

ATTITUDE, SUBJECTIVE NORM, SPIRITUALITY AND INTERNET-TRIGGERED ACADEMIC DISHONESTY (ITAD): A CASE STUDY OF MALAYSIAN UNIVERSITY STUDENTS

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Abstract: Academic dishonesty is one area of higher education that has been significantly impacted by new technology. Since technology has made it easier for students to obtain a wealth of academic publications that can be downloaded quickly and for free, it has given rise to new chances for students to act dishonestly. Therefore, the aimed of the study is to investigate the relationship between students' attitude, subjective norm and spirituality towards internet-triggered academic dishonesty (ITAD) among university students in Malaysia. Analyzing data from 207 respondents, the study employs the Partial Least Square Structural Equation Modeling (PLS SEM) method for analysis. The results reveal that subjective norm and spirituality significantly influence internet-triggered academic dishonesty (ITAD). The study will be able to contribute to the area of unethical behaviour by students in the era of information technology. Thus, the findings of this study will help the Ministry of higher education and policymakers in policy formulation and paving new ways for further research.

Keywords: Attitude, AI Prevention tools, ITAD, University Students, Malaysia.

Introduction

The rapid growth of internet technology has transformed the way students access information and complete academic tasks. While this progress has brought many benefits, it has also created new challenges, particularly in the area of academic integrity. One major concern is Internet-Triggered Academic Dishonesty (ITAD), where students misuse online tools or resources to complete assignments or assessments in dishonest ways. This is a problem that needs to be addressed as students are the driving force of a nation as they will become leaders of the country in future. Universities are thus tasked with equipping students who are imbued not only with academic knowledge but also with good ethical values. Academic

dishonesties are currently growing and becoming cancerous, thereby damaging the integrity of the education system. Peled and Grinautski (2013) found that 10 percent of students had copied through the "cut and paste" method from the internet with 40 percent of these students using the same method to solve their project papers. Enormous implications will occur if this phenomenon is not given serious consideration. The outcome of these implications can affect institutions of higher learning, making it difficult for these institutions to achieve their academic goals in disseminating knowledge and will also affect the CPI ranking of a country. Thus, this study focuses on understanding the factors that influence university students in Malaysia to engage in ITAD.

Many studies are limited to specific regions or disciplines, affecting generalizability (Orok et al., 2023; Al Shbail et al., 2021). Calls for mixed-method research and cross-cultural comparisons are frequent, as are suggestions for longitudinal studies to assess dishonesty over time (Stone et al., 2009; Harding et al., 2007). Researchers stress the need for effective interventions, including ethical training, stricter academic policies, and fostering environments of integrity (Alleyne & Phillips, 2011; Simkin & McLeod, 2010). Cheating is not only driven by internal attitudes but often normalized when students observe peers engaging in such acts without consequences (Murdock & Anderman, 2006). Therefore, understanding both motivational and environmental triggers is crucial for developing holistic, effective strategies to curb academic dishonesty in higher education globally.

Guided by the Theory of Planned Behavior (TPB), the research examines how attitude, subjective norm (the influence of people around them), and spirituality affect students' intentions to commit ITAD. Although many studies have discussed academic dishonesty in general, there is still limited research that looks specifically at internet-related dishonesty within the Malaysian higher education context. Using a quantitative approach, data were collected from 207 students across various universities. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings of this study aim to provide useful insights for university administrators, educators, and policymakers in developing effective strategies to reduce unethical online academic behavior.

Literature Review

The reviewed literature highlights various factors influencing academic dishonesty among university students across different cultural and institutional contexts. Quantitative methods dominate research, using theories such as the Theory of Planned Behavior (Ajzen, 1991) and religiosity scales to examine students' motivations and behaviours. Plagiarism remains the most common form of dishonesty (Rusdi et al., 2019), while internet-triggered cheating is increasingly prevalent (Akbulut et al., 2008; Taşgın & Gerez-Taşgın, 2021). Attitudinal and contextual variables like peer influence (Rettinger & Kramer, 2009), access to technology (Bachore, 2014), and institutional enforcement (Heriyati & Ekasari, 2020) significantly affect students' tendencies to cheat. Studies by Stone et al. (2009) and Imran & Nordin (2013) affirm that intention, shaped by justification and attitude, is a strong predictor of dishonest behavior. Meanwhile, religiosity and moral reasoning have shown potential in reducing academic misconduct (Herdian & Mildaeni, 2022; Ullah Khan et al., 2019).

