



The Effect of Jurisprudential Inquiry Model and Achievement Motivation on Cognitive Learning Outcomes

Atan Pramana^a, I Nyoman Sudana Degeng^b, Suko Wiyono^c, Dedi Kuswandi^d,
^{a,b,c,d}Universitas Negeri Malang, Malang, Indonesia, Email:
^aatanpramana.1701219@students.um.ac.id, ^aatanpramana@gmail.com

Meaningful learning is seen as an important educational goal and a necessity in terms of the challenges confronting us in the 21st century. The selection of the right model can influence meaningful learning. In this paper the jurisprudential inquiry model and expository are compared and juxtaposed with achievement motivation to determine its interaction with the instructional effect of cognitive learning outcomes. A quasi-experimental design was used—the type 2x2 factorial design version pre-test/post-test non-equivalent control group. The research subjects were undergraduate students who were taking Civics Education courses at Universitas Negeri Malang. The research sample was taken by the cluster sampling of as many as four classes with a total of 140 students. Data analysis techniques using the MANOVA technique was also used. The results showed that there were differences in students' cognitive learning outcomes between applying inquiry jurisprudence and expository models. Among students who have high and low achievement motivation there were differences in cognitive learning outcomes. In cognitive learning outcomes, there is no interaction between learning models and achievement motivation. The findings show that the jurisprudential inquiry model and achievement motivation can influence learning outcomes. The jurisprudential inquiry model makes students more motivated, challenged, and interested in learning for individuals and groups.

Key words: *Learning model, jurisprudential inquiry model, expository model, achievement motivation, cognitive learning outcomes.*



Introduction

Education should provide an opportunity for students to gain knowledge, skills, and values as a condition of entering an increasingly and fiercely competitive world. Meaningful education is an important educational goal and a necessity when facing the challenges of the 21st century. The results of education represent a great opportunity to be meaningful, related to cognitive, psychomotor, and affective aspects. Cognitive and psychomotor aspects in learning generally have an instructional effect, while affective aspects are generally nurturant effects. Joyce et al. (2009) explain that various (engineering) efforts need to be made so that students learn properly. Slavin (2018) adds that the learning model must be in accordance with the learning objectives and characteristics of students.

The selection of the right learning model can develop student potential. One learning model that provides broad opportunities for students to search, explore, discover, and construct knowledge to solve problems through teacher guidance is the jurisprudential inquiry model (Nwafor, 2014). Determining the right learning model can increase learning outcomes. The alternative for students to freely search, explore, discover, and construct knowledge to solve problems through educator guidance is the jurisprudential inquiry model. This is a problem-solving technique that improves the relationship between science, technology, and society (Nwafor, 2014).

Joyce et al. (2009) have observed that jurisprudential inquiry could improve three basic competencies regarding individual positions in social life: firstly, attachment to values; secondly, the ability to clarify and solve problems; and thirdly, the ability to master knowledge regarding public issues. The advantage of jurisprudential inquiry is the direct learning effect that allows students to use the framework in analyzing the controversial issues related to public policy. The jurisprudential inquiry model is an effective, alternative learning model applied in social science learning activities (Joyce et al., 2009). The Civics Education course of the social science learning family is very suitable for the application of the jurisprudential inquiry learning strategy model. Civics Education is comprised of courses that deal directly with people's lives, aiming to build good characteristics or character in citizens. So the application of the jurisprudential inquiry model is expected to deepen a student's understanding of taking Civics Education courses.

The jurisprudential inquiry is organized into six stages: first, directing the case; second, identify issues and value conflicts; third, choose a position or determine attitude towards a case; fourth, explore attitudes or positions and forms of argument; fifth, confirm and qualify the position; and sixth, examine the factual assumptions behind positions deemed to meet qualifications. Students are put in small groups to present with some value dilemmas in the case. This model is not used in primary education but is used in middle schooling and for adult students.

