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Comedian Mathematical Thinking: An Islamic Examination of Inductive, Deductive, and Analogy Approaches in the Creation of Stand-Up Comedy Material

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Abstrak

Penelitian ini mengkaji proses berpikir komedian dalam membuat materi Stand-Up Comedy dan menyoroti kesamaan antara struktur komedi dan pemikiran matematis. Memasukkan struktur komedi ke dalam pembelajaran di kelas dapat menciptakan suasana yang menyenangkan dan menarik sekaligus menyampaikan konsep secara efektif dan mencapai tujuan pembelajaran. Stand-Up Comedy sebagai pertunjukan solo memungkinkan para komedian untuk mempresentasikan materinya secara mandiri (Utami, 2018). Sejalan dengan perspektif Islam, penelitian ini bertujuan untuk mengeksplorasi bagaimana proses berpikir matematis pelawak diselaraskan dengan metode induktif, deduktif, dan analogis, dengan tetap mempertimbangkan nilai dan prinsip Islam. Dengan menganalisis persimpangan antara humor, matematika, dan ajaran Islam, penelitian ini berupaya memberikan wawasan tentang penggunaan teknik komedi untuk meningkatkan pengalaman belajar mengajar, mempromosikan lingkungan pendidikan yang inklusif dan menyenangkan yang menghormati nilai dan tujuan Islam.

Kata Kunci: *Stand Up Comedy, Metode Berpikir Matematis, Induktif, Deduktif dan Analogi*

ABSTRACT

This study examines the thinking process of comedians in creating Stand-Up Comedy material and highlights the similarities between comedy structures and mathematical thinking. Incorporating comedy structures into classroom learning can create a fun and engaging atmosphere while effectively conveying concepts and achieving learning objectives. Stand-Up Comedy, as a solo performance, allows comedians to present their material independently (Utami, 2018). In line with an Islamic perspective, this study aims to explore how the comedian's mathematical thinking process aligns with the inductive, deductive, and analogical methods, while considering the values and principles of Islam. By analyzing the intersection of humor, mathematics, and Islamic teachings, this research seeks to provide insights into utilizing comedy techniques to enhance teaching and learning experiences, promoting an inclusive and enjoyable educational environment that respects Islamic values and objectives.

Keywords*: Stand Up Comedy, Mathematical Thinking, Inductive, Deductive and Analogy Methods*

Introduction

Until now, mathematical thinking activities have also begun to be provided to elementary school (SD) students. Ahmed & Kumalasari, (2023) states that in a study carried out in schools, the ability to think mathematically is very useful and must always be given treatment in order to understand the basic concepts for elementary school students so that later they can develop their thinking skills. Therefore, good mathematical reasoning or thinking activities will be able to encourage humans to understand or use a concept about what has been captured to solve problems effectively (Amany & Puteri, 2023; Arif et al., 2023; Cahyadi & Ariansyah, 2023). Indirectly, mathematical thinking becomes the foundation in order to change the degree of humanity. This is supported by the statement of Darmayanti et al., (2023) that the results of mathematical thinking make it possible to achieve the key to success in achieving a

career.

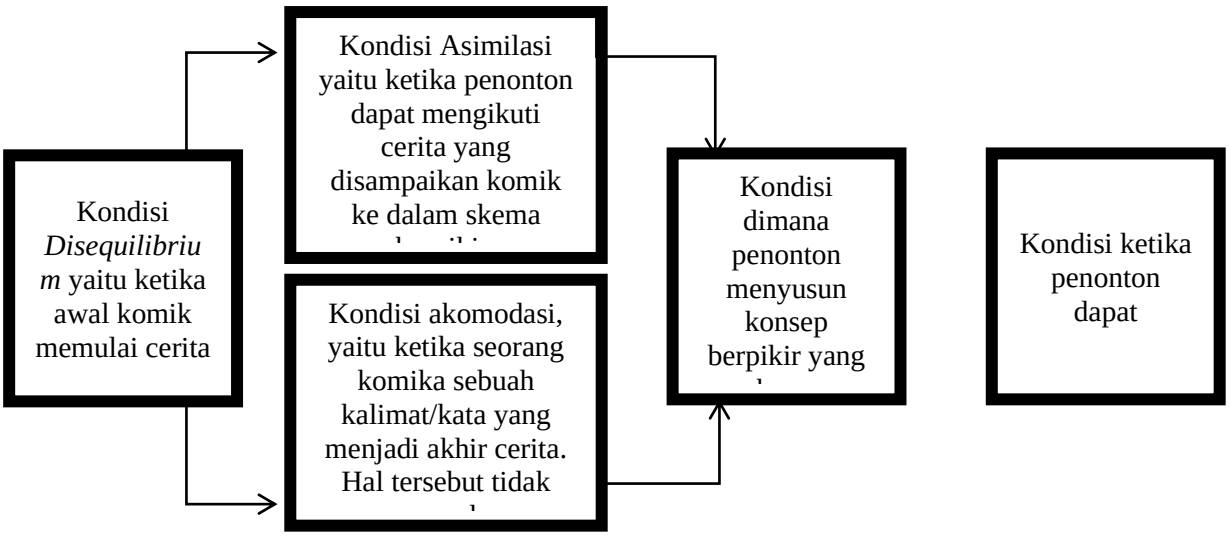
In the context of Islamic education, the integration of mathematical thinking activities can also be beneficial (Inganah et al., 2023; Jayanti et al., 2023). The principles of Islam emphasize the importance of seeking knowledge and developing critical thinking skills. Mathematical thinking aligns with these principles as it requires logical reasoning, problem-solving abilities, and the application of concepts in real-world situations. However, previous studies have revealed that one of the factors that hindered students' thinking processes was that students were afraid to produce wrong answers. Math anxiety, which is the fear of making mistakes in math, can affect students' cognitive functions, such as concentration, memory, and problem-solving abilities (Lestari et al., 2023; Muhammad, Darmayanti, et al., 2023; Muhammad, Triansyah, Fahri, & Gunawan, 2023).To overcome this challenge, incorporating humor and comedy into the learning process can create a more relaxed and enjoyable atmosphere in the classroom.