2.1 Internet-Triggered Academic Dishonesty (ITAD)

Academic dishonesty is an unethical act done by students to excel in their academic education effortlessly. Academic dishonesty includes behaviours such as deception on academic tasks, cheating on exams, making changes on homework, changing exam papers, unauthorized use of others' work, plagiarism, and changing research. ITAD refers to using internet to conduct academic dishonesty. This study will refer to Akbulut et al. (2008) measurements of ITAD which comprise of five dimensions, namely fraudulence, plagiarism, falsification, delinquency and unauthorized help.

2.2 Attitude and ITAD

Attitude refers to an individual's positive or negative evaluation of a specific behaviour, such as academic dishonesty. It is a central construct in the Theory of Planned Behaviour (TPB) (Stone et al., 2009). Attitude is a measure of a person's evaluation of the results of behaviour, whether positive or negative. A person's attitude towards behaviour consists of the belief in the outcome of the behaviour. The more a person believes behaviour gives positive results, the more that person will favor it. The beliefs that make someone behave in a similar manner are called Behavioural Belief. Harding et al (2007) reported that attitude has a positive and significant effect on intention.

Across the reviewed studies, attitude toward academic dishonesty consistently emerged as a significant predictor of students' intention to cheat. Stone et al. (2009), Imran and Nordin (2013), and Alleyne and Phillips (2011) demonstrated that students with favorable attitudes toward cheating were more likely to form intentions to engage in dishonest academic behaviours. Similarly, Simkin and McLeod (2010) showed that motivation to "get ahead" shaped cheaters' positive attitudes toward dishonesty, reinforcing the idea that students rationalize cheating to academic success. Harding et al. (2007) also found that students' attitudes, especially when combined with weak moral obligations and permissive environments, significantly influenced their intention to cheat. These findings align with the Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA), both of which emphasize attitude as a central determinant of intention.

Other studies expanded on this by integrating additional variables that impact or mediate attitudes. Sparks and Shepherd (2002) and Mustapha et al. (2019) revealed that moral judgments and spiritual intelligence, respectively, could shape students' attitudes toward unethical behaviour. Rettinger and Kramer (2009) also highlighted that "neutralizing attitudes" (e.g., justifications for cheating) strengthened the likelihood of dishonest actions. These insights suggest that interventions targeting attitude change especially by fostering ethical reasoning, intrinsic motivation, and awareness of moral consequences may be effective in reducing academic dishonesty. Nonetheless, variations in sample size, cultural settings, and methodological limitations suggest the need for further cross-contextual research to better understand how attitudes develop and influence unethical students conduct.

2.3 Subjective Norm

Subjective norms refer to the perceived social pressure to perform or abstain from a particular behaviour. This construct considers the influence of peers, family, and societal expectations (Harding et al., 2007). Ajzen and Fishbein (1974) define the subjective norm as “the person’s perception that most people who are important to him think he should or should not perform the behaviour in question”. Ajzen and Fishbein (1974) refer to the “perception of the expectations of relevant other people”.

Across the five reviewed studies, subjective norms consistently emerged as a significant predictor of academic dishonesty, although their influence varied in strength depending on the context. Stone et al. (2009) and Imran and Nordin (2013) found that subjective norms perceptions of social pressure to engage or not engage in misconduct had a statistically significant impact on students’ intention to cheat. Similarly, Simkin and McLeod (2010), applying the Theory of Reasoned Action, confirmed the role of subjective norms alongside attitudes in influencing cheating behaviour, highlighting that peer influence and social expectations are powerful motivators. In the study by Harding et al. (2007), subjective norms combined with moral obligation and attitudes predicted students’ intention to cheat, further emphasizing the cumulative effect of these social and personal influences. Alleyne and Phillips (2011) also found that subjective norms predicted cheating intentions but not lying, suggesting that their impact may be behaviour specific.

Overall, these findings affirm that students’ perceptions of what is socially acceptable or expected within their academic environments strongly influence their ethical decision-making. The studies imply that reducing academic dishonesty requires reshaping these perceived norms through institutional efforts, such as cultivating integrity-focused cultures and peer-led initiatives. However, many of these studies rely on self-reported data from limited or localized samples, indicating a need for broader, longitudinal, and multi-institutional research to validate and expand on the role of subjective norms in shaping academic behaviour across diverse settings.