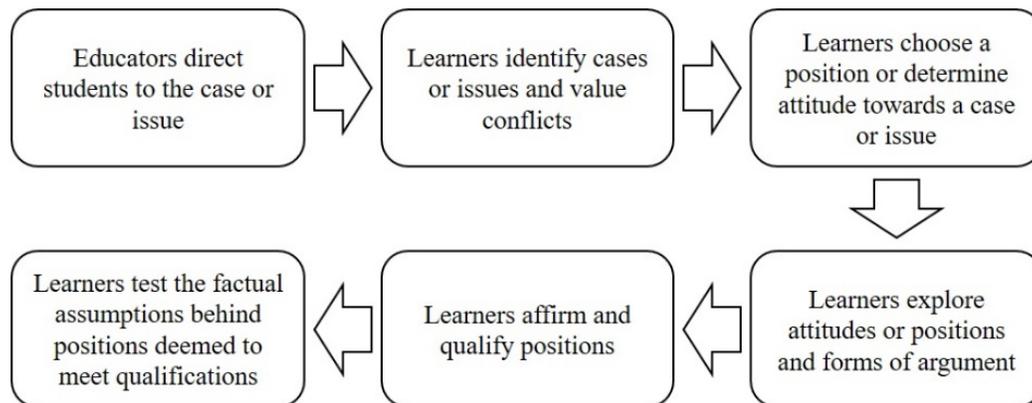


Figure 1

The Stages of Jurisprudential Inquiry (Joyce et al., 2009).

Observations and surveys at Universitas Negeri Malang, in the Civics Education (in the 2018-2019 school year) have shown that the average level of achievement of learning outcomes and the transformation of attitudes and behavior in students is low. There are several factors that cause the low achievement of students in Civics Education. First, the material taught by the educators is still theoretical because it is not accompanied by factual examples and actual cases or phenomena; secondly, learning does not emphasize creative two-way communication to foster understanding of lecture material, performance, and learning motivation; third, students underestimate or do not take Civics Education seriously because they are not scientific and expertise-based courses that are appropriate to the study program and consider repetition of lessons while at school; and fourth, teaching models or strategies implemented in the classroom are boring. Learning strategies implemented by educators still use lecture, discussion, question and answer and assignment strategies. The application of lecture strategy still occupies the most time. For the method of discussion, question and answer, and for assignment work, educators act as the main controller in the learning process. The transfer of information from educators to students is an effort that is more emphasized than learning. The learning model applied is expository.

Theoretically, with the philosophical foundation and psychology of learning, the expository model differs significantly from the jurisprudential inquiry model. The expository model emphasizes the ability to convey information verbally. Learning is centered on the educator. Students are required to obtain information or knowledge. Students are less trained, guided, or directed to hone critical thinking skills (Nwafor, 2014). From the learning conditions through to the expository model, we can ascertain the strengths and weaknesses of the expository model compared to the jurisprudential inquiry model. Even with the changing paradigm of education and the demands of contemporary learning competence, the expository model is predicted or



considered to be inferior compared to the jurisprudential inquiry model. The expository model is a learning model that optimizes the mastery of subject matter by the process of delivering material verbally from educators to students (Killen, 2006). Expository models, according to Oxford (2003) means that preparation (preparation) is first; second, the presentation (presentation); third, correlation (correlation); fourth, concluding (generalization); and fifth, 'apply' (application). In terms of the weaknesses of the expository model Andrews (1984), concluded that the learning model oriented towards students was superior to the expository model. Models that are centered on educators must be abandoned and move on to democratic classes, where educators and students gather to build unity, norms and solve problems.

Research shows that higher levels of expectation of success are positively related to various attainment behaviors, which include achievement, choice, and persistence (Schunk, 2012). The characteristics of achievement motivation are as follows: first, the desire to carry out a difficult task or job; second, the desire to master, manipulate or human ideas, carry out as quickly as possible, and independently in accordance with applicable conditions; third, the desire to overcome obstacles to achieve high standards; fourth, the desire to achieve maximum achievement for oneself; and fifth, the desire to be able to win in competition against other parties, as well as improve one's abilities through the successful application of talent. Achievement motivation will grow if the learning model used can arouse students' involvement in learning activities. The jurisprudential inquiry model divides students into groups, allowing students to discuss and teach each other, while educators can go around to each group and respond to individual problems that cannot be solved in groups. The application of jurisprudential inquiry models will foster student achievement motivation so that they will be actively involved in each step of learning.

To determine the superiority of the jurisprudential inquiry and expository models in this study, both of these models were designed, developed, and applied in Civics Education courses college students. The jurisprudential inquiry model and expository are compared and juxtaposed with achievement motivation to determine its interaction with the direct effects of cognitive learning outcomes. From the explanation above, it is expected that jurisprudential inquiry and achievement motivation can influence learning outcomes. This determines the effect of jurisprudential inquiry models and achievement motivation on cognitive learning outcomes. This study further aims to determine: first, the difference in cognitive learning outcomes between the application of jurisprudential inquiry and expository; second, the difference in cognitive learning outcomes between high and low achievement motivation; and third, the interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on cognitive learning outcomes.



