# SCALE DEVELOPMENT AND VALIDATION TO MEASURE STUDENT'S BEHAVIORAL INTENTION TO VOTE

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**Abstract:***: Voting behavior is essential to support the democratic system since the people have the same opportunity to vote in the election. That is why political education should be started earlier, especially for the youth, so that they know the importance of participating in the election by casting a vote. However, it is reported that the turnout rate among youth is considered low. Before the 14th General Election (GE14), young Malaysian voters aged 21 to 30 outnumbered senior voters by 2 to 1. Therefore, this study aims to establish a measurement scale of young voters' behavioral intention to vote. Relevant literature on intention to vote among youth was reviewed, and responses from 422 students of Universiti Teknologi MARA, Malaysia, aged 18 to 29 years. The responses were collected through an online questionnaire to explore the factor structure and validate the scale. Confirmatory factor analysis (CFA) using SmartPLS (version 3.3.3) was used to validate the scale. In conclusion, the study's findings recommend the extension of the scale development and validation used for future studies. It will facilitate and provide valuable perspectives for various parties, such as political parties, to consider this a winning factor in future elections.*

**Keywords:** *Intention to vote, young voters, model validation, Malaysia*

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## Introduction

The waves of demonstrations in advanced and newly democratic countries create the impression that young people have an unequivocal, decisive, and pro-democracy stance. The registration rates and voter turnouts for the general elections among Malaysian youth could be higher and more appealing (Esa & Hashim, 2017). Youth is becoming increasingly significant in today's political scene; with the implementation of Undi-18 in Malaysia, this wave of youth voting involvement has been a source of anxiety among political parties. However, the issue is that the turnout is considered very low among the youth. Since 1998, Malaysian politics has witnessed the birth of a new significant political trend, which has considerably impacted the increase in political participation among youths in recent general elections. However, it has been shown that the voter registration rate among youths aged 21 to 22 continued to be the lowest (Esa & Hashim, 2017). The constitution amendment in July 2019 witnessed tremendous effects on the number of voters, and the increase in voters comes from the group of young people or first-time voters. The latest general election was held in 2022, and this is the first time the *Undi18* was effective since the voting age was lowered from 21 to 18 in 2019. Ample attention should be given to the rise of young voters that change the political landscape in Malaysia. According to the research conducted by Wenxuan and Osman (Wenxuan & Osman, 2023), among voters in Selangor, it is found that some young people in Malaysia are willing to speak up, participate in politics, and contribute to the development of the country.

Even with these statistics, as far as researchers are concerned, there is a limited number of studies conducted regarding the current level of user behavioral intention to vote among young voters in Malaysia. As the number of youths forms a significant percentage of Malaysia's population and is motivated by the country's implementation of Undi-18, this study intends to explore the behavioral intention to vote among young voters in Malaysia. A closer examination of the behavioral intention to vote among youth is essential by offering new insights into reaping the democratic benefits of greater participation and political accountability and establishing innovative mechanisms for the constructive engagement of youth in the formal political process.

## Research Model

The most significant predicting behavior models are the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB). These two models are well known in the study for predicting the behavior of users across the fields. Previous studies have empirically proven that both models theorized the intentions to predict the behavior. The TRA has been used comprehensively across social sciences to investigate the prediction of the behavior of particular users (Doane et al., 2014; Jang & Cho, 2022; Mishra et al., 2014; Zarzuela & Antón, 2015).

Oni et al. (2017) found that the TRA constructs, which are attitude toward behavior and subjective norms, significantly impacted the intention to participate in politics. The TPB is an extension of the TRA that comprises an individual's perception of the ease with which the behavior can be performed (Ajzen, 1991). It means that an individual will perform that behavior if it facilitates them. The TPB adds perceived behavior control (PBC) as a determinant of behavioral intention as well as behavior. Concerning voting behavior, the individual's (PBC) would be low if they found that many obstacles may deter them from voting. The possible obstacles are due to distance, which requires long travel time or difficulty traveling to the polling place. This model has been used for over 35 years and is continuously applied in studies across the field nowadays. Thus, it has provided strong support and is widely used in the current

studies for the predictive validity of TPB to examine the prediction behavior of the individual (Romero-Colmenares & Reyes-Rodríguez, 2022; Shukri et al., 2022; Sin & Rochelle, 2022;). Concerning voting behavior, there is support for the predictive validity of TRA.

### Determinants of Behavioral Intention to Vote

The present study investigates the behavioral intention to vote among young adults aged 18 to 30. The model proposes that candidate perception, party perception, subjective norms, persuading method, awareness, and social network engagement are the predictor variables, while the intention to vote is the outcome variable.

