

# The Application of Critical Thinking in Accounting Education: A Literature Review

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## Abstract

Critical Thinking is the mental process of analysing or evaluating information. The review of literature reveals that higher education, in particular is now placing an emphasis upon exposing matriculates to the concept of critical thinking and challenging them to develop those skills and dispositions necessary for improving the quality of their lives. The aim of critical thinking is to promote independent thinking, personal autonomy and reasoned judgment in thought and action. This involves two related dimensions: the ability to reason well and the disposition to do so. A structured critical thinking approach was created to train professional students for their professional market-ready development and thus becoming part of comprehensive professional training for students upon graduation. It is also an area which would pave the way for further research in one of the most critical area of human development. The purpose of this paper is to demonstrate the model based on the literatures done by previous researchers thus highlighting the importance of critical thinking in professional accounting education.

**Keywords:** accounting, critical thinking, education, perception

## 1. Introduction

The idea of creating a critical thinking model is to develop an effective critical thinking learning module for professional students i.e. ACCA due to the high requirements of the professional examinations. Furthermore, the module development could be use to develop a comprehensive professional training at UiTM to produce ACCA graduates on time. A structured critical thinking approach was created to train professional accounting students for their professional market-ready graduates despite all global challenges and changes in technology.

Since 1967, the faculty has produced the number of graduates with professional accounting qualifications such as ACCA and CIMA. The effort continues to spearhead government's aspiration to increase the number of professionally qualified Bumiputra accountants in the country to 60,000 by the year 2020. UiTM as the earliest and the only established public university that conducts a successful ACCA program and was awarded with the Platinum Status tuition provider from the globally recognized professional body, ACCA with recorded numbers of world prize winners. The award given by ACCA to a learning provider based on criteria such as provision of facilities and infrastructure, teaching and learning technique and achieving continuous excellent examination results.

### 1.1 What is Critical Thinking

Kurfiss (1988) defines critical thinking is an investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified. The author also suggests that, in all disciplines, critical thinking involves two phases which is discovery and justification of ideas. In the discovery phase, examination is done to search patterns and formulate interpretations or hypotheses about what the evidence means. In the justification phase, the conclusions, reasoning, and evidence in an argument were set forth. Facione (1990) explains that the ideal critical thinker is:

- habitually inquisitive,
- well-informed, trustful of reason,

- open-minded, flexible,
- fair-minded in evaluation,
- honest in facing personal biases,
- prudent in making judgments,
- willing to reconsider,
- clear about issues,
- orderly in complex matters,
- diligent in seeking relevant information,
- reasonable in the selection of criteria, focused in inquiry, and
- persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit.

Critical thinking involves a complex process of deliberation which involves a wide range of skills and attitudes. It is an art of analyzing and evaluating thinking with a view to improving it. Critical thinking is important to our life as it would improve one's attention and observation towards anything they are working for. As the activity will involve more focused reading, it will also help to improve the ability to identify the key points in a text or other message rather than becoming distracted by less important material Adedoyin & Okere (2017). On the other hand, it will improve the ability of the students to respond to the appropriate points in a message.

Understanding and adoption of critical thinking in studying can also help the students to make use of the knowledge that have learnt in classroom and the practicality will improve their skills in not only getting their points across of knowledge more easily but also on guiding them to how to get their points more easily Altunkaya & Ates (2018). The critical thinking skills analysis that the students choose can be applied in a variety of situations. Thus it is vital for them to understand how the critical thinking skills analysis works.

Accountants should always exercise sound moral judgment in all accounting activities. Accountants have the unique responsibility to provide clients with professional services while presenting a truthful and accurate assessment of a company and its financial health to the general public. The global economic and business landscape is changing with unprecedented speed and uncertainty. Climate change, resource scarcity, geopolitical conflict, unpredictable emerging markets and the increasing pace of digital innovation are just a few of the many drivers reshaping business and the role and expectations of professional accountants across the world. All professional accountants will be expected to look beyond the numbers, collaborate with other parts of the business and think and behave more strategically by Anwar (2018).

## 2. Literature Review

There are six important critical thinking skills delivered by Facione (1990) namely; (1) Interpretation, (2) Analysis, (3) Evaluation, (4) Inference, (5) Explanation and (6) Self-Regulation. The study which analysed critical thinking for purposes of educational assessment and instruction further highlighted sub-skills under each skill which are crucial for human self-development especially students. The sub-skills involved are categorization, decoding significance and clarifying meaning (Interpretation), examining ideas, identifying arguments and analysing arguments (Analysis), assessing claims and assessing arguments (Evaluation), querying evidence, conjecturing alternatives and drawing conclusions (Inference), stating results, justifying procedures and presenting arguments (Explanation) and finally self-examination and self-correction (Self-Regulation).