2.4 Spirituality

Spirituality is a broad construct distinct from religion, emphasizing a sense of sacredness without the institutional constraints associated with traditional religious practices. It encompasses moral values, ethical attitudes, and behaviours that influence individual satisfaction, innovative behaviour, and overall integrity within institutions. Spirituality fosters an atmosphere where individuals can express, develop, and implement their ideas while promoting good attitudes, behaviours, and moral conduct. (Abdullah et al., 2020). Spirituality means knowing that our lives have significance in a context beyond a mundane everyday existence at the level of biological needs that drive selfishness and aggression. It means knowing that we are a significant part of a purposeful unfolding of Life in our universe (Alper, 2023). Spirituality is broadly characterized as an individual's quest for meaning, purpose, and connection in life. It encompasses the search for understanding life's deeper significance, personal growth, and self-awareness. Spirituality may involve values, beliefs, and experiences that contribute to one's sense of purpose and often extend beyond oneself to include a

connection with others and the universe. It is distinct from religiousness but can intersect with organized religion depending on the individual's perspective (Astin et al., 2011).

The reviewed studies reveal a consistent emphasis on the role of spirituality in shaping ethical attitudes and reducing academic dishonesty. Research by Rifani et al. (2021) and Ullah Khan et al. (2019) showed that spiritual-religious attitudes can significantly lower students' propensity to engage in dishonest academic behavior, often through the mediating role of moral disengagement or cheating attitudes. However, while religiosity emerged as a more robust predictor than spirituality alone in some studies, others like Mustapha et al. (2019) highlighted spiritual intelligence especially among Muslim students as a contributing factor to cheating intentions. These studies underscore the importance of internal moral frameworks, shaped by both spiritual and religious values, in discouraging unethical academic conduct.

On a broader scale, multiple studies (e.g. Parsian & Dunning, 2009; Gomez & Fisher, 2005; Hardt et al., 2012) focused on the development and validation of tools to measure spirituality, revealing dimensions such as self-awareness, mindfulness, and a search for meaning as core elements of spiritual well-being. Workplace and institutional studies, including those by Milliman et al. (2003) and Aryawati et al. (2024), also indicated that fostering spirituality enhances ethical behavior and organizational integrity. Despite methodological limitations like small or homogeneous samples and cross-sectional designs these findings suggest that integrating spirituality in both personal development and institutional ethics frameworks can strengthen moral conduct and reduce dishonesty in academic and professional contexts.

Research Methodology

This study employs quantitative research design, utilizing primary data gathered through a structured survey questionnaire. Using a quantitative approach, data were collected from 207 students across various universities. The survey aims to identify key determinants influencing Malaysian students' intention to adopt ITAD, with particular emphasis on constructs drawn from the Theory of Planned Behavior (TPB), namely attitude, subjective norm, perceived behavioural control, alongside an additional focus on the role of spirituality.

To examine the proposed relationships among these constructs, variance-based PLS-SEM was employed using SmartPLS 4.0 software. The analysis followed a two-step procedure encompassing both the measurement and structural models. The use of PLS-SEM is justified by its suitability for theory-driven research frameworks such as TPB, as well as its ability to handle complex models and issues like multicollinearity (Cassel et al., 2000) and non-normal data distributions (Semejin et al., 2005). The research framework includes four independent variables tested in relation to the dependent variable, students' intention to adopt ITAD.

3.1 Respondent's Profile

A total of 207 respondents participated in this study. The demographic distribution is summarized as in Table 1. In terms of gender, the majority of the respondents were female, accounting for 69.1% (n=143), while the remaining 30.9% (n=64) were male. Regarding age,

most of the respondents fell within the 17 to 28 years age group, representing 87.0% (n=180) of the sample. This was followed by 10.1% (n=21) aged between 29 and 44 years, and 2.9% (n=6) aged between 45 and 49 years. In terms of ethnicity, the sample consisted predominantly of Malay respondents (75.4%, n=156), followed by Chinese (16.9%, n=35), Indian (3.9%, n=8) and others (3.9%, n=8). With respect to access to technology, a significant majority (93.2%, n=193) reported having a computer at home, whereas only 6.8% (n=14) did not. Lastly, in terms of their current university affiliation, 58.5% (n=121) were enrolled in public universities, while 41.5% (n=86) were studying at private universities.

