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Islamic (accounting) ethics education: Learning from *shalat*

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Abstrak

Artikel ini bertujuan untuk mengungkap penyesatan profesionalisme konvensional sebagai salah satu etika akuntansi dalam hal etika Islam, dan memberikan solusi melalui praktik shalat. Dengan studi naratif-intervensi di tiga kelas akuntansi pada tingkat sarjana dan pascasarjana, intervensi atau terobosan dari cara pembelajaran rutin digambarkan. Ditemukan bahwa pandangan konvensional tentang melihat pendidikan formal telah menjadi penghalang untuk menerapkan cara-cara Islam. Studi ini memberikan kritik terhadap profesionalisme akuntan serta proposal tentang bagaimana melakukan pendidikan Islam dalam sistem konvensional dan sekuler. Upaya berkelanjutan akan membantu siswa untuk menyadari bahwa melayani Tuhan adalah puncak profesionalisme. Konsep profesionalisme dalam etika akuntansi juga harus diperluas dalam definisinya.

Kata Kunci: Pendidikan Akuntansi; Etika; Shalat; Profesionalisme.

Abstract

This article aims to reveal the misdirection of conventional professionalism as one of accounting ethics in terms of Islamic ethics, and provides a solution through the practice of *shalat*. By narrative-interventionism study in three accounting classes in undergraduates and postgraduates levels, the intervention or break through from routine way of learning was portrayed. It is found that conventional view of seeing formal scheduled education has become a barrier to apply Islamic ways. This study provided critics towards accountants' professionalism as well as a proposal of how to conduct Islamic education within the conventional and secular system. A continuous effort will help the students to realize that to serve God is the pinnacle of professionalism. The concept of professionalism in accounting ethics should therefore also be extended in its definition.

Keywords: Accounting Education; Ethics; Shalat; Professionalism.

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The growth of Islamic accounting in economics faculties or courses, thus Islamic education, is accelerating in most universities in Indonesia. Partly, I presume, is caused by the increase of Islamic financial institutions indicated by the fastest growth of asset. The World Islamic Banking Competitiveness Report 2014-2015 noted capital asset growth rate from 2009-2013 amounted to 43%, compared to Pakistan at 29%, Qatar at 26%, Malaysia and Turkey at 19%, or even Bahrain at 2%. The rising number of Islamic financial institutions requires corresponding amount of employees. In June 2015, according to Indonesian Sharia Banking Statistics 2016, financial institutions comprising Islamic commercial banks, Islamic commercial units, and Islamic rural banks in Indonesia have absorbed 47.529 employees. This number has risen from 43.054 employees in 2013, or equivalent to 10,4% rise.

Ironically, the provision of the Islamic-economics degree bearing employees by mostly secular universities is viewed sufficient. In truth, Islamic economics (including accounting) education is not only about understanding the “how to do” or the “how to apply”, as Akhtyamova, Panasyuk, & Azitov (2015) have experienced in Russia while practicing Islamic economics education. Understanding the philosophy of Islamic economics will not capture the core of Islamic values if the education is ran on a conventional secular system. By that, the Islamic education is not only about understanding its underlying theories, practice, even further, its learning process. This study is not only focused on the substance of what we teach (see Kamayanti & Rahmanti, 2014) since religion, Islam nevertheless, would increase ethical behavior (Keller, Smith, & Smith, 2007); but it dwells deep into the learning process as the most important experience of Islamic education itself.

Previous articles on accounting education deals with learning process techniques such as using journal articles to enhance cognitive competencies (Hoque, 2002) and other techniques to enhance reflective thinking (Mintz, 2006). Even if education is purposed towards happiness and well-being, it is geared towards individual interest (Michalos, 2007), or at critical perspective, maintaining its critics against capitalism (Bakre, 2006). Conventional education, especially now in this information technology era, has further lost a touch of humanity as expressed in a poem by Singh (2004, p. 657):

“Sometimes, I wonder
How am I doing?
Where am I going? In my world of
Standard Operating System
I send out an SOS
I click on an online quiz
For self-evaluation
For self-examination.
I know
It is a codependent relation.
I use the guidance menu
For navigation.”

