Vol 14 (1), 2025, 77- 84 DOI: 10.23960/jppk.v14i1.32947
Jurnal Pendidikan dan Pembelajaran Kimia
e-ISSN: 2714-9595| p-ISSN 2302-1772
http://jurnal.fkip.unila.ac.id/index.php/JPK/index

The Relationship Between Religiosity and Student Learning Outcomes in Chemistry for Class XI at MAN 1 Madina

Nurul Amalia Febrian*, Ayi Darmana

Chemistry Education, Faculty of Mathematics and Natural Sciences, University Negeri Medan
Jl. W. Iskandar Psr V Medan Esatate District. Deli Serdang, Indonesia.

*Correspondinge-mail: nurulamaliapebriani@gmail.com

Received: Jan 8th, 2025 Accepted: March 3rd, 2025 Online Published: April 25th, 2025

Abstract: The Relationship Between Religiosity and Student Learning Outcomes in Chemistry for Class XI at MAN 1 Madina. This study aims to determine religiosity, chemistry learning outcomes, and the relationship between religiosity and learning outcomes among students at MAN 1 Madina. The population in this study consists of all XI IPA class students at MAN 1 Madina, totaling 210 individuals. The sampling technique used is total sampling. The instrument used is a religiosity questionnaire consisting of 30 statement items, a retest in the form of a chemistry ability test with 10 multiple-choice questions on the topic of chemical equilibrium, and data from the second-semester report cards. Hypothesis testing was conducted using correlation and determination coefficient tests. Based on the analysis conducted, it was found that the overall level of religiosity among students falls into the very high category with an average score of 87.63. Meanwhile, the students' academic performance, which is a combination of report card grades and test scores, averaged 84.26. There is a significant positive relationship between religiosity and chemistry learning outcomes among the XI students of MAN 1 Madina. The strength of the relationship between religiosity and students' learning outcomes overall falls into the strong category with an influence contribution of 50.3%.

Keywords: Learning Outcomes, Religiosity

Abstrak: Hubungan antara Religiusitas dengan Hasil Belajar Siswa pada Mata Pelajaran Kimia Kelas XI MAN 1 Madina. Penelitian ini bertujuan untuk mengetahui religiusitas, hasil belajar kimia, serta hubungan religiusitas dengan hasil belajar pada siswa MAN 1 Madina. Populasi dalam penelitian ini adalah seluruh siswa kelas XI IPA di MAN 1 Madina yang berjumlah 210 orang. Teknik pengambilan sampel yang digunakan adalah total sampling. Instrumen yang digunakan adalah angket religiusitas yang berjumlah 30 item pernyataan, tes ulangan berupa lembar soal kemampuan kimia sebanyak 10 soal pilihan berganda dengan topik kesetimbangan kimia, serta data nilai rapor semester genap. Uji hipotesis dilakukan dengan uji koefien korelasi dan determinasi. Berdasarkan analisis yang dilakukan diperoleh bahwa tingkat religiusitas yang dimiliki siswa secara keseluruhan berada dalam kategori sangat tinggi dengan nilai rata-rata sebesar 87,63. Sedangkan hasil belajar siswa yang merupakan gabungan nilai rapor dan nilai tes memperoleh rata-rata sebesar 84,26. Terdapat hubungan positif yang signifikan antara religiusitas dengan hasil belajar kimia pada siswa XI MAN 1 Madina. Kekuatan hubungan antara religiusitas dengan hasil belajar siswa secara keseluruhan berada dalam kategori kuat dengan kontribusi pengaruh sebesar 50,3%.