The relatively same concept of critical thinking was then emphasized by Pascarella and Terenzini (1991), Caifen, Hailun & Rongrong (2018) which asserted that it;

*“typically involved the individual's ability to do some or all of the following: identify central issues and assumptions in an argument, recognize important relationships, make correct inferences from data, deduce conclusions from information or data provided, interpret whether conclusions are warranted on the basis of the data given, and evaluate evidence or authority”.*

The importance of critical thinking has been highlighted by many scholars. Bourne (2018), Çalik, Çelik & Sönmez (2018) highlighted several global skills that are crucial for 21<sup>st</sup> century professions. His suggestions asserted that for young generation to be able to have an effective engagement with today's global society, they need to master the skills related to team work, problem solving and critical thinking. This particular set of skills is now become equally significant as the theories and concepts. This indicates that it is important for youth to be well equipped with critical

thinking skills in order to effectively discharging their roles and responsibility at schools, universities, and society at large.

The application of critical thinking skills over considerable amount of time would aid one's judgments, evaluation and problem-solving abilities. In a study involving auditors, Bucaro (2018) finds that by changing the way auditors think, it is possible to achieve improvement in their professional judgment. Bratten et al. (2016), Glover et al. (2018), Çelik, et.al (2018), Knechel (2007) and Power (2007) further highlighted that critical thinking is a crucial approach in assisting auditors in applying certain level of professional judgment required. This will significantly expand the auditors' understanding on the risk analysis and areas with high level of complexity such as estimates and provision. This is consistent with Bucaro (2018) who finds that critical thinking allows auditors to have better expectations in dealing with challenging accounting estimates and provision.

Elements in the critical skills would assist one's ability to acquire information and knowledge, as well as to recognize important and relevant data and information, so as to make an informed decision. As there are big data available now, critical skills are the capabilities that can make a difference as to what extent the data might be useful. Those elements would allow one to develop ability to extract relevant information from masses of data. Lacking skills in distinguishing between what is important and what is not might put such resources at waste, hence further highlighting the significance of critical skill. This is supported by Brewster et al (2017), Edson,et.al (2017), Griffith et al and Young (2015) whose results indicate that accountants with critical thinking training have better ability in recognizing diagnostic versus non-diagnostic information, compared to those without training in critical thinking.

There is also rising need of critical thinking as it inculcates the ability to think independently while being logical at the same time. Study performed on auditors revealed recognition of more evidence when auditors were asked to think collectively as compared to specific with regard to the item under examination (Rasso, 2015). Acquisition of critical thinking skill enhances one's ability to be reflective to the current changes in environment. One would be more willing to consider multiple perspective in making decision and analysis.

### 2.1 The Importance of Critical Thinking for Professional Accounting Students

Seven skills areas or quotients has been developed and introduced by the Association of Chartered Certified Accountants (ACCA) in 2017 via ACCA Futures Research Report highlighting the essentials for the evolving profession. This unique model demonstrates the skills and qualities needed from the successful professional accountant. This is a continuity of adding the value to employers and clients, thus the future professional accountants need an optimal and changing combination of professional competencies by way of practicing the critical thinking approaches. The quotients are further explained as per Figure 1 below:

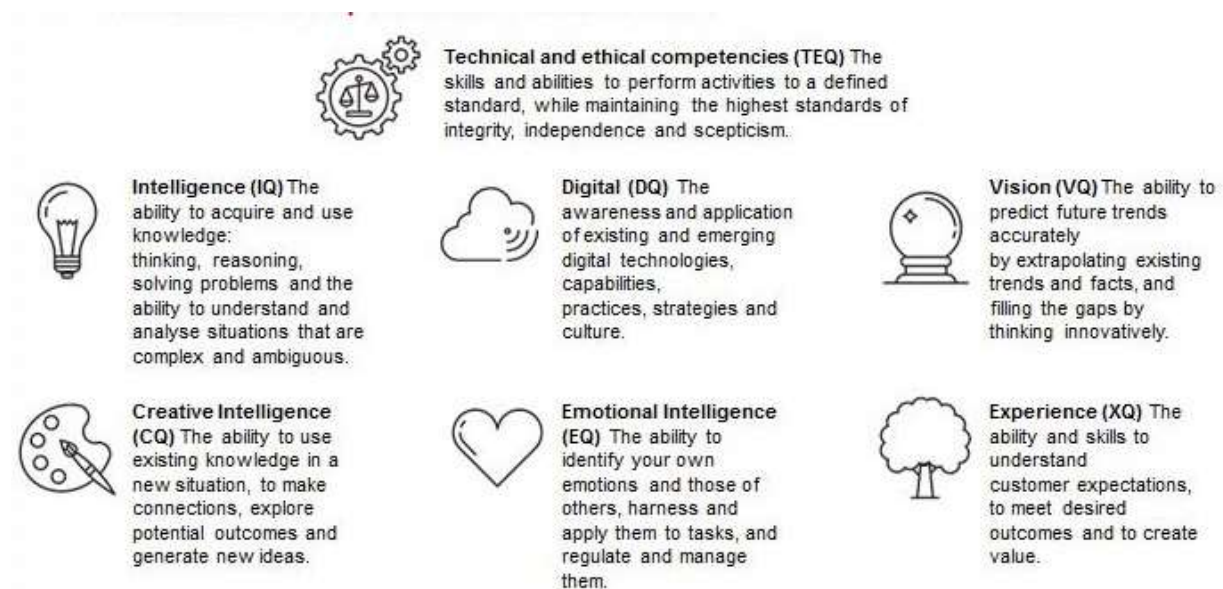


Figure 1. ACCA Professional Quotients for Success (ACCA Futures, 2017)

An accountant will be required to make best-practice recommendations to the management and clients on how to reduce costs and risks, enhance revenues and improve profits. In order to do this, accountants will need to research and make sense of complex business and financial information. Thus the ability to gather and interpret data, ability to identify, analyse and solve problems and to evaluate results are very important. In the process, accountant will also need to employ critical thinking abilities – accountants must be able to approach tasks logically: evaluate information, understand its implications, arrive at conclusions and develop workable solutions Dincer & Kilinç (2018).

Haller et al. (2007), Cockerill, Craig & Thurston (2018) implements a model suggesting that students engaged with learning process through repetitive activities, memorizing, understanding and reflecting. All of these processes require them to think in order to achieve effective learning outcomes and thereby enhance problem solving skill. From the model, it identifies difference in stage for the critical thinking. Reflecting stage requires higher critical thinking as compared to repetitive or memorizing stage. Factors which may influence students' thinking process may include teacher-student relationship, collective or collaborative studying, deep approach and transformational learning as in Figure 2 below.

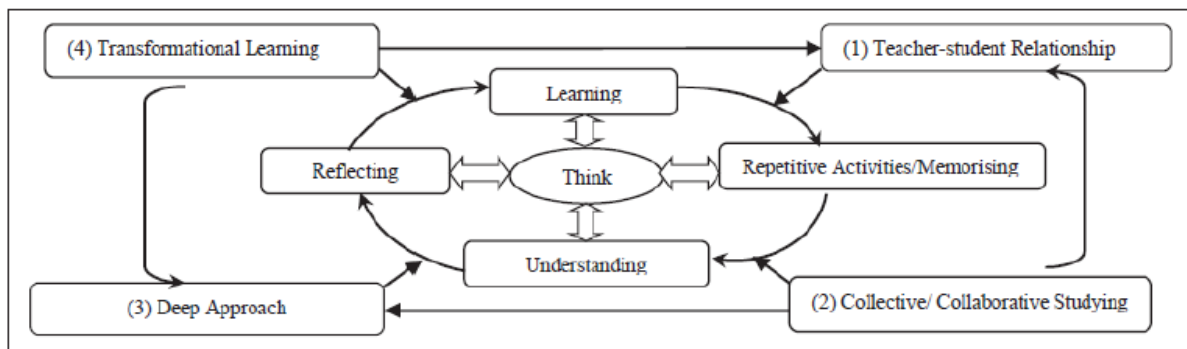


Figure 2. Model of Critical Thinking and Problem Solving (Haller et al., 2007)

### 3. Conclusion

Critical thinking workshop were to be planned based on the combination of model suggested and will be made available for other higher learning institutions that will generate consultancy activities. The students may benefit this module as a guideline for them in managing conflict arises throughout their journey in completing professional exam. The model will be tested to professional accounting students in UiTM in order to realign the strategy in meeting ACCA's requirements.