The poem ridicules the lost of direction in (accounting) education, since in contrast, education is the transfer of value and of purpose to create civilization (Al Attas, 1981). To pursue education is every moslem’s obligation as stated in a hadith: *‘utlub il ‘ilma wa law fis-Sin*, meaning seek knowledge even in China. Further, having education is also *ibadah* or worship. *Shalat* is one *ibadah* that is most important, as stated in a hadith:

الصَّلَاةُ أَعْمَالُهُمْ مِنَ الْقِيَامَةِ يَوْمَ يَهِيَ النَّاسُ يُحَاسَبُ مَا أَوَّْلَ إِنَّ

The first *amal* (deed) of human at the day of the judgment, that will be accounted for is his/her *shalat* (Shahih, HR Abu Daud: 964, At-Tirmizi: 413, Shahih Al-Jami’: 2571 al-Albani). Noting this in mind, this article aims to tackle two issues. Firstly, it aims to reveals an implementation of Islamic (accounting) ethics education in a secular institution by practicing *shalat* to arouse ethical consciousness. Secondly, it aims to



provide critics to conventional accounting ethics that have followed direction of the International Federation of Accountants (IFAC) purposed to gain trust in the market, not for accountability to God. One of eight accountants’ ethics pillars, which will be scrutinized, is professionalism.

METHOD

The research was conducted in a secular university that provides Islamic courses and claims to have inspiring, enlightening, and emancipating as its vision. The intervention of *shalat* practice was started in the first semester of 2015/2016 for one postgraduate class; and it commenced to the second semester of 2015/2016 for two under graduate classes and one postgraduate class. The observation, therefore, lasted for approximately eight months (September 2015-April 2016).

The courses taught in these classes do not have clear, if not to say no, relation to Islam. This choice aims to prove that Islamic economics education does not only always have to be applied to courses with “Islamic” labels. The length of courses for each class took two and a half hour, bearing three credits as follows:

Table 1. Intervened Classes

Class	Courses	Scheduled time
Undergraduates A	International Accounting	18.15-20.45
Undergraduates B	Business and Professional Ethics	09.30-12.00
Postgraduates C	Research Method	13.00-15.30

Note that the scheduled time for these courses according to the university regulation are very strict, since the lecturing administration kept detailed records of lecturers’ time. Note also, that the time of *shalat* is within the scheduled lecture time. The time of *shalat* for 31 March 2016 is as follows:

Table 2. Time of *Shalat* 31 March 2016

<i>Shalat</i>	Time
Subuh	04.20
Duhur	11.38
Asyar	14.55
Maghrib	17.39
Isya	18.49

These prayer times vary of course, but not significantly during the time of the research. Since the azan (a call for *shalat*) is always called out before the class is over, the class would be immediately stopped and every muslim student is encouraged to have *shalat* together (*jama’ah*). The discussion after *shalat* about professionalism as one of accountants’ ethics were then carried out. Another intervention beside *shalat* was carried out by discussing a video downloaded from youtube concerning azan (<https://www.youtube.com/watch?v=6ZjOMHjDpbo>). Several themes that came up during the discussion were classified and presented in results in a narrative fashion. All discussions that are presented in the next session are true and empirical in nature. However, in its presentation, I may have omitted some conversations to keep the flow of the main issue, but this omission will not have substantial effect on the findings.

RESULTS AND DISCUSSIONS

The discussions after the *shalat* lasted between 10-15 minutes and was always related to the course materials. The findings are organized according to the aims of the research. The first section provides the critic towards professionalism in the conventional accountant ethics under the subtitles “is breaking regulation (un)professional?”, “can we leave out religious values in the name of professionalism?” and “tolerance and professionalism”. In this section, a session for each intervened class is narrated in dialogic form to show the flow of discussion since it would best also depict how integration of course materials and the ethics of *shalat*.