The higher the sensitivity to comedy or sense of humor in learning mathematics, the more fun and interesting the situations become (Mustakim & Ngaliyah, 2023; Nasiha et al., 2023; Pradana & Uthman, 2023; Rachmawati et al., 2023). Comedy, when used appropriately in the classroom, can provide a momentary release of tension and enhance pedagogical activities (Santiago, 2023; Segara et al., 2023; Sugianto, 2023; Triansyah, Muhammad, et al., 2023). Stand-up comedy, which has gained popularity in Indonesia, can be a suitable type of comedy to incorporate in the learning process (Angraini et al., 2023; Angraini & Muhammad, 2023). However, it is essential to ensure that the jokes used in the classroom are not offensive or disrespectful, as they can undermine the teacher-student relationship.

The structure of stand-up comedy is unconsciously similar to the process of mathematical thinking (Dwi et al., 2023; Maryanto et al., 2023; Muhammad, 2023; Muhammad & Juandi, 2023). By incorporating comedy structures into classroom learning, the class atmosphere can become more engaging while still focusing on the concepts and materials being taught, thus achieving the learning goals. Muhammad, Triansyah, Fahri, & Lizein, (2023) suggests several methods related to mathematical thinking, including inductive methods, deductive methods, and analogy methods. Inductive thinking involves drawing conclusions based on one or several premises, while deductive thinking relies on acknowledged premises. The analogy method draws conclusions from the similarity between two different things.

In stand-up comedy, set-ups and punchlines form the basic structure of writing material. Comedians often break expectations and create unexpected twists, which align with the assimilation and accommodation processes in mathematical thinking (Samosir et al., 2023; Siahaan et al., 2023; Triansyah, Komaliddin, et al., 2023). Comedians trigger thoughts based on existing patterns (assimilation) and then divert or create new patterns (accommodation) to create a state of equilibrium. When this equilibrium is achieved, the audience responds with laughter. This thinking process can be applied in the classroom to engage students and promote their mathematical thinking skills.

In conclusion, integrating mathematical thinking activities with comedy and humor can create a more enjoyable and relaxed learning environment (Angraini et al., 2022; Ramadhaniyati et al., 2023). This approach can help overcome math anxiety and promote students' thinking skills. In the context of Islamic education, incorporating mathematical thinking aligns with the principles of seeking knowledge and developing critical thinking skills. By using comedy structures, such as set-ups and punchlines, teachers can make the learning process more engaging while still focusing on the essential mathematical concepts. However, it is crucial to ensure that the humor used in the classroom is appropriate and respectful to maintain a positive teacher-student relationship.