Kata Kunci: Hasil Belajar, Religiusitas

- **INTRODUCTION**

The quality of human resources can be improved through education (Mulya & Sulaiman, 2022). Thus, it is hoped that excellent education will produce excellent individuals as well. Based on the Republic of Indonesia Law Number 20 of 2003, national education aims to develop students' potential to become individuals who are faithful and devoted to God Almighty, have noble character, are physically and mentally healthy, possess resilient personality, intelligence, creativity, independence, and responsibility. Furthermore, Islam views education not merely as teaching; education encompasses the transfer of values and the development of personality in all its aspects, in addition to the transfer of knowledge (Al Fadhil, 2019). Thus, as is known, educational institutions, such as schools, have the responsibility to instill not only knowledge but also character values in their students (Naibaho, 2019). The values that shape attitudes, discipline, and perspectives on education and life in general are often associated with the religiosity one possesses, as religion often serves as a moral and ethical guide for individuals.

According to the Ministry of Education and Culture, religiosity is one of the main characters that must be prioritized by students. According to Evi & Farid (2014), religiosity is the internalization of religious values within the individual, which is related to belief in religious teachings both in speech and heart, and is subsequently actualized in daily actions and behavior. According to Mubarak (2019), the nature of religiosity can be applied, such as having faith in God Almighty, tolerance and appreciation for religious diversity, as well as harmony and peace in everyday life. Students need to have a good religious attitude, which includes practicing their religion at school and not just following the rules. However, in reality, only a small number of Muslim students are willing to practice their religion properly while at school. This includes performing Sunnah prayers or congregational prayers that are mandatory at the school mosque (Prayoga, 2019). Furthermore, the numerous incidents occurring among teenagers both inside and outside of school, ranging from minor to serious violations such as cheating, skipping classes, fighting, to committing crimes like drug use, rape, theft, and other immoral acts (Prayoga, 2019), indicate that the religiosity of students is still quite low. This is because fostering a religious attitude is difficult as it requires a strong religious commitment to develop a healthy religious character (Naibaho, 2019).

Science, including Chemistry, is a field that studies the structure, composition, changes, and reactions of a substance as well as the energy surrounding it (Muti'ah et al., 2021). Chemistry is one of the challenging subjects because it allows students to understand the world around them, explained in the form of abstract processes and connected with the basic structure of matter (Setiadi & Irhasyuarna, 2017). The teaching and learning process presents challenges for chemistry concepts that are considered complex (Ad'hiya, et al., 2019).Thus, it can lead to negative perceptions and low motivation felt during the chemistry teaching and learning process (Asmara, 2016). As a result, students' learning outcomes in chemistry can decline (Hemayanti et al., 2020). High or low learning outcomes affect whether students perceive changes in their learning or not (Arsyad et al., 2022). Because chemistry can be profound knowledge from both scientific and religious perspectives, incorporating religious values into scientific inquiry is an acceptable approach."Fostering a positive attitude towards chemistry, recognizing the laws of nature, and praising God Almighty" are the goals in studying the subject of Chemistry.This positive attitude towards chemistry results in respect for God Almighty, who created the universe and certainly has certain laws

(sunatullah) (Darmana, 2012). Understanding the beauty in the order of nature and the ability of chemistry to explain various natural phenomena and its technological applications, students who develop a positive attitude towards chemistry tend to be more interested in studying Chemistry further (Depdiknas, 2004).

According to Khoerunnisa (2017), the connection between religious values and learning outcomes also stems from a result/goal that each school aims to achieve so that students can attain good achievements. According to Aswie (2023), low cognitive knowledge scores are directly proportional to students' understanding of religious values. This is because students with strong religious beliefs will be more diligent in studying in class, do more homework, and achieve better results (Kumar & Mittal, 2014). Someone who has a strong belief in God's will will react positively to everything that happens to them. As a result, learners will approach the learning process with greater optimism, which will lead to high learning outcomes (Marliani, 2016).This is in line with the opinion of Febrianti et al., (2015) that a person's intelligence is influenced by well-formed character values.

According to Yusak research (2014), academic success is influenced by religiosity. Individuals with a high level of religiosity will also have a high level of achievement. This is due to the fact that highly religious individuals are more capable and resilient when facing challenges and failures, especially in problem-solving; they are also more likely to produce more valuable outcomes and better learning results. According to Ceglie research (2013), religion has a significant impact on perseverance in the field of science, leading to positive progress both academically and beyond. This is supported by Mansour (2008) research, which states that there is a significant integration between religious values and science in the majority.