Is Breaking Regulation (Un)Professional? The intervention to stop for *shalat* during class, was probably considered odd, because none of lecturers in the faculty had such practice. This information was gathered during the discussion. Of course, this brought up an irony since the university, although not a religious one, has muslim population in dominance for both lecturers and students. The question for discussion was then raised: is it professional to take some time to conduct *shalat*?

International Accounting Class (Undergraduates A)

This class was a small class consisting of 12 accounting students. There were 11 muslim students and one non-muslim. The first time the question was asked, there were mixed answers and confusion. The discussion was guided and intervened in the following manner.

“Please be free to state your mind,” I said, “If for example, the dean just passed by and found an empty class during the scheduled time, and asked you where has the class gone, what would you answer?” I asked a student who could not perform *shalat* because of her monthly period. She was left alone in class while we conducted *shalat jama’ah*.

“I would say that everyone is gone for *shalat* at the *surau*”, she said.

“What do you think the dean would think if you had answered that? Would you say that it was a professional conduct?” I asked again. She could not make up her mind, looking baffled. A classmate put up his hand to comment.

“This is not professional. If the class is scheduled to run from 18.15-20.45, then the professional thing to do is to stick to the schedule”, he said. His comment brought reaction to another student.

“I think it is professional, since it is our obligation to conduct *shalat* on time”, he protested, “but I see the dilemma, it is not professional because we have taken the time of lecture for *shalat*. Therefore, it is not professional because it breaks the regulation. Yet, it is professional if you see this from religious perspective”.

“It is not professional at all because we have taken the time of lessons to pray, while the prayer can be done after the class”, another student joined the discussion, “so there is no reason for us to cut off the time of the lecture”.

After a moment of silence, I commented, “You are all right if you look at it from different perspectives. It is very wrong to take time for *shalat* if you believe that following regulation established by the faculty is your guidance of truth. It is also wrong not to conduct *shalat* on time since the *hadith* stated so.² Therefore, which one is more ethical? Would you prefer to be ethical in the eyes of human, or in the eyes of God?”

“God...”, the students said unanimously.

“*Alhamdulillah*, what can we learn from this?”

“Human makes rules that do not comply to God?”

“Yes. That is one way of looking at it. We learn that sometimes, and may be most of the times, human make rules or regulations that deviate from God’s rules. Yet, although we know what is better, we choose to follow human instead of God. Do you agree with that?” The students nodded. “Alright, what about accounting? In international context, what is considered to be accounting rules made by human?”

“IFRS?” someone chimed in.

“That is right. Now let’s see what we know about IFRS?” I placed a slide (Figure 1) showing conceptual frameworks. Especially, I directed the attention of the students

¹ In the business and economics faculty, the *mushala* is named the *surau*; an indigenous term for praying place.

² From Ibnu Mas’ud he said: “I asked *rasulullah* what is the most good deed?” He answered: “*shalat* on time”. I asked again, “then what”? He answered “serve your parents”. “Then what?” He answered “fight (*jihad*) in Allah’s cause”. Ibnu Mas’ud said, “*rasulullah* has conveyed this to me, if I were to aske more advice, he would add more” (Muttafaq alaih, Bukhari no.: 527, and Muslim no.:85).