Method

The research design uses a quasi-experimental design. The type 2x2 factorial design version pre-test/post-test is a non-equivalent control group. Research subjects are already in the form of intact groups. The experimental group 1 was a group that was subject to treatment with the jurisprudential inquiry learning model, while the experimental group 2 was subjected to the treatment with an expository learning model.

Table 1
Research Design

		Learning model	
		Jurisprudential inquiry (X1)	Expository (X2)
Achievement	Height (Y1)	X1Y1	X2Y1
motivation	Low (Y2)	X1Y2	X2Y2

The population is the whole subject of research conducted at Universitas Negeri Malang, Jawa Timur, in Indonesia, comprised of undergraduate students who are taking Civics Education. Research subjects that are already in the form of intact groups and the policy of the leadership of higher education do not allow changing groups that are already systemized. The sampling technique is done by a cluster sampling technique and selecting research subjects randomly. The basis of the consideration is that all subjects of this study are currently running the same Civics Education and with teaching lecturers having teaching experience of at least ten years.

Before being subjected to treatment, pre-tests are first given to the subjects of the experimental and control groups and asked to fill the instruments of achievement motivation honestly. The initial ability of research subjects before being given treatment can be determined by a pre-test. Furthermore, the research subjects were asked to fill out the achievement motivation questionnaire instrument to determine the level of achievement motivation, and to determine the level of achievement motivation in the category of high or low based on the average score obtained by all research subjects. The sample of research subjects amounted to 140 students, divided into group 1 who received the jurisprudential inquiry model. Of this sample, those who had high achievement motivation were 32 students, while 38 students had low achievement motivation. In Group 2, those who received the expository model and had high achievement motivation were 36 students, with 34 students having low achievement motivation. The sample selection uses two groups because it is seen from the level of ability (intelligent). The level of student ability seen from differences in cognitive pre-test learning outcomes is homogeneous.

Table 2
Research Subjects

		Learning model		Amount
		Model jurisprudential inquiry	Model expository	
Achievement	High	32 Students	36 Students	68 Students
motivation	Low	38 Students	34 Students	72 Students
Total		70 Students	70 Students	140 Students

Research instruments are certain tools or means used to obtain or collect data to solve research problems or to achieve research objectives. The research instruments used were of two kinds; namely, the treatment instrument contained in the learning plan, with the learning model for the two experimental groups. The next instruments are achievement motivation questionnaire and cognitive learning outcomes test. Before the research is conducted, it is necessary to test the instrument. The instrument trials were conducted to determine whether the instrument was valid or not and whether the instrument was reliable or not. The validity of the instruments to be measured is content and item validity.

The validity of the contents of the instrument was determined based on the assessment and consideration of relevant experts, to provide an assessment of the use of language and its suitability with the material to be examined on each item-content of the instrument. Based on the results of the content validity, the percentage of the learning plan is 92,68%, the achievement motivation questionnaire is 89,5%, and the cognitive learning outcomes test is 80,25% so that the test instrument is declared valid and feasible. Item validity was done on group subjects that were not included in the experimental group.

Item reliability is related to trust issues. A test is said to have high reliability or a high level of confidence if the test gives fixed results. If r_{11} is calculated to be greater than r table, then it can be said that the test set is reliable. From the calculation results of the Alpha Cronbach test aided by IBM SPSS Statistics 26 for windows, the reliability of the achievement motivation questionnaire was 0,762 of 25 Items, and the cognitive learning outcomes test was 0,803 of 25 Items, so it could be categorized as high reliability.

