' worksheets, Core Competencies, Competency Standards and essential competencies, indicators, and learning objectives, as well as a concept map for flat plane geometry for class VIII of Junior High School. The students' worksheets contain an introduction/motivation, activity 1, activity 2, integration project, evaluation, and reflection. The use of Islamic contexts, both Qur'anic texts and hadiths, as well as religious symbols, along with the context of local wisdom around students, is used to attract students to learn mathematics. The situation problems presented in the students' worksheets is adapted to the context of Muslim people's daily life. The closing section contains a bibliography. The bibliography includes references in writing students' worksheets, namely books/documents related to mathematical concepts and materials, the Koran, interpretation and translation.

### Develop Stage

At the design stage, prototype 1. Then at the development stage, prototype one is validated by the validators. The validators include mathematicians and integration experts, language and learning design experts, media and graphic design experts, and math learning practitioners. Aspects assessed include the feasibility of content, presentation, language and graphics. The results of this expert validation are presented in [Table 2](#).

**Table 2.** Results of Expert Validation on student worksheet products

No	Assessed Aspect	Score (%)	Criteria
1	Content feasibility aspect	83,75	Very valid
2	Presentation aspect	81	Very valid
3	Linguistic aspect	83,50	Very valid
4	Graphic aspect	81,25	Very valid
5	Integration Aspect	81,75	Very valid
6	Literacy Aspect	82	Very valid
	Average	82,28	Very valid

All experts recommend that prototype one be used with revisions according to their suggestions and input. The result of improving students' worksheets adapted to this expert's advice is then referred to as prototype II. Prototype II was then tested on students and teachers to analyze the practicality of its use. Students' worksheets were tested on class VIII MTs Surya Buana Malang. When students work on students' worksheets, observations are made, equipped with interview guidelines to analyze student responses to the existing prototype. Based on the results of interviews, students are not accustomed to solving problems related to the Islamic context.

The suggestions and inputs from the validator related to students' worksheets integrated Islamic geometry associated with the feasibility of the content. Some of the problems presented in students' worksheets are not associated with the daily context of students, namely, related to the context of Islam and the local wisdom of Malang. In the presentation, activities on integrated Islamic geometry have not fully facilitated students in finding concepts. The context in the question only focuses on monotonous religious symbols without variations and challenges. In the linguistic aspect, some spelling and punctuation need to be improved. Use effective sentences according to PUEBI and standards that do not cause double interpretation or the use of regional languages. Aspects of graphics, the cover is less attractive, font size, colour choices, and some ornaments are less attractive and useful. Aspects of integration, the inclusion of Al-Quran verses is too much so that it is feared to become students worksheets subjects of Al-Quran Hadith Integration with Islamic teachings is not only about sticking Al-Quran verses or hadiths on students' worksheets but accompanied by interpretation, intent and content, Mathematics is a tool to explain the holy Al-Quran. Aspects of literacy, the problems in students' worksheets are still not complete all problems but only in the form of questions, so they do not train and develop students' mathematical literacy. Problems must be designed to use the context of everyday life, and Islam attracts students to train and develop mathematical and religious literacy. Based on input from students, the use of language and instructions for using

students' worksheets integrated Islamic geometry is easy to understand, helping students to construct knowledge independently related to flat shapes.

Students' worksheets already use an attractive design and format. There is an insight into the Koran and its relation to mathematics. Students' worksheets already use an attractive design and format. There is an insight into the Koran and its relation to mathematics. The student questionnaire responses to prototype II concluded that the students' worksheets designed were very practical (with a score of 89.08%). The input from students is that students' worksheets are very interesting. Still, they are unfamiliar with the questions presented in local and Islamic contexts, so they need skills to understand and create mathematical models and solutions. Thus, students' worksheets can be used with minor revisions. While the responses from teachers regarding students' worksheets and students' worksheets are integrated, Islamic geometry is practical. It can be used with an average value of 86.67% for teachers and 86.56% for student assessments. This study's results align with [Hamdi & Ermawati \(2018\)](#), which state that valid, practical and effective learning and using problems related to Islam can increase students' motivation and learning outcomes. In addition, students and educators are very interested in the cultural contexts presented. Culture-based learning makes learning meaningful and builds knowledge, skills and attitudes ([Rosa & Orey, 2011](#)).

### **Implementation Stage**

At this stage, the student worksheet product is ready to be implemented for students with a note that the validator has declared it feasible. The trials were conducted offline using learning simulations and providing students with worksheets to students. Students learn the material of flat plane geometry. The trial was conducted in a limited manner by taking one class, class VIII A, which 22 students attended. The purpose of this trial is to find out how far the product's success has been developed. Product trials are carried out in class for one meeting with a time allocation of 2 meeting hours.