Although many studies have examined the relationship between religiosity and learning outcomes, few have specifically focused on particular subjects such as chemistry or the scope of science. The selection of the topic of chemical equilibrium as a test is also a new approach used to measure students' chemistry learning outcomes in a more specific and relevant way. Furthermore, the sample involving the entire population of the 11th grade also makes the results more representative and generalizable to a wider population in the school. Therefore, based on the problem description, the author is interested in investigating in depth the relationship between learning outcomes in the cognitive aspect and the religiosity possessed by students.

- **METHOD**

The method used is correlational, which is to examine the relationship between religiosity and students' chemistry learning outcomes. This research was conducted in the even semester of the 2023/2024 academic year from July to August 2024. The research population consists of 210 students from the XI IPA class at MAN 1 Madina, divided into 6 classes. The sample was taken using the total sampling technique, so all 210 students became subjects of the research. The instruments used consist of a religiosity questionnaire (30 statement items) and a chemistry ability test (10 multiple-choice questions about chemical equilibrium), as well as data from the second semester report cards.

The religiousity questionnaire and chemistry ability test were first validated by experts. The expert validation results for the questionnaire yielded a score of 87.5%, which falls within the "very feasible" category for use in the research. Meanwhile, the

expert validation results for the chemistry ability test obtained a score of 85%, which also falls within the "very feasible" criteria for use in the research. Before conducting the hypothesis test, prerequisite tests were first carried out, namely the normality test using Shapiro-Wilk, homogeneity using Levene's test, and data linearity. Then, hypothesis testing was conducted using the correlation coefficient and the coefficient of determination to determine the relationship, strength, and influence of the relationship between the two variables.

- **RESULT AND DISCUSSION**

This research consists of an independent variable, which is the students' religiosity, and a dependent variable, which is the students' learning outcomes. The research data was processed using SPSS. Students' religiosity was measured using a questionnaire consisting of 30 statements. The data on students' religiosity is presented in Table 1.

Table 1. Data on Students' Religiosity

Data	Result
Sample	210
Max	98
Min	74
Mean	87,63

Meanwhile, the students' learning outcomes in this study are a combination of report card grades and daily test scores, which are then divided by two (average). The report card grades used are the chemistry grades from the second semester. Meanwhile, the daily test scores are the results of the chemistry proficiency test conducted on the topic of chemical equilibrium. The acquisition of student learning outcome scores is presented in Table 2.

Table 2. Data on Student’s Learning Outcomes

Data	Result
Sample	210
Max	99
Min	61,5
Mean	84,26

The religiosity data and learning outcomes obtained were first subjected to normality, homogeneity, and linearity tests. The normality test is intended to determine whether the data is normally distributed. The normality test uses the Shapiro-Wilk test at a significance level of 0.05, with the test results for religiosity data presented in Table 3.

Table 3. Results of the Religiosity Normality Test

Data	Class	Sample	*Shapiro Wilk*
			Sig.
Religiosity	XI IPA 1	34	0,203
	XI IPA 2	35	0,065
	XI IPA 3	36	0,067
	XI IPA 4	36	0,080
	XI IPA 5	35	0,232
	XI IPA 6	34	0,071

Based on Table 3, the sig value > 0.05 indicates that the religiosity data in each class is normally distributed. Meanwhile, the results of the test for learning outcomes data are presented in table 4.

Table 4. Results of the Learning Outcomes Normality Test

Data	Class	Sample	Shapiro Wilk
			Sig
Learning Outcomes	XI IPA 1	34	0,209
	XI IPA 2	35	0,301
	XI IPA 3	36	0,589
	XI IPA 4	36	0,224
	XI IPA 5	35	0,295
	XI IPA 6	34	0,156

Based on Table 4, the sig value > 0.05 indicates that the students' learning outcomes in each class are normally distributed. Next, a homogeneity test was conducted to determine whether the data is homogeneous. The homogeneity test used Levene's test with results shown in Table 5.