Previous research has shown that **voters' perceptions** have a significant role in determining their level of acceptability and trustworthiness, which can then be translated into a vote. Mohd Nizah et al. (2016) believed several problems impact voters' perceptions. These concerns can be racial attitudes, economic concerns, development concerns, or news influencing voters' perceptions. Voters' perceptions are frequently influenced by issues on show during the election period. A study on voting behavior and perceptions of party leadership by Pandian (2014) found that students are more drawn to and focus closely on excellent leadership abilities. Abdel Rahman Farrag and Shamma (2014) found that factors related to voting for a specific **candidate** or party, such as personal events related to the candidate, the candidate's image, current events surrounding the election process, interest in issues and policies, and religious beliefs, seemed to be important for voters in their decision making. In addition, research done by Van Steenburg and Guzmán (2019) found a strong correlation between candidate brand image, self-brand image, and voting intention.

**Political parties** play a significant role in the political process in many nations. According to Bennett et al. (2019), voting intentions increased significantly when the voter was of the same (vs opposing) party as the candidate. It is also consistent with the findings of Satriadi et al. (2021), which claimed that different people have distinct voting habits. Some voters are impacted by sociological elements like ethnicity, race, religion, and psychological factors, including recognizing political parties, candidates, and problems. In addition, Slomczynski and Shabad (2012) indicated that perceptions of political party corruption impact whether people decide to vote in elections, whether they intend to vote for a specific party, and whether they choose to vote for any party. Even when other voting-related factors are considered, assessments of party misconduct are essential.

**Subjective norms**, as defined by the Theory of Planned Behavior (TPB), refer to an individual's perception of social pressures to perform or not perform a particular behavior (Ajzen, 1991). In the context of voting, subjective norms reflect the influence of social expectations, such as family, friends, and peers, on an individual's intention to vote. Young voters who perceive their friends or family as likely to vote and believe their peers value voting are likely to report a higher voting intention (Glynn et al., 2009). Bergan et al. (2022) conducted a large-scale field experiment involving university students in the United States. They found that social pressure is an effective strategy for increasing voter turnout among first-year college students during the election. Another study by Geldrop (2020) focused on young citizens aged 18-24 and discovered that performing that behavior becomes the norm when people form the social environment of the one-person vote. Because of social pressure, one starts searching for the information he or she needs to perform the behavior, which is a behavioral skill for performing the behavior. These findings were consistent with earlier studies by Al-Mohammad (2017), who studied the impact of social websites on Jordanian students' intentions of active political

participation and found that subjective norms strongly impacted respondents' attitudes toward active political participation.

The relationship between **persuading methods** and the behavioral intention to vote among youth in political elections has garnered significant attention recently. Several studies have delved into understanding how different persuasive strategies influence the voting behavior of young individuals. One study by Chaulk (2019) explored the effectiveness of canvassing, social media, and the internet in mobilizing different age groups to vote in the American National Election 2016. The research found that while social media platforms were not significantly related to increases in turnout across generations, internet campaigns did increase turnout slightly, highlighting the effectiveness of digital platforms in engaging youth. The finding is consistent with a study conducted by Shaw (2018), who found that most Americans received information about the 2016 Presidential Election through social media, and with 69% of adults using social media, it is hard to ignore the prominence it plays in campaigns. Holbein and Hillygus (2020) demonstrated that conversations among peers could significantly boost political interest and the perceived importance of elections, enhancing the intention to vote among young people.

Similarly, Bond et al. (2012) revealed that social media messages displaying friends' voting behavior impacted users' likelihood of voting, emphasizing the power of social networks in increasing voter turnout among young people. He additionally identified that civic education programs significantly increased the likelihood of voting among youth by fostering a sense of civic duty and providing practical information on voting. These findings suggest that a multifaceted approach incorporating peer influence, social media engagement, targeted advertisements, and civic education is essential for effectively motivating young voters to participate in political elections (Kahne & Bowyer, 2018).

**Political awareness** sparked the public's political consciousness on various political phenomena, and it was an essential tool for democracy to thrive (Patgiri, 2015). Apart from the ability to retain and organize the encountered information, the state of awareness was influenced by information obtained from various sources, such as access to political information, exposure to media, and political education. According to Kuotsu (2016), voters with a basic political understanding might become more motivated to participate in political elections. Put another way, the more political information a voter possesses, the more likely they are to participate in politics. Studies have demonstrated that civic education increases political awareness, participation, and voter turnout (Davies, 2020; Levinson, 2014). Stockemer and Rocher (2017) found that younger individuals are more politically illiterate than older generations. This generational political knowledge gap accounts for approximately half of the turnout gap between voters in their early 20s and those in their 50s. Following this, Pontes et al. (2019) revealed that young people who formally study citizenship matters are likelier to have voted in the previous UK general election than their contemporaries.

