

PEMBINAAN INSTRUMEN ATSS DILEMA-NUTRISI: MENILAI KESAHAN DAN KEBOLEHPERCAYAAN

(Development of *ATSS Dilema-Nutrisi* Instrument: Assessing Validity and Reliability)

ZAINUN MUSTAFA¹ & NOORAIDA YAKOB²

ABSTRAK

ATSS Dilema-Nutrisi merupakan instrumen yang dibina bagi mengukur pemikiran berorientasikan matlamat berpandukan tatacara *Articulated Thought in Simulated Situation* (ATSS). Instrumen ini adalah dalam Bahasa Melayu dan direka khusus bagi belia Muslim di Malaysia untuk memahami pola perilaku kognitif pelajar tingkatan empat aliran sains tulen apabila dirangsang untuk berfikir dalam pelbagai situasi berkaitan dengan makanan dan amalan pemakanan di luar konteks peperiksaan. Sebelum digunakan, kesahan dan kebolehpercayaan instrumen dibincangkan dan dinilai melalui kajian rintis. Dalam makalah ini, beberapa pendekatan bagi meningkatkan kesahan instrumen telah dibincangkan. Seterusnya, berdasarkan maklum balas daripada kajian rintis, penilaian terperinci terhadap kesahan dan kebolehpercayaan telah dilakukan. Penilaian ini dilakukan dengan menggunakan pengiraan berdasarkan statistik perihalan dan perisian SPSS 23. Hasil penelitian kesahan bagi ATSS Dilema-Nutrisi mendapati Purata Peratus Kekongruenan (ACP) ialah 90.9%, Kesahan Kandungan untuk Setiap Item (I-CVI) dan Kesahan Kandungan untuk Skala Keseluruhan (S-CVI) ialah 1.0. Manakala, Persetujuan antara Penilai (IRA) ialah 0.916, Kebolehpercayaan antara Penilai (IRR) ialah 0.763, nilai Pekali antara Kelas (ICC) 0.969, Pekali Intrakelas 0.978 dan Pekali Konkordans Kendall bagi keharmonian respons (*W*) ialah 0.056. Berdasarkan dapatan nilai kesahan dan kebolehpercayaan instrumen yang dinyatakan, instrumen mempunyai tahap kesahan dan kebolehpercayaan yang baik. Setelah instrumen ditambah baik berdasarkan komen-komen pakar, instrumen ini telah digunakan dalam kutipan data.

Kata kunci: ATSS; perilaku kognitif; situasi simulasi; pendidikan biologi; pertuturan pemikiran dalam situasi yang disimulasikan; Sains Tauhidik

ABSTRACT

ATSS Dilema-Nutrisi is an instrument to gauge the goal oriented thinking based on the Articulated Thought in Simulated Situation (ATSS) procedure. The instrument is administered in Bahasa Melayu and specifically designed for Muslim youth in Malaysia. The instrument is intended to serve as a guide for a better understanding of the trends in cognitive behaviour of form four science stream students when stimulated to think in various situations related to nutrition and eating habit. *ATSS Dilema-Nutrisi* focuses on the student ability to articulate their thought in non-exam-nature scenarios. In this article, some possible approaches to increase the validity are discussed. Then, the validity dan reliability of the instrument are discussed and tested in a pilot study. The validity and reliability checking are conducted in-depth using descriptive statistics and SPSS 23. From the analysis, the Average Congruency Percentage (ACP) is 90.9%, Content Validity for Individual Item (I-CVI) and Content Validity for Overall Scale (S-CVI) are 1.0. The Inter rater agreement (IRA) is 0.916, Inter rater reliability (IRR) is 0.763, Inter Class Coefficient (ICC) is 0.969, Intra Class Coefficient is 0.978 and Kendall Coefficient of Concordance for response homogeneity (*W*) is 0.056. From the findings, the instrument has an acceptable range of validity and reliability. Thus, the instrument is corrected and modified according to the expert comments before administrated for data collection.