### **Evaluation Stage**

This evaluation stage aims to determine the products' validity, practicality, and effectiveness by providing summative evaluations. The results of this evaluation stage are 1) the student response questionnaire and 2) the teacher's response questionnaire. Student response questionnaire determines the level of practicality of the products developed. The practicality assessment includes appearance attractiveness, product clarity, and material clarity. Based on the student response questionnaire research results, the practicality level of the product is 86.56%. Based on these results, the developed mathematical students' worksheets product can have very practical criteria. Based on these results, students' worksheets can be used without repair. The teacher's response questionnaire indicates the product's practicality level is 86.67%. The percentage value of the practicality of each aspect (attractiveness, time efficiency, ease of use and utilization).

In line with the results of interviews with teachers learning with students, worksheets in integrated Islamic geometry can be carried out well. Still, the time to discuss all activities in students' worksheets is insufficient. The teacher also revealed that the students' worksheets were designed to attract students' enthusiasm and interest in learning mathematics and being active in learning. In addition, prototype two already uses clear students' worksheet instructions



and communicative language by PUEBI and is adapted to the student's cognitive development level. Based on content feasibility, the Islamic integrated geometry students' worksheets are complete and equipped with activities that make it easier for students to construct knowledge about flat planes. Thus, the students' worksheets of integrated Islamic geometry are practically used in learning flat-plane geometry to facilitate the development of junior high school students' mathematical literacy and religious literacy.

The results of this study are in line with the results of research conducted by Hamdi & Ermawati (2018) and Fitriza et al. (2020), which state that the use of valid, practical and effective learning tools and using contexts or problems related to Islam can increase student motivation and learning outcomes. Students and teachers are very interested in the contexts of teachings and symbols of Islamic teachings, which are presented as motivation in learning and show that mathematics is not dry in value. The test results in student and teacher responses to the prototype two students' worksheets as a basis for perfecting the product. The final product of students' worksheets integrated with Islamic geometry for junior high school students is shown in Figure 2.

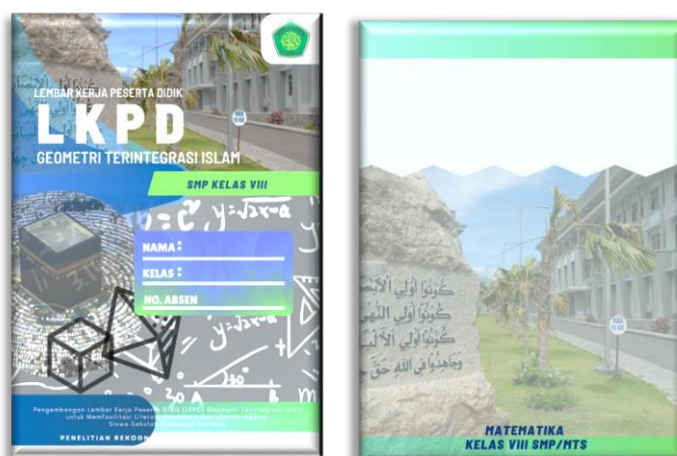


Figure 2. The front cover and back cover of students' worksheets

The front and back cover students' worksheets integrated with Islamic geometry. On the front cover is an image of Baitullah, a mathematical formula and a flat side space. It is intended to motivate students to start thinking about mathematics which is not afraid of values, and Islamic religious symbols contain mathematical concepts that can be learned. In addition, there is an Ulul Albab stone inscription which is the branding of UIN Maulana Malik Ibrahim Malang, with the hope that this student worksheet can inspire and strengthen the character of Ulul Albab Students. This student's worksheets were developed to produce a generation as described in the "Ulul Albab" terminology, namely people who have the integrity of aqidah and spiritual depth, nobility of character, breadth of knowledge, and professional maturity. The word "Ulul Albab" itself is mentioned in the Quran 16 times, namely in QS Al-Baqarah: 179, 197, 269; Surah Ali Imran: 7, 190; QS Al Maidah: 100; QS Yusuf: 111, QS Al Ra'd: 19; Surah Ibrahim: 52; Surah Sad: 29, 43; QS Az-Zumar: 9,18,21; QS Al Mu'min: 54, and QS At-Thalaq: 10. Of course this goal is part of cultural transformation as an intangible process of seeding and development whose impact will be felt later.

After the cover, there is a student worksheet identity page, an introduction, guidelines for using student worksheets accompanied by an explanation of each component, a concept map of the material to be studied, and a table of contents. In addition, these students' worksheets also present Core Competencies, Competency Standards, Basic Competencies, and indicators of learning objectives. Each material is given activities that contain related sub-materials designed by constructivists using the daily context of students and Islam to find concepts. In addition, an integration project provides space for students to develop reasoning, research, and religion skills in a mathematics learning project.