Table 5. Results of the Homogeneity Test

Data	Sample	*Levene*
		Sig.
Religiosity	210	0,129
Learning Outcomes	210	0,151

Based on Table 5, the sig value > 0.05 indicates that the data on religiosity and student learning outcomes are homogeneous. The linearity test aims to determine whether the two or more variables being tested have a linear relationship or not.

Table 6. Results of the Linearity Test

Data	N	*Deviation From Linearity*
		Sig.
Learning Outcomes * Religiosity	210	0,258

Based on Table 6, it is known that the significance value for deviation from linearity is 0.258. This indicates a significance value of > 0.05, which means that there is a linear relationship between the religiosity variable (X) and learning outcomes (Y). Then, a parametric test was conducted in hypothesis testing, namely the correlation test.

Table 7. Correlation Test of Religiosity with Learning Outcomes

Pengujian Hipotis	N	Person Correlation	Sig. (1-tailed)	R Square
Learning Outcomes * Overall Student Religiosity	210	0,709	0,000	0,503

Based on Table 7, the sig value for religiosity with learning outcomes is 0.000, where the sig value < (0.05), which means Ha is accepted. Meanwhile, at the correlation coefficient level, a value of 0.709 was obtained, indicating a strong correlation with an influence contribution of 50.3%.

The significant positive relationship between religiosity and students' learning outcomes means that the better the religiosity possessed by the students, the better their learning outcomes will be, and vice versa. Based on the research results, it was found that overall religiosity contributes 50.3% to the influence on students' learning outcomes, with the remaining percentage determined by other factors, one of which is motivation. Based on the percentage of the contribution of religiosity to learning outcomes, it shows that religiosity significantly influences students' learning outcomes. This is in line with the research by Pitaloka et al., (2022) that religiosity somewhat influences a person's learning outcomes. A person's learning behavior is positively influenced by their religious attitude, and a good understanding of religion positively affects all activities in various aspects of their life. This is because religion instills values that shape human personality, such as honesty, discipline, self-confidence, optimism, responsibility, and piety values that become good morals shaping one's character. Thus, it is clear that a person's religiosity has a significant impact on their academic achievements and social standing. Uno (2008) also argues that the level of religiosity plays an important role in the development of character and academic success of students. Another study conducted by Wibowo et al., (2015) revealed that the influence of religiosity is not limited to just one subject, but rather affects students' academic performance in various subjects. This shows that religiosity does not only play a role in subjects related to religion, but also impacts other more general subjects.

▪ CONCLUSION

This study concludes that the religiosity of 11th-grade students at MAN 1 Madina has a strong positive relationship with their chemistry learning outcomes. The average religiosity of the students is 87.63, while their learning outcomes are 84.26. The influence of religiosity on learning outcomes reaches 50.3%. This finding explains that the factor of religiosity plays a role in improving students' learning outcomes,

particularly in the subject of chemistry. Therefore, it is important to pay more attention to religious values in the learning process.

▪ REFERENCES

Al Fadhil, M. (2019). Internalisasi Nilai Religiusitas pada Anak dalam Keluarga. *Jurnal Mudarrisuna*, *9*.

Arsyad, R. N., Pomalato, S. W. D., Abbas, N., & Achmad, N. (2022). Hubungan Antara Self Regulated Learning dengan Hasil Belajar Matematika Pada Materi Trigonometri. *Jambura Journal of Mathematics Education*, *3*(1), 48–56.

Ceglie, R. (2013). Religion as a Support Factor for Women of Color Pursuing Science Degrees: Implications for Science Teacher Educators. *Journal of Science and Teacher Education*, *24*.

Depdiknas. (2004). *Pedoman Pembuatan Laporan Hasil Belajar, Pengembangan Ranah Psikomotorik, Pembelajaran Tuntas, Penilaian Ranah Afektif, Penilaian dengan Portofolio, Manajemen Pelaksanaan Kurikulum Berbasis Kompetensi*. Dirjen Dikdasmen.