Table 1: Respondents' Profile

Demographic		Sample	
		Frequency (N=207)	Percentage (%)
Gender	Male	64	30.9
	Female	143	69.1
Age	17-28	180	87.0
	29-44	21	10.1
	45-59	6	2.9
	60 and above	0	0
Ethnicity	Malay	156	75.4
	Chinese	35	16.9
	Indian	8	3.9
	Others	8	3.9
Computer at Home	Yes	193	93.2
	Nomaceh	14	6.8
Current University	Public University	121	58.5
	Private University	86	41.5

Results and Discussion

In this study, PLS path modelling was utilised to examine the data. In particular, it is a variance based, structural equation modelling approach, it is appropriate for structural measurement models where it allows for the use of small sample sizes, and it is used to verify and test the models (Hair et al., 2011; Henseler et al., 2015). On the basis of literature, it suggests that PLS path modelling is appropriate for this study since it incorporates TPB theory with religiosity as a moderator. Furthermore, two-step analytical involves the assessment of structural model (Hair et al., 2012) and to analyze the data, this study uses SmartPLS 4.0 (Ringle et al., 2015).

4.1 Assessment of the measurement model

According to Hair et al. (2011, 2019), the evaluation of the measurement model in PLS-SEM involves examining individual item reliability, internal consistency reliability, content validity,

convergent validity, and discriminant validity. Table 4 presents the results of the reliability and convergent validity assessment for all constructs in the model. Most indicator loadings exceeded the recommended threshold of 0.70 (Hair et al., 2017), except for a few items with low loadings, which were subsequently removed to improve model quality.

The construct Perceived Behavioural Control (PBC) was initially included in the model, however, it was removed during the measurement model evaluation due to inadequate psychometric properties. Specifically, four out of five items under PBC were deleted due to low factor loadings. Of the remaining two items, one showed a factor loading of 0.577, below the acceptable minimum of 0.60, while the other displayed an excessively high loading of 0.999, suggesting potential redundancy or overfitting. As such, the construct did not meet the requirements for reliability or convergent validity. In line with PLS-SEM guidelines (Hair et al., 2017; Ramayah et al., 2018), PBC was excluded from the final model to maintain the integrity and robustness of the overall measurement structure.

All retained constructs demonstrated satisfactory psychometric properties. The composite reliability (CR) values for each construct exceeded 0.70, indicating acceptable internal consistency. The Cronbach's alpha values were also above 0.70, further confirming reliability. In terms of convergent validity, Fornell and Larcker (1981) emphasize the importance of evaluating the average variance extracted (AVE), where values should exceed 0.50. Similarly, Chin (2010) posits that an AVE greater than 0.50 is required to establish convergent validity. As shown in Table 2, the AVE values for all constructs in this study range from 0.628 to 0.825, exceeding the recommended threshold. These results confirm that the model has achieved adequate convergent validity.

Table 2: Measurement Model

Constructs	Items	Loadings >0.70	AVE >0.50	Composite Reliability >0.70	Cronbach's Alpha >0.7
Attitude			0.640	0.899	0.862
	ATT1	0.768			
	ATT2	0.843			
	ATT3	0.858			
	ATT4	0.725			
	ATT5	0.800			
Subjective Norm			0.642	0.899	0.863
	SN1	0.804			
	SN2	0.756			
	SN3	0.744			
	SN4	0.856			
	SN5	0.839			
Spirituality			0.825	0.904	0.797
	SP6	0.947			

Intention to Commit ITAD	SP7	0.867			
			0.628	0.978	0.977
	IF1	0.850			
	IF2	0.835			
	IF3	0.928			
	IF4	0.828			
	IF5	0.850			
	IF6	0.884			
	IF7	0.824			
	IP1	0.931			
	IP2	0.935			
	IP3	0.883			
	IP4	0.897			
	IP5	0.911			
	IFS1	0.732			
	IFS2	0.881			
	IFS3	0.896			
	IFS4	0.922			
	IFS5	0.907			
	ID1	0.878			
	ID2	0.713			
	ID3	0.868			
	ID4	0.834			
	ID5	0.886			
	IUH1	0.861			
	IUH2	0.745			
	IUH3	0.898			
	IUH4	0.834			
	IUH5	0.879			

The coefficient of determination (R^2) (refer Figure 1) is used to evaluate the proportion of variance in the endogenous variable that can be explained by its exogenous predictors. According to Hair et al. (2017), R^2 values range from 0 to 1, with values closer to 1 indicating higher predictive accuracy. As a general guideline, R^2 values of 0.75, 0.50 and 0.25 are interpreted as substantial, moderate, and weak, respectively, particularly within the context of marketing and behavioral research.