Samsuddin et al. (2015), Guirguis (2018), Gu (2018) has concluded in their study which contributes in filling the gap in knowledge by unveiling the current awareness, motivations, and readiness of accounting students to pursue professional accounting education in Malaysia. This will not only contribute into the advancement of the body of knowledge, but as guidance to the accounting educators and the institute as the tuition providers in formulating strategies to attract high quality students and subsequently produce highly competitive accounting graduates. Mautz (2018), Demirel, et.al (2018) has found out in his research that respondents listed job skills they felt were essential and how well they felt their employer fared in helping them develop those skills: Interpersonal skills, Confidence and motivation, Critical thinking and Innovation and creativity. It is very crucial to close the gap of these skill as it may stop the outflow of young talent. Therefore, it is very crucial for the young talents to prepare themselves with the skills required by organisations and the teachers also need to equipped themselves with the right approach in teaching method that comprehend the critical thinking activity.

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### References

- Adedoyin, O., & Okere, E. (2017). The Significance of Inclusion Concept in the Educational System as Perceived by Junior Secondary School Teachers: Implications for Teacher Training Programmes in Botswana. *Global Journal of Social Sciences Studies*, 3(1), 13-28. <https://doi.org/10.20448/807.3.1.13.28>
- Altunkaya, H., & Ates, A. (2018). Sources of Reading Anxiety among the Learners of Turkish as a Foreign Language. *Asian Journal of Education and Training*, 4(3), 161-169. <https://doi.org/10.20448/journal.522.2018.43.161.169>

- Anwar, M. N. (2018). Acquisition of Skills for Listening Comprehension: Barriers and Solutions. *International Journal of English Language and Literature Studies*, 7(3), 50-54. <https://doi.org/10.18488/journal.23.2018.73.50.54>
- Bernama , Professional Accounting Centre To Be Set Up To Boost Number Of Bumiputra Accountants, June 2014. Accessible at <http://accountancy.uitm.edu.my/v2/index.php/news-events/news/92-professional-accounting-centre-to-be-set-up-to-boost-number-of-bumiputra-accountants>.
- Bucaro, A. C. (2018). Enhancing auditors' critical thinking in audits of complex estimates. *Journal of Accounting, Organizations and Society*, (2018), 1-15.
- Caifen, W., Hailun, F., & Rongrong, C. (2018). The Research on Graduate Students' Understanding of Three Basic Limit Concepts. *American Journal of Education and Learning*, 3(2), 100-107. <https://doi.org/10.20448/804.3.2.100.107>
- Çalik, F., Çelik, I., & Sönmez, S. (2018). The Investigation of Competence of Teachers and Kindergartens in Terms of Movement Education Achievements in Pre-School Education Program. *Journal of Education and e-Learning Research*, 5(3), 179-184. <https://doi.org/10.20448/journal.509.2018.53.179.184>
- Çelik, I., Çalik, F., Bayraktar, G., & Bayram, M. (2018). The Investigation on Physical Education Teacher Candidate's Resilience, Tenacity and Motivation Levels. *Journal of Education and e-Learning Research*, 5(3), 174-178. <https://doi.org/10.20448/journal.509.2018.53.174.178>
- Cockerill, M., Craig, N., & Thurston, A. (2018). Teacher perceptions of the impact of peer learning in their classrooms: Using Social Interdependence theory as a model for data analysis and presentation. *International Journal of Education and Practice*, 6(1), 14-27. <https://doi.org/10.18488/journal.61.2018.61.14.27>
- Demirel, I. N., Teyfur, M., Çelik, I., Safali, S., & Kaya, A. (2018). Perspectives of Preservice Teachers on the Statements Related to Preservice Teachers and Competence of Lecturers. *Journal of Education and e-Learning Research*, 5(3), 185-192. <https://doi.org/10.20448/journal.509.2018.53.185.192>
- Dincer, N., & Kilinç, Z. (2018). The Analysis of Stress Levels of the Female Wrestlers Studying in Higher Education (A Case of Batman Province). *Asian Journal of Education and Training*, 4(3), 156-160. <https://doi.org/10.20448/journal.522.2018.43.156.160>
- Duron, R., Limbach, B., & Waugh, W. (2006). Critical Thinking Framework for Any Discipline. *International Journal of Teaching and Learning in Higher Education*, 17(2), 160–166. Retrieved from <http://www.isetl.org/ijtlhe/>
- Edson, M., Takesure, H., Isaac, C. T., & Simon, N. (2017). ? Extra Lessons or Extra Cash?: A Case Study of Schools in Masvingo Urban, Zimbabwe, from a Social Sciences? Perspective. *International Journal of Asian Social Science*, 7(4), 340-358. <https://doi.org/10.18488/journal.1/2017.7.4/1.4.340.358>
- Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Millbrae, CA: The California Academic Press.
- Glover, S. M., Taylor, M. H., & Wu, Y. (2018). Mind the gap: Why do experts have differences of opinion regarding the sufficiency of audit evidence supporting complex fair value measurements? *Contemporary Accounting Research* (forthcoming). <https://doi.org/10.1111/1911-3846.12480>
- Griffith, E. E., Hammersley, J. S., & Kadous, K. (2015). Audits of complex estimates as verification of management numbers: How institutional pressures shape practice. *Contemporary Accounting Research*, 32(3), 833-863. <https://doi.org/10.1111/1911-3846.12104>
- Griffith, E. E., Hammersley, J. S., Kadous, K., & Young, D. R. (2015). Auditor mindsets and audits of complex estimates. *Journal of Accounting Research*, 53(1), 1-31. <https://doi.org/10.1111/1475-679X.12066>
- Gu, Z. (2018). On Overseas Chinese Teaching from the Perspective of Intercultural Communication. *International Journal of Education, Training and Learning*, 2(1), 13-15. <https://doi.org/10.33094/6.2017.2018.21.13.15>
- Guirguis, R. (2018). Should We Let them Play? Three Key Benefits of Play to Improve Early Childhood Programs. *International Journal of Education and Practice*, 6(1), 43-49. <https://doi.org/10.18488/journal.61.2018.61.43.49>
- Haller, C., Fisher, R., & Gapp, R. (2007). Reflection as a Means of Understanding: Ways in Which Confucian Heritage Students Learn and Understand Organisational Behaviour. *Multicultural Education & Technology Journal*, 1(1), 6-24. <https://doi.org/10.1108/17504970710745175>