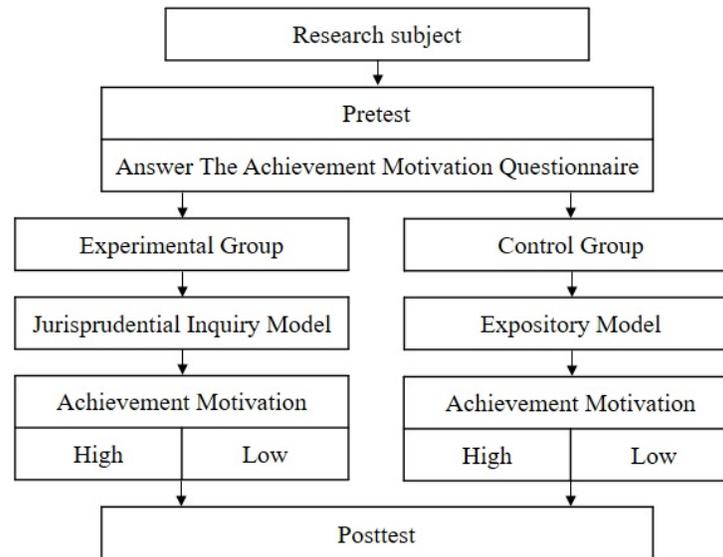


Figure 2
Research Implementation.

The first stage is a limited observation to obtain data and information about the condition of the research subjects, such as the number of subjects who will be involved in the study, lecture schedules, interviews with lecturers of Civics Education about the learning done so far, and the learning plans that have been used. After that, the research subjects were determined, namely the experimental group with the application of jurisprudential inquiry and the experimental group with the application of expository. The instrument trials were conducted on groups other than the experimental group who had studied Civics Education.

The second stage is the research activities carried out in the two experimental groups by providing a pre-test and achievement motivation questionnaire. A pre-test aims to determine the average initial ability of students and determine the value of variance in both homogeneous groups. The t-test and homogeneity test are used with the help of IBM SPSS Statistics 26 for windows, while achievement motivation questionnaires determine the categories of high and low achievement motivation.

The third stage is the application of learning models in learning activities. Learning activities in the two experimental groups differ because each group receives training in a different learning model. Learning is contained in the jurisprudential inquiry learning model learning plan for experimental group 1, and in the expository learning model learning plan for experimental group 2. This is carried out in six meetings. The time for each meeting is 100 minutes. The experiment was adjusted to the real meeting schedule.

The fourth step is collecting research data. In both experimental groups, each was given a post-test. The post-test aims to determine the final ability of the subject after applying the learning model in learning activities. Furthermore, the value of the post-test is the data of students' cognitive learning outcomes. Based on data from cognitive learning outcomes of experimental group 1 and experimental group 2, data analysis was then performed.

Data analysis was performed to meet the research objectives. The stages to achieve the goals included data descriptions, testing the analysis requirements, and testing hypotheses. Data analysis techniques were performed, namely the prerequisite tests (normality and homogeneity test) and hypothesis test (test of difference with t-test and interaction test with MANOVA test). MANOVA is used to analyze the statistics of two groups on several dependent variables simultaneously and to correlate with each other (Pituch & Stevens, 2015).

Results

The normality test result data has a significant value $> 0,05$; so it can be concluded that the data on the achievement motivation questionnaire, pre-test, and post-test, for both experimental groups was normally distributed. Homogeneity data test results have a significant value $> 0,05$; so it can be concluded that the achievement motivation questionnaire, pre-test, and post-test in both experimental groups are homogeneous. The initial ability data is the data of student pre-test scores before being given treatment. The average score of the initial ability of the experimental group 2 was 45,04, and in the experimental group 1 it was 43,64. The results of the similarity test on average cognitive learning outcomes data pre-test experimental group 2, and experimental group 1, was achieved by looking at the Sig. (2-tailed) $(0,259) > 0,05$ on the t-test. It can be concluded that there is no difference in the average pre-test between the two experiments before applying the learning model (jurisprudential inquiry and expository model).

With the first hypothesis, there is no difference in cognitive learning outcomes between the application of the jurisprudential inquiry and expository models (H_0). There is a difference in cognitive learning outcomes between the application of the jurisprudential inquiry and expository models (H_1). The basis for decision making is if the p-value $> 0,05$, then H_0 is accepted, and if the p-value is $< 0,05$, then H_0 is rejected. Based on the data in Table 3, the p-value (probability) = 0,000, because p-value $< 0,05$, H_1 is accepted. That is, there is a significant difference in cognitive learning outcomes between the application of jurisprudential inquiry and expository models.

In the second hypothesis, there is no difference in cognitive learning outcomes between high and low achievement motivation (H_0). There is a difference in cognitive learning outcomes between



high and low achievement motivation (H1). The basis of decision making is if the p-value $> 0,05$, then H_0 is accepted, and if the p-value is $< 0,05$, then H_0 is rejected. Based on the data in Table 3, the p-value (probability) = 0,000, because the value of $p < 0,05$, then H_0 is rejected. That is, there are differences in cognitive learning outcomes between high and low achievement motivation.