Keywords: ATSS; cognitive behaviour; simulated situations; biology education; Articulated Thought in Simulated Situations; Tauhidic Science

Rujukan

- Al-Ghazali. 2014. *Mutiara Ihya Ulumuddin*. Makassar: Mizan.
- Alvero A.M. & Austin J. 2006. An implementation of protocol analysis and the silent dog method in the area of behavioral safety. *Analysis of Verbal Behavior* **22**(1): 61-79.
- Aminah A. & Nurul Huda M. 2006. Nutrition security in muslim countries: the drive towards a healthy ummah. Dlm. Shaikh Mohd. Saifuddeen Shaikh Mohd. Salleh & A. Sobian (pnyt.). *Food and Technological Progress: an Islamic Perspectives*. Petaling Jaya, Selangor: MPH Group Pub dan Institute of Islamic Understanding Malaysia (IKIM).
- Austin J. & Delaney P.F. 1998. Protocol analysis as a tool for behaviour analysis. *The Analysis of Verbal Behaviour* **15**: 42-56.
- Best J. B. 1999. *Cognitive Psychology*. West Sussex: Wiley & Sons Inc.
- Bhattacharjee A. 2012. *Social Science Research: Principal, Methods and Practices*. Textbooks Collection. Book 3.
- Blake K.R., Hopkins R.E., Sprunger J.G., Eckhardt C.I., & Denson, T.F. 2018. Relationship quality and cognitive reappraisal moderate the effect of negative urgency on behavioural inclinations toward aggression and intimate partner violence. *Psychology of Violence* **8**(2): 218-231.
- Böttcher F. & Meisert A. 2013. Effects of direct and indirect instruction on fostering decision-making competence in socioscientific issues. *Research in Science Education* **43**(2): 479-506.
- Broderic J.A. 2007. The relationship between negative emotions and conflict resolution strategies upon exposure to intimate couple conflicts: An investigation using the articulated thoughts during simulated situations paradigm. Disertasi sarjana. University of British Columbia.
- Cabello F. & O'hara D. 2002. Addressing the limitation of protocol analysis in the study of complex human behaviour. *International Journal of Psychology and Psychology Therapy*. **2**: 115-130.
- Clyne C. & Blampied N.M. 2004. Training in emotion regulation as a treatment for binge eating. *Behaviour Change*. **21**(4): 269-281.
- Creswell J.W. (2009). *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. Thousand Oaks: Sage Publication Inc.
- D'zurilla T.J. & Maydeu-Olivares A. 1995. Conceptual and methodological issues in social problem-solving assessment. *Behavior Therapy* **26**: 409-432.
- Davison G.C. & Zigelboim V. 1987. Irrational beliefs in the articulated thoughts of college students with social anxiety. *Journal of Rational-Emotive Therapy* **5**(4): 41-59.
- Davison G.C., Robins C. & Johnson M.K. 1983. Articulated thoughts during simulated situations: a paradigm for studying cognition in emotion and behavior. *Cognitive Therapy and Research* **7**(1): 18-39.
- Davison G.C., Navarre S.G. & Vogel R.S. 1995. The articulated thoughts in simulated situations paradigm: A think-aloud approach to cognitive assessment. *Current Directions in Psychological Science* **4**(1): 29-33
- Davison G.C., Vogel R.S. & Coffman S.G. 1997. Think-aloud approaches to cognitive assessment and the articulated thoughts in simulated situations paradigm. *Journal of Consulting and Clinical Psychology* **65**(6): 950-956.
- Fawziah Y., Azizi Y., Asmah S. & Zurihanmi Z. 2005. *Buku Aplikasi Kognitif dalam Pendidikan*. Batu Caves: PTS Publications & Distributors Sdn. Bhd.
- Fuad M.B. 2017. *Metodologi Pendidikan: Panduan Menulis Tesis*. Sintok: Penerbit UUM.
- Gisev N., Bell J.S. dan Chen T.F. (2013). Interrater agreement and interrater reliability: key concepts, approaches and application. *Res. Social Adm. Pharm.* **9**(3): 330-338.
- Iorio C.K.D. 2005. *Measurement in Health Behaviour: Methods for Research and Education*. San Francisco: Jossey-Bass.
- Jonasse D.H. 2012. Designing for decision making. *Education Tech. Research Dev.* **60**: 341-359.
- Kamisah O., Lilia, H. & Zanaton I. 2017. The critical thinking attitudinal profile of some Malaysian secondary students: a reflection of scientific attitudes. *Journal of Science and Mathematics Education in S.E Asia* **26**(2): 143-167.
- Kuusela H. & Paul P. 2000. A comparison of concurrent and retrospective verbal protocol analysis. *Am. J. Psychol.* **113**(3): 387-404.
- Landiss J. & Koch G. 1977. The measurement of observer agreement for categorical data. *Biometrics* **33**(150): 174.
- Lynn M.R. 1986. Determination and quantification of content validity. *Nursing Research* **35**: 382-385.
- Maslow A.H. 2012. *A Theory of Human Motivation*. New Jersey: Start Publishing LLC.
- Miles M.B. & Huberman, A.M. 1994. *An Expanded Sourcebook : A Qualitative Data Analysis*. Thousand Oaks: Sage Publications.
- Nor Aini A. 2002. Keberkesanan pendekatan pengajaran konstruktivis dalam membina semula konsepsi pelajar terhadap konsep-konsep fotosintesis dan makanan. Tesis PhD. Universiti Sains Malaysia.
- Polit D.F. & Beck C.T. 2006. The content validity index: are you sure what's being reported? Critique and recommendations. *Research in Nursing & Health* **26**: 489-497.