Evi, A., & Farid, M. (2014). Religiusitas, Kontrol Diri dan Kenakalan Remaja. *Persona: Jurnal Psikologi Indonesia*, 127.

Febrianti, E., Haryani, S., & Supardi, K. I. (2015). Pengembangan Lembar Kerja Siswa (LKS) Materi Larutan Penyangga Model Problem Based Learning Bermuatan Karakter Untuk Siswa SMA. *Journal of Innovative Science Education*, *4*(1), 50–58.

Khoerunnisa. (2017). *Pengaruh Pengetahuan Tentang Keberagamaan Terhadap Hasil Belajar PAI Siswa Kelas V di SDN 02 Pesucen Kecamatan Petarukan Kabupaten Pemalang*. 113.

Kumar, P., & Mittal, A. (2014). Religious Attitude, Modernization and Aggression of College Going Students and Its Impact on Their Academic Achievement. *International Journal of Education and Psychological Research*, *3*.

Mansour, N. (2008). Religious Beliefs: a Hidden variable in the performance of science teachers in the Classroom. *European Educational Research Journal*, *7*.

Marliani, R. (2016). Hubungan Antara Religiusitas dengan Prestasi Belajar pada Mahasiswa Fakultas Syariah dan Hukum UIN Sunan Gunung Djati Bandung. In *Jurnal Psikologi Integratif* (Vol. 4, Issue Nomor 2, pp. 136–147).

Mubarak, Z. (2019). *Sistem Pendidikan di Negeri Kangguru* (Pertama). Gading Pustaka Depok.

Mulya, R., & Sulaiman, S. (2022). Pengaruh Nilai Religiusitas Terhadap Hasil Belajar Siswa Dalam Pembelajaran Pendidikan Agama Islam Di Sdn 10 Lubuk Alung. *At-Ta'Dib: Jurnal Ilmiah Prodi Pendidikan Agama Islam*, *13*(2), 171–185. https://doi.org/10.47498/tadib.v13i2.695

Muti'ah, M., Siahaan, J., & Sukib, S. (2021). Upaya Meningkatkan Motivasi dan Pemahaman Ilmu Kimia Melalui Demonstrasi Kimia Bagi Siswa SMA N 1 Labuapi. *Jurnal Pengabdian Magister Pendidikan IPA*, *4*(2), 0–5.

Naibaho, F. (2019). Hubungan Antara Religiusitas Dengan Keberhasilan Try Out Ujian Kompetensi Mahasiswa Akademi Kebidanan Santa Elisabeth. *Jurnal Ekonomi, Sosial &Humaniora*, *01*(03), 73–80.

Pitaloka, F. A., Supriatin, L., Azhar, N., Aini, S. Q., & Fajrussalam, H. (2022). Pengaruh Sikap Religiusitas Mahasiswa Terhadap Prestasi Belajar. *Jurnal Ilmiah Multidisiplin Indonesia*, *2*(3), 804–814.

Prayoga, Y. C. (2019). *Pengaruh Latar Belakang Pendidikan, Religiusitas dan Budaya Sekolah terhadap Akhlak Remaja di Gondangrejo Kabupaten Karanganyar* [Institut Agama Islam Negeri Surakarta].

Setiadi, I., & Irhasyuarna, Y. (2017). Improvement of Model Student Learning Through The Content of Solutions Guided Discovery Buffer. *IOSR Journal of Research & Method in Education (IOSRJRME)*, *07*(01), 01–09.

Uno, H. B. (2008). *Orientasi Baru dalam Psikologi Pembelajaran* (Ketiga). Bumi Aksara.

Wibowo, M. W., Susanto, D. Y., & Nocky, S. (2015). Pengaruh sikap religiusitas terhadap prestasi belajar siswa di SMA Budi Utomo Kecamatan Prambon Kabupaten Sidoarjo. *Jurnal Ekonomi Dan Manajemen*.

Yusak, M. (2014). Korelasi Religiusitas dengan Prestasi Akademik. *Jurnal Intelegensia*, *3*(1).