We undertook an analysis of interactions between learning models (jurisprudential inquiry and expository) and achievement motivation on students' cognitive learning outcomes. Two variables are involved at the same time and will be tested in advance of the effect of multivariate assisted by IBM SPSS Statistics 26 for windows. With the third hypothesis, there is no interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on cognitive learning outcomes (H_0). There is an interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on cognitive learning outcomes (H1). The basis for decision making is if the p-value $> 0,05$, then H_0 is accepted, and if the p-value is $< 0,05$, then H_0 is rejected. Based on the data in Table 3, the p-value (probability) = 0,437, because the value of $p > 0,05$ then H_0 is accepted. That is, there is no interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on cognitive learning outcomes.

Table 3
MANOVA Test Results Tests of Between-Subjects Effects

Source	Dependent variable	Type III sum of squares	Df	Mean square	F	Sig.
Corrected model	Cognitive learning outcomes	9184.431 ^b	3	3061.477	89.141	.000
Intercept	Cognitive learning outcomes	599571.085	1	599571.085	17457.787	.000
Learning model	Cognitive learning outcomes	1375.417	1	1375.417	40.048	.000
Achievement motivation	Cognitive learning outcomes	8150.964	1	8150.964	237.333	.000
Learning model * Achievement motivation.	Cognitive learning outcomes	20.877	1	20.877	.608	.437
Error	Cognitive learning outcomes	4670.791	136	34.344		
Total	Cognitive learning outcomes	611481.000	140			
Corrected total	Cognitive learning outcomes	13855.221	139			

Discussion

Influence of Learning Models on Cognitive Learning Outcomes

Effects are shown on the application of the jurisprudential inquiry model found on cognitive learning outcomes. Based on the data in Table 3, the p-value (probability) = 0.000 < 0.05 then H₀ is rejected. That is, there are differences in cognitive learning outcomes between the application of jurisprudential inquiry and expository models. Significant differences in the results of the statistical analysis are also supported by the results of research (direct observation) of the real conditions of learning in the classroom. The results showed that the jurisprudential inquiry learning model was different from expository learning. The jurisprudential inquiry model has a more positive effect than expository learning.



The jurisprudential inquiry model makes students more motivated, challenged, and interested in learning, both individually and in groups. Students are more enthusiastic about discussing and solving the problems discussed. Research Singh (2010) states that the application of jurisprudential inquiry can significantly improve learning outcomes for social dialogue competencies. The jurisprudential inquiry learning model (because it is problem-based) develops the ability to think, solve problems, and develop intellectual skills. Joyce et al. (2009), in the study of the application of the jurisprudential inquiry learning model, stated that the application of the jurisprudential inquiry model significantly improved learning outcomes and problem-solving skills. The jurisprudential inquiry model can help develop abilities in understanding phenomena and problems in the surrounding environment by searching, exploring, constructing knowledge, and developing the ability to solve problems with the guidance of educators. Students live, learn, communicate and carry out their daily activities.

Influence of Achievement Motivation on Cognitive Learning Outcomes

Achievement motivation has a significant effect on cognitive learning outcomes in learning Civics Education. Based on the data in Table 3, the value of p (probability) = 0,000, because the value of $p < 0,05$, then H_0 is rejected. That is, there are differences in cognitive learning outcomes among students who have high and low achievement motivation. The results showed that high and low achievement motivation had a significant effect on cognitive learning outcomes. Achievement motivation has a very high correlation on student activity in learning. Achievement motivation is a factor that has an important role and positively influences cognitive learning outcomes as the final form of the learning process. High achievement motivation encourages all student actions to achieve learning achievement.

Motivation is very much needed in the learning process. Motivation encourages behavior and changes behavior from not excited to excited, from unwilling to willing, and from being reluctant to be ready. Motivation is an encouragement from within each individual or group to make changes that are better in achieving the goals set. Schunk (2012) defines motivation as a process of initiating and maintaining activities directed at achieving goals. Achievement motivation is a goal to strive for achievement following specified standards. Gu et al. (2011) and Kanani et al. (2017) have stated that one of the factors that motivate one's motivation is the need for achievement. A study by Singh (2011) concluded that people who have achievement motivation drive to work, keep trying to achieve targets, succeed in challenging and difficult tasks, try to achieve success, and choose the success or failure of activities to get a sense of intrinsic satisfaction.