- Rayburn N.R., Jaycox L., McCaffrey D.F., Ulloa E.C., Zander-Cotugno M., Marshall C.N. & Shelly G.A. 2007. Reactions to dating violence among Latino teenagers: An experiment utilizing the articulated thoughts in simulated situations paradigm. *Journal of Adolescence* **30**(6): 893-915.
- Ronan G.F., Dreer L., Maurelli K., Ronan D.W. & Gerhart J. 2014. *Practitioner's Guide to Empirically Supported Measures of Anger, Aggression, and Violence*. New York: Springer International Publishing.
- Saadon M. & Zainal Abidin Y. 2014. *Halalkah Makanan Kita?* Batu Caves: PTS Islamika.
- Sheskin D.J. 2007. *Handbook of Parametric and Nonparametric Statistical Procedures*. Boca Raton: Taylor & Francis Gp.
- Vaismoradi M., Jones J., Turunen H. & Snelgrove S. 2016. Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice* **6**(5), 100-110. doi: 10.5430/jnep.v6n5p100
- Virzi R.A. 1992. Refining the test phase of usability evaluation: how many subjects is enough. *The Journal of The Human Factors and Ergonomics Society* **34**(4): 457-468.
- White J., Davison G.C., Haaga D.A.F & White A. 1992. Cognitive bias in articulated thought of depressed and nondepressed psychiatric patients. *The Journal of Nervous and Mental Disease* **180**(2): 77-81
- Whitehead A.E., Polman R.F., Jones H.S., Williams E.L., Rowley C., Quayle L. & Marcchan, D. 2018. Investigating the relationship between cognitions, pacing strategies, pacing strategies and performance in 16.1 km cycling time trials using a think aloud protocol. *Psychology of Sport and Exercise* **34**: 95-109. doi:http://doi.org/10.1016/j.psychsport.2017.10.001
- Zahazan M. 2006. *Anakku Hebat Anakku Soleh*. Kuala Lumpur: Telaga Biru.
- Zalina Z. 2004. Keberkesanan undang-undang dan produk halal di Malaysia. *Jurnal Syariah* **12**(2): 95-106.
- Zanov M. V. & Davison G.C. 2009. A conceptual and empirical review of 25 years of cognitive assessment using the articulated thoughts in simulated situations (ATSS) think-aloud paradigm. *Cogn. Ther. Res.* **34**: 282-291.

¹*Pusat Pengajian Ilmu Pendidikan
Universiti Sains Malaysia
Pulau Pinang
Mel-e: zainunmustafa@gmail.com**

²*Pusat Pengajian Ilmu Pendidikan
Universiti Sains Malaysia
Pulau Pinang
Mel-e: nooraida@usm.my*

*Penulis untuk dihubungi