In the present study, the R^2 value for the construct intention to commit ITAD is 0.217, which indicates that 21.7% of the variance in intention is explained by attitude, subjective norm, and spirituality. Although this value is considered weak by conventional standards, it still exceeds the minimum threshold of 0.10 recommended by Falk and Miller (1992) for acceptable explanatory power in behavioral studies. Therefore, the R^2 value of 0.217 is deemed sufficient to justify the inclusion of the specified predictor variables in the model.

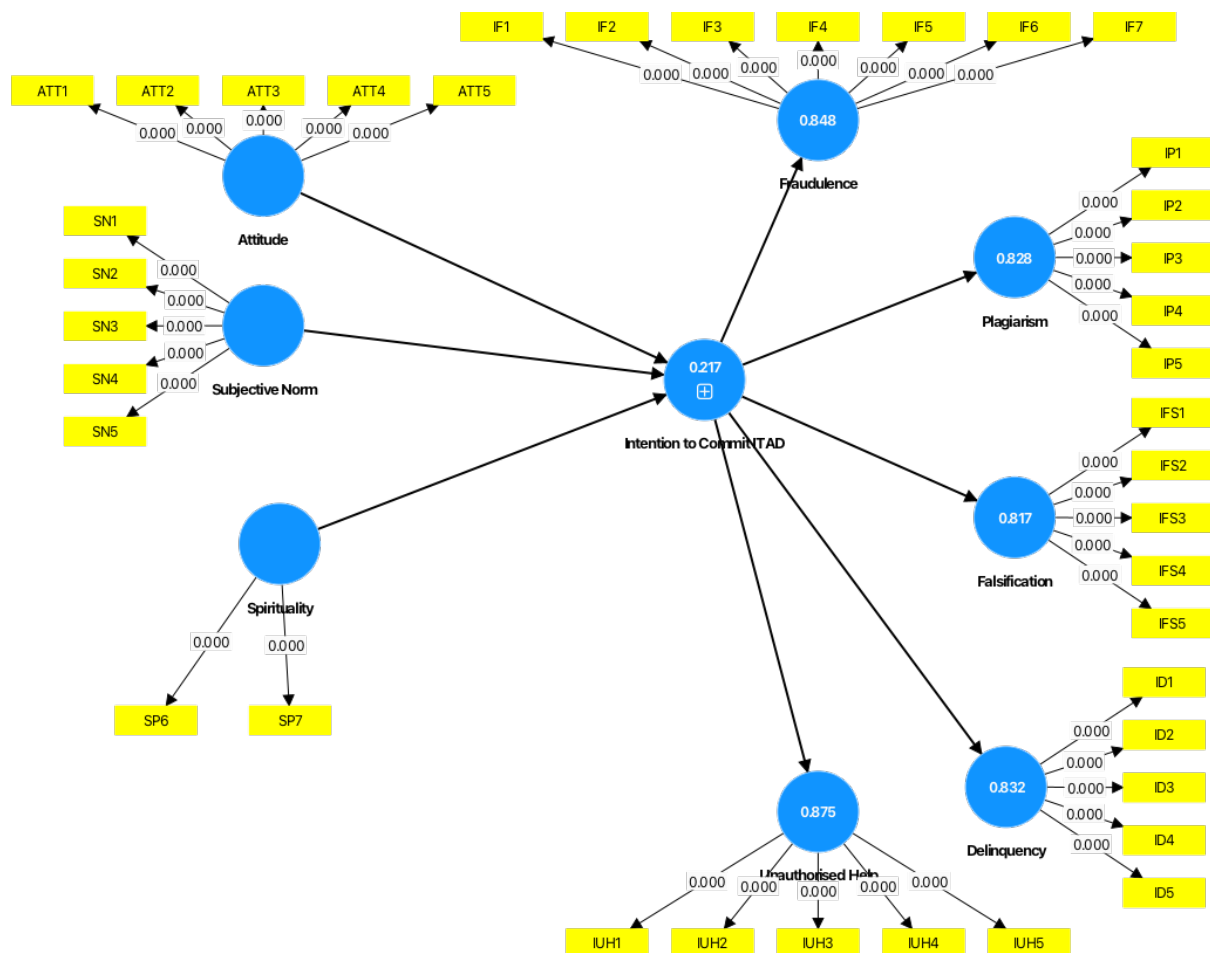


Figure 1: Coefficient of Determination (R^2)