The availability of the internet has made political participation possible (Azmi & Chinnasamy, 2019). People who were born between 1980 and 2000 are known as millennials, and this type of group dramatically depends on the internet and **social media** in their lives, and this includes matters regarding political information and voting behavior (Glover, 2018). In a study that aimed to know the influence of social media on the participation of young voters in electoral politics, it was found that social media have roles in enabling full young participation in elections (Haque & Liza, 2019). Moreover, social media is seen as a top-rated platform among

youths because it connects with friends, expresses opinions, and exchanges ideas and information among them (Zulkifli et al., 2021). Social network engagement has become interesting in studies on behavioral intention to vote among young people.

## Methods

This study follows the systematic scale development approach to develop a scale of the behavioral intention to vote, as Netemeyer et al. (2003) suggested. The approach includes three (3) main phases, namely, (1) item generation, (2) item purification, and (3) item validation and reliability assessment.

### Phase 1: Item Generation

A detailed literature search was conducted on the behavioral intention to vote among youth, and initial agree-to-disagree items were generated. The review process involved measuring items from past studies. The instrument went through several processes, namely the development of the instrument, expert validation, pre-test, and pilot test before actual data collection. Before data collection, the questionnaire was submitted for ethical approval from the UiTM Research Management Centre.

### Phase 2: Item Purification

The convenience sampling method was used for the data collection and stratified based on the number of states in Malaysia. The study population will be selected from respondents who fulfill the following criteria: (1) studying at Universiti Teknologi MARA and (2) being between 18 and 30 years old. Based on the A-priori Sample Size Calculator for Structural Equation Models calculation, the minimum sample size of the study is 170 respondents. The questionnaire, using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), was distributed online to the students of Universiti Teknologi MARA across branches in Malaysia. A total of 422 responses were appropriate and used for analysis. The questionnaire consists of six (6) predictor variables: candidate perception, party perception, subjective norms, persuading method, awareness and social network engagement, and intention to vote as the outcome variable.

### Phase 3: Item Validation

Reliability and construct validation techniques were employed to assess the scale items measuring the students' behavioral intention to vote to verify the construct variables identified in Phase 2. Item validation and reliability assessment were used to test the convergent, discriminate, and predictive validity of the scale.

## Findings And Discussion

### Participants

Most respondents are female (N=305 or 72.3%), while the rest are male (N=117 or 27.7%). Regarding age, most respondents are 18 to 20 years old (N=338 or 80.1%), followed by 21 to 23 years old (N=79 or 18.7%), 24 to 26 years old (N=4 or 0.9%), and 27 to 29 years old (N=1 or 0.2%).

### Normality and Bias

A normality assessment was conducted to justify the selection of Partial Least Square Structural Equation Modeling (PLS-SEM). The purpose of conducting the normality assessment and identifying common method bias (CMB) is to determine the normality of data dispersion and

the suitability of using SmartPLS as an inferential tool for PLS-SEM. Mardia's multivariate analysis was selected to determine the normality of the research data. Based on the suggestion of the previous studies, WebPower was used to conduct Mardia's multivariate analysis (Hair et al., 2014; Rosman et al., 2023; Wulandari et al., 2021; Zhang & Yuan, 2018). The result shows that the research data are slightly not normal - indicated by Mardia's multivariate skewness ($\beta$=310.754, p=<0.01) and Mardia's multivariate kurtosis ($\beta$=1595.084, p=<0.01); thus justified the selection of SmartPLS as the tool to analyze PLS-SEM. On the other hand, Common method bias (CMB) was conducted using SmartPLS 4.0. The results show VIF values between 1.352 and 5.433 – indicating that there should be no Common method bias (CMB) issue, as Hair et al. (2017) suggested.

### Measurement Model
Two steps in SmartPLS analysis involve establishing a measurement model and confirming a structural model. Researchers suggest that the measurement model must conform to the following criteria - internal consistency reliability, convergent validity, and discriminant validity (Ramayah et al., 2016). This study uses first-order construct for assessment – Candidate Perception (CDT), Party Perception (PTY), Persuading Methods (PSD), Subjective Norms (SBN), Awareness (AWR), Social Network Engagement (SNE), and Intention to Vote (INT).

### Convergence validity
Convergence validity assesses whether the new scale is related to other variables and whether it is measuring the same construct. To achieve convergent validity, the assessment was made to factor loading, Average Variance Extracted (AVE), and Composite Reliability (CR). A total of 6 runs were conducted using SmartPLS version 4.0. Table 1 shows the results of the convergence validity assessment. Based on the result, it can be confirmed that all thresholds have been confirmed - Factor loading ≥ 0.7; AVE ≥ 0.5; CR ≥0.7, indicating that convergence validity has been ascertained as suggested by Ramayah et al. (2018) and Hair et al. (2017). Even though certain item factor loadings are below 0.7, it was kept as the CR value has been fulfilled – as Ramayah et al. (2018) suggested.