- Kimmel, P. (1995). A framework for incorporating critical thinking into accounting education. *Journal of Accounting Education*. [https://doi.org/10.1016/0748-5751\(95\)00012-B](https://doi.org/10.1016/0748-5751(95)00012-B)
- Knechel, W. R. (2007). The business risk audit: Origins, obstacles and opportunities. *Accounting, Organizations and Society*, 32(4e5), 383e408. <https://doi.org/10.1016/j.aos.2006.09.005>
- Kurfiss, J. G. (1988). *Critical thinking: theory, research, practice, and possibilities*. Washington, D.C.: Association for the Study of Higher Education.
- Lai, E. R. (2011). *Critical Thinking: A Literature Review Research Report*. Retrieved from <http://www.pearsonassessments.com/research>.
- Lapoint-O'Brien, T. (2013). *The Development of Critical Thinking Skills*.
- Larsson, K. (2017). Understanding and teaching critical thinking—A new approach. <https://doi.org/10.1016/j.ijer.2017.05.004>
- Mautz, S. (2018). A New Deloitte Study of 10,455 Millennials Shows They Need Help Improving These 4 Skills. Published on May 21, 2018. Retrieved from <https://www.inc.com/scott-mautz/new-deloitte-study-of-10455-millennials-says-employers-are-failing-to-help-young-people-develop-4-crucial-skills.html>
- Pascarella, E., & Terenzini, P. (1991). *How college affects students*. San Francisco: Jossey-Bass.
- Power, M. K. (2007). Business risk auditing and debating the history of its present. *Accounting, Organizations and Society*, 32(4-5), 379-382. <https://doi.org/10.1016/j.aos.2006.09.003>
- Rasso, J. T. (2015). Construal instructions and professional skepticism in evaluating complex estimates. *Accounting, Organizations and Society*, 46, 44-55. <http://doi.org/10.1016/j.aos.2015.04.005>
- Samsuddin, M.E., Khairania, N.S., Abdul Wahid, E., & Abd Sata, F.H. (2015). Awareness, Motivations and Readiness for Professional Accounting Education: A Case of Accounting Students in UiTM Johor. *Procedia Economics and Finance*, 31(2015), 124 – 133. [https://doi.org/10.1016/S2212-5671\(15\)01139-9](https://doi.org/10.1016/S2212-5671(15)01139-9)
- Wingate, U. (2007). A framework for transition: Supporting 'learning to learn' in higher education. *Higher Education Quarterly*, 61(3), 391-405. <https://doi.org/10.1111/j.1468-2273.2007.00361.x>