In this study, the author would like to review the thought process of a comedian in writing Stand Up Comedy material using inductive, deductive and analogy methods. With reference to the background, the researcher raised a study entitled Comedian Mathematical Thinking: An Islamic Examination of Inductive, Deductive, and Analogy Approaches in the Creation of Stand-Up Comedy Material

Methodology

This study describes Comedians' mathematical thinking processes in writing stand-up comedy materials using inductive, deductive, and analogy methods. The selection of subjects in this study took into account several aspects such as their communication skills and the comedy material delivered. While the Stand Up Comedy material that has been selected in his research is then analyzed to review his mathematical thinking processes using inductive, deductive, and analogy methods. If the Stand Up Comedy material does not show a pattern of thinking mathematically then that subject is not selected. This type of research is exploratory qualitative by collecting verbal data. Therefore interviews conducted during research tend to be flexible until the research objectives are met. While the data analysis in this study were: (1) collecting verbal data from interviews and field observations. (2) making abstractions or summaries so that they stay on track and the discussion does not widen, (3) analyze the data that has been collected using inductive, deductive, and analogy methods to dissect thinking schemes, (4) draw conclusions. The process of inductive thinking goes through 4 stages, namely: (1) taking facts using observation or experiment, (2) collecting hypotheses, (3) compiling evidence, (4) collecting theories and evidence to draw valid conclusions. Meanwhile, the deductive thinking process, according to Sari (2016), does not need to prove the validity of an argument, but draws a conclusion using the initial premise. Next is the analogy thinking process, namely the suitability of two different things and the conclusions drawn are the basis of that suitability

Findings and Discussion

In making it, the comedy material that is written comes from anxiety and events that have been experienced by comedians and can be experienced by many people. The sensitivity possessed by every comedian greatly influences the writing of comedy material based on personal experience. In this study, 2 subjects were taken and conclusions were obtained.

1. The mathematical thinking process used by K1 is an inductive method. Because in the process of thinking, K1 uses evidence to test the premises given.
2. K2's thought process in making the material uses the deductive method. In this case K2 draws conclusions from his arguments or premises he conveys.

3. In different jokes, K2 uses an analogy thinking process, by equating two different things

The structure of K1's comedy is based on the thought process with the inductive method

Setup: as a boarding house kid, I often eat at food stalls. However, in every stall that I met, the sugar in the iced tea was never stirred. Even though I am a buyer and the buyer is the king.
Punchline: this is the first time a king has stirred his own iced tea
Premise 1 : if I am the buyer, then I stir the iced tea
Premise 2: If I am the buyer, then I am the king
Conclusion : I am the king of stirring my own iced tea.
If written in symbolic form, then
Premise 1 : p=>q,
Premise 2 : p=>r.
Conclusion: (p=>q)=>(p=>r).

Table 1. Table of Truth Drawing Conclusions K1

p	q	p=>q	r	p=>r	(p=>q)=>(p=>r)
B	B	B	B	B	B
B	S	S	S	S	B
S	B	B	B	B	B
S	S	B	S	B	B

The structure of K2's comedy is based on the deductive thinking process

Setup: my friend wears a locket necklace, while her boyfriend wears a padlock necklace. My friend said it's a symbol of loyalty.
Punchline: even though every time we buy a lock, we definitely get two keys.
Premise 1: a sign of loyalty in a relationship is symbolized by a key (male) and a lock (female)
Conclusion: every time you buy a padlock you get two keys. So, the girl has two boyfriend boys.