**Figure 3.** An Example of an Integration Project Developed by Integrating Islamic and Local Wisdom

Based on Figure 3, the integration project developed is related to the waste problem. Indonesian people have local wisdom that waste must be appropriately managed so as not to pollute the environment. It is necessary to sort out which can still be used and which should be buried. In this project, students are asked to solve the garbage dump truck problem by calculating the volume of the truck, which is adjusted to the instructions. From this integration project, besides being directed to have sensitivity to the social environment while still prioritizing local wisdom, students are also asked to find Islamic teachings, which are the basis for loving the environment by utilizing related mathematical concepts.

Internalization of Islamic values in mathematics learning can be implemented through subject matter, learning methods, and the learning process (Istiqlal & Jumadi, 2017). This study uses the insights of the Koran presented in the subject matter to provide motivation and change the mindset of students that mathematics is free of religious values. Furthermore, learning design based on Islamic characters will help students connect the mathematical concepts

learned with life events and problems, especially related to implementing worship (Setiawati et al., 2018). In addition, the integration of learning and the Qur'an makes learning materials easy to understand and raises good values and noble character to form students with faith and piety abilities and science and technology by national education goals (Harahap, 2018).

Learning outcomes using the Islamic Integrated Geometry LKPD and those not using the student worksheets showed differences and could improve students' mathematical literacy as measured using a pretest and posttest. The average pretest obtained 58.80, and the posttest average obtained 76.33. The results of the analysis of the t-test formula from the pretest and posttest using SPSS 19 are obtained in Table 3.

**Table 3.** Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	58.80	22	6.678	1.724
	Posttest	76.33	22	9.803	2.531

Based on Table 3, a paired sample test was conducted to determine the significance of the difference and the relationship.

**Table 4.** Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest - Posttest	-17.533	10.412	2.688	-23.299	-11.767	-6.522	21	.000

Based on the SPSS output in Table 4, using a 95% confidence interval, the average value of the increase in student statistics scores before and after receiving the problem-based learning model treatment is between -23,299 to -11,767. Then the paired samples test results show that  $T^* = -6.522$ . In conclusion, the value of Sig is used. It appears that the value of Sig. namely  $0.000 < 0.05$  ( $H_0$  is rejected), so it can be concluded that learning mathematics using the Islamic Integrated Geometry student worksheet can improve the mathematical literacy of junior high school students. The results of this study strengthen the results of previous studies. Various studies (Mauluah & Marsigit, 2014; Fitriza et al., 2020; Rachmiati & Mansur, 2021) examine the development of integrated Islamic mathematics teaching materials that can be implemented in learning mathematics. It is because integrating Islamic values into learning mathematics is beneficial for students in learning mathematics (Abdussakir, 2017). Islamic integrated math questions are appropriate for improving students' mathematical literacy skills (Anggraini, et al., 2021; Sobarningsih, et al., 2019). It can be understood that with Islamic integrated geometry student worksheets, where the problem is a matter of literacy, it can differentiate, improve students' mathematical literacy abilities and shape students' positive character in accordance with Islamic teachings. It is corroborated by the research results of Setiawati, et al (2018), which states that mathematics learning developed by integrating Islam can stimulate students to

connect concepts or material studied. The problems provided are related to Islamic values. The Islamic integrated math literacy questions in student worksheets make the presented issues easy. This convenience is due to the difficulties presented taking the context of students' daily lives related to their religion. Thus, being able to generate motivation and a positive attitude and beneficial for students who complete it. The results of this study also strengthen previous research conducted by Imamuddin, et al. (2022), which stated that for 94% of students in the small and large group testing groups, mathematical literacy questions that were developed by integrating with Islam were effectively based on the potential effect that the questions could motivate students, had excellent benefits and were able to differentiate the mathematical literacy abilities of Madrasah students. Based on this research, it is recommended to use Islamic integrated mathematical literacy questions in learning mathematics.

## CONCLUSION

Based on the research results exposure, this research concludes that the Islamic integrated geometry students' worksheets to facilitate mathematical literacy and religious literacy of junior high school students are declared valid, practical and effective. Students' worksheets Integrated Islamic geometry effectively promotes the development of mathematical literacy and religious literacy through learning mathematics assisted by students' worksheets. This study uses the ADDIE design (analysis, design, development, implementation and evaluation), but the research still has many shortcomings. For this reason, further research related to integrating Islamic religious values and symbols in mathematics learning in schools is not only limited to using the Al Quran but also uses Islamic religious values and teachings, including hadist, history or Sirah, and so on. In addition, it can be further developed apart from the integration of Islam and with the local wisdom of the local area.

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