The Effect of Interaction of Learning Models and Achievement Motivation on Cognitive Learning Outcomes

The interaction causes two or more independent variables that have a significant impact on the dependent variable. The separate effects of the independent variable are called the main effect. The results of multivariate testing of interactions between learning models (jurisprudential inquiry and expository) and achievement motivation on the average variable of cognitive learning outcomes of students, found no interaction. Based on the data in Table 3, the p-value (probability) = 0,437, because the value of $p > 0,05$ then H_0 is accepted. That is, there is no interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on cognitive learning outcomes.

The independent variable of the learning model (jurisprudential inquiry and expository) and the moderating variable of achievement motivation bring significant influences on the dependent variable of cognitive learning outcomes of students. Each independent and moderator variable has a separate and significant influence. The findings in this study indicate that the learning model (jurisprudential inquiry and expository) significant effect on cognitive learning outcomes. The moderator variable carries the main effect on cognitive learning outcomes. The independent variable and moderator variable have the same strong influence. From the acquisition of cognitive learning outcomes, it is known that subjects who were treated with jurisprudential inquiry models were superior to subjects treated with expository models. Judging from the moderator variables, this study shows that subjects who have high achievement motivation are superior to cognitive learning outcomes compared to subjects who have low achievement motivation. Schunk (2012) explains that achievement motivation has an influence on learning. This is evident from the mean acquisition of cognitive learning outcomes in the interaction of learning models (jurisprudential inquiry and expository) and achievement motivation.

Motivational thinking has a significant relationship to productive learning. Onete et al. (2012) argue that achievement motivation carries a positive influence on learning outcomes; achievement motivation has a positive relationship with students' learning achievement. Similarly, Gupta et al. (2012) found that achievement motivation had a positive effect in determining academic achievement. From studies on previous research, it can be concluded that high achievement motivation carries a strong (significant) effect on student learning outcomes compared to low achievement motivation.

Onete et al. (2012) have stated that achievement motivation has a significant effect on student learning activities. Achievement motivation is a factor that influences learning and a strong desire to realize what he wants. Gupta et al. (2012), in their research, stated that achievement

motivation affects the learning process of students. High achievement motivation makes students more eager to participate in learning activities and improve learning outcomes. According to Aydın & Coşkun (2011), students with high categories of achievement motivation have a high willingness to learn, make goals with moderate levels of difficulty, have confidence to work hard and try to overcome the difficulties they encounter.

Theoretical Implications and Practice of Research Findings in Learning

The theoretical implications of the findings of this study on learning Civics Education courses college students are providing input information to lecturers who support Civics Education on the importance of appropriate learning models in Civics Education learning in efforts to improve cognitive learning outcomes. The implications of the findings are fundamental to the jurisprudential inquiry model for the purpose of learning to clarify and solve problems, mastering knowledge regarding public issues, and analyzing issues of value controversy relating to public policy.

This model is centered on three main concepts. The first is jurisprudential, which has an understanding of knowledge and skills related to an issue (problem) in terms of 'law' or the interests of the community. Second, the concept of Inquiry/discovery in this context is interpreted by the process of learning independently to find a value or complexity in an issue (Joyce et al., 2009). And third, Sakrotik dialogue is a dialogue technique based on students' initial responses to cases testing these responses with systematic questions and inductive patterns, to arrive at final conclusions independently (Kilbane & Milman, 2013).