The discriminant validity of the model was assessed using the Heterotrait-Monotrait Ratio of Correlations (HTMT), as recommended by Henseler et al. (2015). Discriminant validity is considered adequate when HTMT values fall below the conservative threshold of 0.85 or the more liberal threshold of 0.90 (Hair et al., 2017). As shown in Table 3, all HTMT values in this study ranged from 0.077 to 0.648, which are well below the recommended cut-off points. These results confirm that each construct in the model is empirically distinct from the others, thereby supporting the discriminant validity of the measurement model.

Table 3: Assessment of Discriminant Validity

	1	2	3	4
1. Attitude				
2. Intention to Commit ITAD	0.240			
3. Spirituality	0.077	0.385		
4. Subjective Norm	0.648	0.412	0.276	

Assessment of the structural model

The structural model was assessed by examining the path coefficients, which represent the hypothesised relationships among the constructs. To evaluate the significance of these relationships, the bootstrapping procedure with 5,000 resamples and 207 cases was applied, as recommended by Hair et al. (2017). The path estimates are presented in Figure 2, while Table 6 summarises the direct effects, including standardised beta coefficients, standard errors, t-values, p-values, and confidence intervals.

As shown in Table 4, two hypotheses were supported. H2 proposed that subjective norm has a positive influence on intention to commit ITAD, which was supported ($\beta = 0.375$, $t = 5.192$, $p < 0.001$). Similarly, H3, which hypothesised a positive relationship between spirituality and intention, was also supported ($\beta = 0.266$, $t = 4.517$, $p < 0.001$). In contrast, H1, which posited a positive relationship between attitude and intention, was not supported, as the path coefficient was not statistically significant ($\beta = 0.030$, $t = 0.156$, $p = 0.876$).

Table 4: Direct Relationships for Hypothesis Testing

	Hypotheses		Std Beta	Std Error	t-values	p-values	5% (LLCI)	95% (ULCI)	Decision
H1	Attitude → Intention to Commit ITAD		0.030	0.079	0.156	0.876	-0.062	0.178	Not Supported
H2	Subjective Norm → Intention to Commit ITAD		0.375	0.073	5.192	0.000	0.184	0.426	Supported
H3	Spirituality → Intention to Commit ITAD		0.266	0.059	4.517	0.000	0.175	0.367	Supported