**Table 1: Convergence Validity**

| Construct | Factor Loading | | Cronbach's Alpha | CR | AVE |
|---|---|---|---|---|---|
| Candidate Perception (CDT) | CDT1 | 0.667 | 0.711 | 0.771 | 0.530 |
| | CDT3 | 0.770 | | | |
| | CDT4 | 0.743 | | | |
| Party Perception (PTY) | PTY3 | 0.853 | 0.703 | 0.721 | 0.526 |
| | PTY5 | 0.570 | | | |
| Persuading Methods (PSD) | PSD2 | 0.673 | 0.795 | 0.846 | 0.582 |
| | PSD3 | 0.640 | | | |
| | PSD4 | 0.879 | | | |
| | PSD5 | 0.833 | | | |
| Subjective Norms (SBN) | SBN1 | 0.625 | 0.767 | 0.842 | 0.574 |
| | SBN2 | 0.823 | | | |
| | SBN3 | 0.773 | | | |
| | SBN4 | 0.794 | | | |
| Awareness (AWR) | AWR4 | 0.722 | 0.756 | 0.802 | 0.574 |
| | AWR5 | 0.783 | | | |
| | AWR6 | 0.768 | | | |

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|---|---|---|---|---|---|
| Social Network Engagement (SNE) | SNE1 | 0.664 | 0.769 | 0.846 | 0.526 |
| | SNE2 | 0.640 | | | |
| | SNE4 | 0.759 | | | |
| | SNE5 | 0.781 | | | |
| | SNE6 | 0.769 | | | |
| Intention to Vote (INT) | INT1 | 0.544 | 0.722 | 0.826 | 0.548 |
| | INT2 | 0.769 | | | |
| | INT4 | 0.794 | | | |
| | INT5 | 0.821 | | | |

### Discriminant Validity

The next step is to confirm discriminant validity. Two tests were conducted: the Fornell-Larcker Criterion and The Heterotrait-Monotrait ratio of correlations (HTMT). Table 2 shows the result of the Fornell-Larcker Criterion. The result shows that the square root of the construct is more significant than its previous values – thus, it meets the requirements for confirming discriminant validity. However, researchers suggest that HTMT should also be tested to confirm the discriminant validity. Thus, Table 3 shows the result of The Heterotrait-Monotrait ratio of correlations (HTMT) assessment. The results indicated no value above 0.9; therefore, it can be concluded that the study successfully confirmed the discriminant validity and subsequently achieved measurement model assessment.

**Table 2: Fornell-Larcker Criterion**

| | ADO | CRE | IRE | ORE | PRO | TRE |
|---|---|---|---|---|---|---|
| ADO | 0.919 | | | | | |
| CRE | 0.554 | 0.853 | | | | |
| IRE | 0.734 | 0.429 | 0.875 | | | |
| ORE | 0.767 | 0.539 | 0.650 | 0.913 | | |
| PRO | 0.780 | 0.561 | 0.628 | 0.662 | 0.868 | |
| TRE | 0.438 | 0.521 | 0.481 | 0.361 | 0.480 | 0.807 |

**Table 3:The Heterotrait-Monotrait ratio of correlations (HTMT)**

| | AWR | CDT | INT | PTY | PSD | SIZE | SBN |
|---|---|---|---|---|---|---|---|
| AWR | 0.758 | | | | | | |
| CDT | 0.235 | 0.728 | | | | | |
| INT | 0.392 | 0.266 | 0.740 | | | | |
| PTY | 0.278 | 0.250 | 0.368 | 0.726 | | | |
| PSD | 0.224 | 0.084 | 0.435 | 0.285 | 0.763 | | |
| SIZE | 0.533 | 0.101 | 0.428 | 0.280 | 0.338 | 0.725 | |
| SBN | 0.427 | 0.255 | 0.445 | 0.214 | 0.139 | 0.345 | 0.758 |

### Conclusion

The main objective of this study is to establish a measurement of student's behavioral intention to vote. The analysis showed that the study successfully confirmed the discriminant validity and achieved measurement model assessment. Therefore, the determinants of candidate perception, party perception, persuading methods, subjective norms, awareness, social network engagement, and intention to vote are identified. The image and credibility of the political party

and candidate may influence youth voting behavior. Besides, knowledge about politics, social networks, and social environment are among the factors that could influence voting behavior. Future studies may identify detailed relationships between the constructs influencing the intention to vote for further analyses. Besides, other significant analyses can be done to provide various perspectives on behavioral intention to vote among youth. The scope of the study also should be broader by focusing on different types of respondents.

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