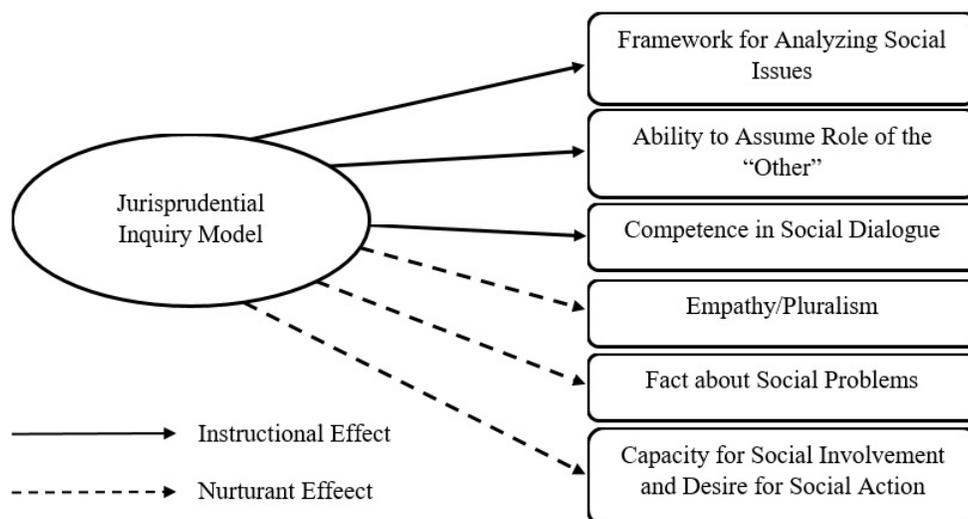


Figure 3
The Impact of Jurisprudential Inquiry Model (Joyce et al., 2009)



The direct impact of the jurisprudential inquiry is that students are encouraged to create a framework for conducting social analysis, the ability to make assumptions in the role of 'others' (i.e. perspective taking), and competence in social dialogue while the indirect impact that will be achieved is the ability of empathy in understanding different positions on an issue, knowing facts related to social problems, certainty in social improvement, and the will in engaging social action (Joyce et al., 2009).

Nwafor (2014) argues that in learning the jurisprudential inquiry model, learning must be fun so that students have enthusiasm, confidence and motivation to learn. Second, the best learning is learning from each other or from peers and from someone you know. Third, learning is most effective when an educator teaches a student (one to one learning). These advantages compared to the expository model are: first, the jurisprudential inquiry model emphasizes the activities of learners to the maximum to search for and find learning information. Second, students are assigned to find answers independently, so that an attitude of confidence can be grown. The inquiry model places educators as facilitators and motivators for students' learning. And third, the purpose of applying the inquiry model is to develop the ability to think critically, logically, and systematically, or critical thinking can be developed as part of mental processes in intellectual abilities. Winnie Siew Li & Arshad (2015) concluded that to improve student learning progress, teachers need to have a correct and positive understanding of the application of inquiry. A jurisprudential inquiry model is a form of a student-centered approach.

Mentzer & Becker (2010) have found that achievement motivation in supporting learning readiness has a positive impact on a student's learning progress. Learners will also avoid tasks that are too easy because they do not provide satisfaction. Conversely, students who have low achievement motivation prefer tasks that are easy or very difficult, because they do not like to work hard and are not afraid to fail (Schunk, 2012). Burriss & Garton (2007) and Mentzer & Becker (2010) state that a learner will increase cognitive learning outcomes if the learner is motivated to learn, while to improve achievement motivation one needed an appropriate learning model. Students with low achievement motivation tend to have poor learning outcomes than students with high achievement motivation.

The results of observations by researchers during the treatment have noted conducive learning conditions with indicators: that is, students are very enthusiastic and responsive to the tasks and discussions led by educators. Educator questions encourage students to be eager to answer and try to solve the problems found. The subject group model of jurisprudential inquiry and expository seeks to utilize time effectively and efficiently, following up on questions from educators and from other students to obtain better learning outcomes. For this reason, he explained that in carrying out learning through expository models, several things must be



observed, such as high-level interactions between educators and students, the use of high-quality examples, while the involvement of students needed to be effective with high achievement motivation. Kassim & Shaari (2014) concluded that students learn by developing potential through social interaction that can improve learning achievement.

Conclusion

Based on the findings of our research, it can be concluded: (1) There is a significant difference in cognitive learning outcomes between subjects who are subjected to jurisprudential inquiry model treatments and subjects who are subjected to expository model treatment; (2) There is a significant difference in cognitive learning outcomes between subjects who have high and low achievement motivation; And (3) there is no interaction between learning models (jurisprudential inquiry and expository) and achievement motivation on student cognitive learning outcomes as an instructional effect.

The results of this study can also be used to strengthen the theoretical foundation for research into the function of learning development, particularly in learning strategies in the realm of learning technology in an effort to solve learning problems and increase learning motivation. The jurisprudential inquiry model can be used or considered as an alternative strategy in social learning, including social subjects, to improve learning outcomes. The application of the jurisprudential inquiry learning model is recommended so that educators and students play an active and creative role according to their respective roles. Each student has different achievement motivation characteristics. Accommodating these different characteristics, it is recommended that students need to be given proper attention, facilities, motivation, and appreciation, especially for students who have low achievement motivation. For this reason, it is also advisable for educators of social subjects to pay more attention to achievement motivation factors in efforts to improve cognitive learning outcomes.