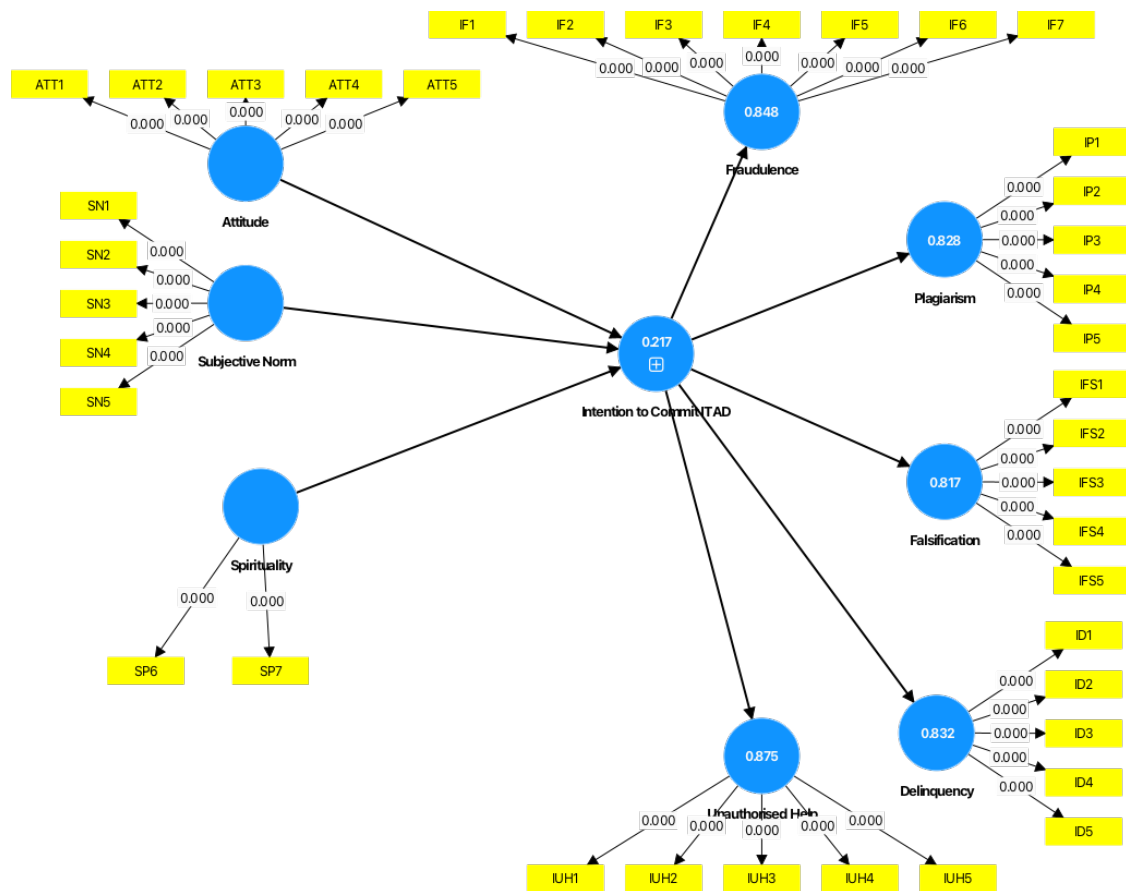


Figure 2: Results of structural model

The effect size of each predictor construct on the endogenous variable was evaluated using Cohen's f^2 , which measures the impact of an exogenous latent variable on an endogenous latent variable by examining the change in R^2 when the predictor is omitted from the model (Ramayah et al., 2018). According to Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 are interpreted as small, medium, and large effect sizes, respectively.

As shown in Table 5, all three constructs, Attitude ($f^2 = 0.008$), Subjective Norm ($f^2 = 0.084$), and Spirituality ($f^2 = 0.097$) exhibit small effect sizes. These findings indicate that while each predictor has a statistically significant contribution to the model as supported by the path coefficients, their individual explanatory power on the variance in intention to commit ITAD remains modest. Nonetheless, in combination, they contribute meaningfully to the overall predictive ability of the structural model.

Table 5: Effect size

Constructs	F square	Effect size rating
Attitude	0.008	Small
Subjective norm	0.084	Small
Spirituality	0.097	Small

Conclusion

This study provides important insights into the factors influencing Malaysian university students' intention to engage in Internet-Triggered Academic Dishonesty (ITAD). The results show that both subjective norm and spirituality have a significant and positive impact on students' intention to commit ITAD. In contrast, attitude does not have a significant impact on students' intention to commit ITAD.

This research demonstrates that subjective norms play a meaningful role in shaping students' intentions toward academic dishonesty. The Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA) offer strong theoretical foundations for understanding how perceived social pressures from peers, family, and academic institutions influence decision-making. Across various contexts and countries, studies have found that when students believe others approve of or engage in dishonest behaviors, they are more likely to do the same. This reinforces the importance of social influence and collective ethical climate in higher education settings. Unlike peer pressure (subjective norms), which comes from outside, spirituality comes from within the person. It helps them stay honest because they believe cheating is wrong, not just because they're afraid of being caught. So, if we want to understand why students cheat or how to prevent it, we should also look at their spiritual values, especially in places where religion and moral beliefs are strong, like in Malaysia.

These findings suggest that students are more likely to be influenced by the opinions of others and their own spiritual or moral values, rather than their personal attitude alone. Therefore, efforts to reduce ITAD should focus on promoting strong ethical environments and community values within universities. This can be done through awareness programs, moral education, and campaigns that highlight the importance of academic integrity. As the use of digital tools in education continues to grow, universities must be proactive in addressing the risks of online dishonesty. Future research should explore additional factors, such as the role of technology use, institutional support, and student awareness, to develop more comprehensive solutions for maintaining academic integrity in the digital era.

Acknowledgments

The authors would like to express their gratitude to Universiti Sains Islam Malaysia and Binus University – Indonesia for the grant provided to execute this project (USIM/BINUS UNIVERSITY/FEM/ SEPADAN-A/75424).

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