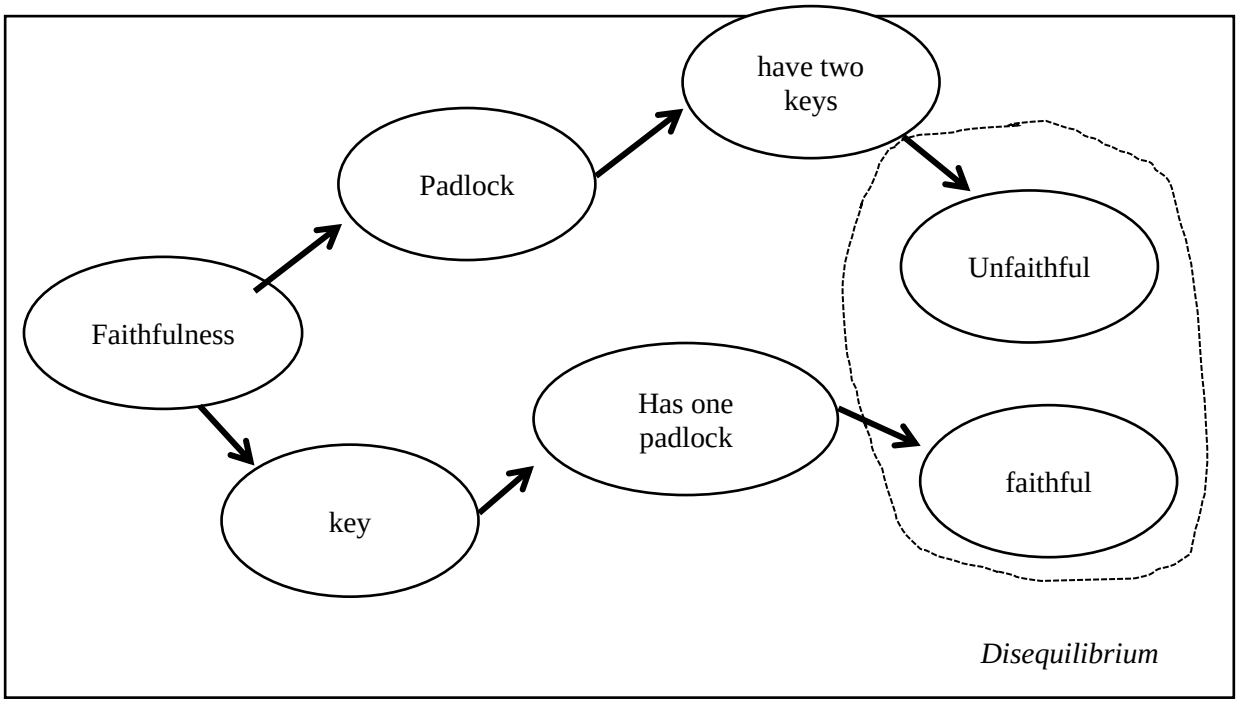


Figure 1. K2 Thinking Structure

The K3 comedy structure is based on the thought process using the analogy method
Setup: As a math kid, I finally know that boys are like limits and girls are like theorems
Punchline: because the limit can only be approached and the theorem needs proof.
Premise 1: Boys and Girls
Premise 2 : Limit and Theorem
Conclusion: Boys are the same as limits because they have an approaching property, and girls are the same as theorems because they have the Need Proof property
Its symbolic form can be written as follows

Premise 1 : $p \wedge q$

Premise 2 : $r \wedge s$

Conclusion : $(p \wedge q) \Leftrightarrow (r \wedge s)$

Table 2. Truth Table of Drawing K3 Conclusions

p	q	p∧q	r	s	r ∧ s	(p ∧ q) ⇔ (r ∧ s)
B	B	B	B	B	B	B
B	S	S	B	S	S	B
S	B	S	S	B	S	B
S	S	S	S	S	S	B

In adding Islamic elements to these conclusions, we can broaden our understanding of the influence of comedic sensibilities and thoughts rooted in the comedians' personal experiences. The mathematical thinking process used by K1 is an inductive method. In this thought process, K1 uses evidence to test the premises given. In the Islamic context, the concept of induction can be linked to the importance of observation and investigation in seeking the truth. Comedy inspired by K1's experiences and sensitivities can depict the realities of life that involve various aspects, including religious views. K2's thought process in making comedy material uses the deductive method. In this case, K2 draws conclusions from his arguments or the premises he conveys. In the Islamic context, the concept of deduction can be related to logical thinking and solid reasoning. K2 can use this approach to produce comedy that reflects Islamic values and principles, such as an emphasis on truth, justice, or wisdom.

In his jokes, K2 uses an analogical thought process by equating two different things. In the Islamic context, the ability to make analogies can be related to understanding and using parables that are often used in the Qur'an and hadith. K2 can utilize this analogical thinking process to describe Islamic messages in a creative and humorous way. By considering the Islamic elements in the conclusion, it is possible to broaden the understanding of how sensitivity, mathematical thinking, and the analogous thinking processes of comedians can be applied in contexts that reflect Islamic religious values and principles.

Conclusion

Based on research on the Analysis of Comedians' Mathematical Thinking Processes with Islamic Studies on Inductive, Deductive, and Analogical Approaches in Making Stand Up Comedy Materials, it can be concluded that comedians' mathematical thinking processes involve Islamic elements in their writing. In this context, comedians' mathematical thinking processes begin with the formation of ideas that develop through inductive, deductive, and analogy methods. During this process, Islamic elements can be intelligently integrated into written Stand Up Comedy material. The inductive approach helps comedians to observe everyday phenomena that are relevant to the lives of Muslims, and then compose material based on their personal experiences or observations. The deductive approach allows comedians to apply Islamic principles and teachings to hilarious situations and relate them to everyday life.

Meanwhile, the analogy method allows comedians to use parables or allegories originating from Islamic values to describe a concept or situation in an intriguing and entertaining way.

In this context, the use of inductive, deductive and analogy methods that integrate Islamic elements can trigger laughter from the audience. This approach allows comedians to convey witty messages, enrich Islamic understanding, and engage audiences by entertaining them. Thus, the mathematical thinking process of comedians who use inductive, deductive, and analogy methods in making Stand Up Comedy material that contains Islamic elements can be a source of joy and deeper understanding for the audience..

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