Acknowledgement

This study was supported by Mora scholarship 5000 Doctoral program from Directorate of Islamic Religious Higher Education, Directorate General of Islamic Education, Ministry of Religion of the Republic of Indonesia.



REFERENCES

- Alkan, M. F., & Arslan, M. (2020). Learner Autonomy of Pre-Service Teachers and its Associations with Academic Motivation and Self-Efficacy. *Malaysian Journal of Learning and Instruction*, 16(2), 75–96.
- Andrews, J. D. W. (1984). Discovery and Expository Learning Compared: Their Effects on Independent and Dependent Students. *The Journal of Educational Research*, 78(2), 80–89. <https://doi.org/10.1080/00220671.1984.10885578>
- Aydın, F., & Coşkun, M. (2011). Secondary school students’ “achievement motivation” towards Geography lessons. *Scholars Research Library Archives of Applied Science Research*, 3(2), 121–134.
- Burris, S., & Garton, B. (2007). Effect Of Instructional Strategy On Critical Thinking And Content Knowledge: Using Problem-Based Learning In The Secondary Classroom. *Journal of Agricultural Education*, 48(1), 106–116. <https://doi.org/10.5032/jae.2007.01106>
- Gu, X., Solmon, M. A., Zhang, T., & Xiang, P. (2011). Group Cohesion, Achievement Motivation, and Motivational Outcomes among Female College Students. *Journal of Applied Sport Psychology*, 23(2), 175–188. <https://doi.org/10.1080/10413200.2010.548847>
- Gupta, M., Devi, M., & Pasrija, P. (2012). Achievement motivation: A major factor in determining academic achievement. *Asian Journal of Multidimensional Research (AJMR)*, 1(3), 131–145.
- Joyce, B., Weil, M., & Calhoun, E. (2009). Models of Teaching (eight edition). *Publishing as Allyn & Bacon, One Lake Street Upper Sadle River, New Jersey, USA*.
- Kanani, Z., Adibsereshki, N., & Haghgoo, H. A. (2017). The Effect of Self-Monitoring Training on the Achievement Motivation of Students With Dyslexia. *Journal of Research in Childhood Education*, 31(3), 430–439. <https://doi.org/10.1080/02568543.2017.1310154>
- Kassim, M., & Shaari, A. S. (2014). The impact of quantum teaching strategy on student academic achievement and self-esteem in inclusive schools. *Malaysian Journal of Learning and Instruction (MJLI)*, 11, 191–205.
- Kilbane, C. R., & Milman, N. B. (2013). *Teaching models: Designing instruction for 21st century learners*. Pearson Higher Ed.
- Killen, R. (2006). *Effective teaching strategies: Lessons from research and practice*. Cengage Learning Australia.



- Mentzer, N., & Becker, K. (2010). Academic Preparedness as a Predictor of Achievement in an Engineering Design Challenge. *Journal of Technology Education*, 22(1). <https://doi.org/10.21061/jte.v22i1.a.2>
- Nwafor, C. E. (2014). Use Of Jurisprudential Innovative Approach in Teaching Basic Science: An Alternative to Lecture Method. *Int. Res*, 3(1), 63–67.
- Onete, U., Edet, P. B., Udey, F. U., & Ogor, B. P. (2012). Academic performance: A function of achievement motivation among education students of Cross River University of Technology, Calabar. *Review of Higher Education in Africa*, 4.
- Oxford, R. L. (2003). Language learning styles and strategies: Concepts and relationships. *Iral*, 41(4), 271–278.
- Pituch, K. A., & Stevens, J. P. (2015). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBM's SPSS*. Routledge.
- Schunk, D. H. (2012). *Learning theories an educational perspective sixth edition*. Pearson.
- Singh, K. (2011). Study of achievement motivation in relation to academic achievement of students. *International Journal of Educational Planning & Administration*, 1(2), 161–171.
- Singh, V. P. (2010). Effectiveness of Jurisprudential Inquiry Model of Teaching on Value Inclination of School Students. *Indian Educational Review*, 47(2), 45–71.
- Winnie Siew Li, S., & Arshad, M. Y. (2015). Inquiry Practices in Malaysian Secondary Classroom and Model of Inquiry Teaching based on Verbal Interaction. *Malaysian Journal of Learning and Instruction*, Vol. 12, 2015, 151–175. <https://doi.org/10.32890/mjli2015.12.8>