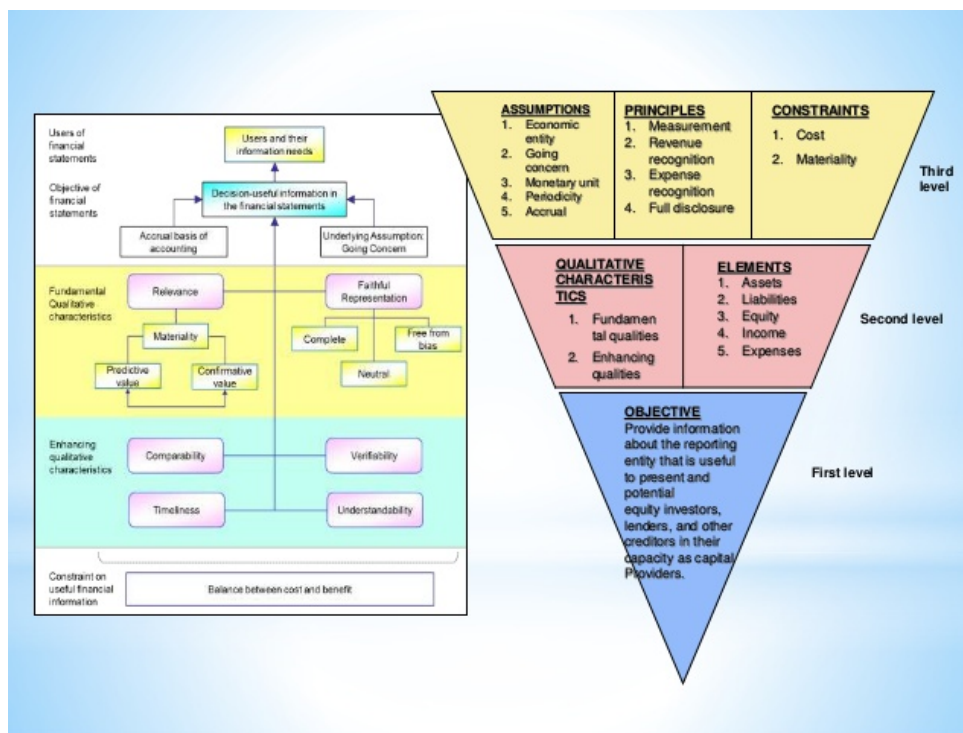
ثُمَّ قُلْتُ (الْوَالِدَيْنِ إِحْسَانًا) قَالَ أَيُّهُنَّ؟ ثُمَّ قُلْتُ (وَقِيَّتَهَا عَلَى الصَّلَاةِ) قَالَ أَفْضَلُ؟ أَلْأَعْمَالُ أَيُّهُنَّ؟ قَالَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ سَأَلْتُ قَالَ مَسْعُودُ بْنُ وَغَانَ عَلَيْهِ مُتَّفَقٌ لَزَادَنِي وَسُئِلْتُهُ وَلَوْ أَنَّ رَسُولَ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ حَدَّثَنِي قَالَ (اللَّهُ سَبِيلٌ فِي الْجِهَادِ) قَالَ أَيُّهُنَّ؟



to the objective of financial reporting. I read the sentences aloud:

“The objective of financial reporting is to provide information about the reporting entity that is useful to present and potential equity investors, lenders, and other creditors in their capacity as capital provider. So, a professional accountant should follow this, if by being professional, one must follow the standards or rules. What do you think?”

Figure 1. Conceptual Frameworks of Accounting



The class agreed.

“What is wrong with this? If we are discussing the purpose of our life, what would that be?” Someone said that human should conduct *ibadah* to God. By that, it means that human should be accountable to God, not human. Yes? Now let’s see again this conceptual frameworks, especially the objectives of financial reporting. Now imagine, what would you say, one day, when the angels Munkar and Nakir asked you: *Man Robbuka* (who is your God). What would you answer?”

“Capital providers,” the class shouted then laughed.

“So, is that the professionalism that accountants seek? To be professional to serve capitalists?” I asked, “Do we agree that this very definition of professionalism is what we have to learn to be good accountants, or to be truly “professional” or unprofessional?”

“I’d rather be professional in the eyes of God”, a student answered.

In this discussion, the conduct of *shalat* on a timely basis, though it would take up the class’ length of session at first triggered a debate on professionalism. The consciousness can be awakened through the practice of *shalat*. The students can realize that if professionalism is viewed only through the lens of human rules, then such professionalism is shallow since the utmost professionalism should be viewed in term of religious values. This realization can then be maintained while discussing the issue according to the given syllabus in International Accounting course, in this case the conceptual frameworks of accounting. The students can be made to understand how accounting can form accountants’ mindset; *i.e.* in the name of professionalism, accountants may forget the reason behind their creation. Accountants, in the name of professionalism, choose to follow human rules instead of God’s rules; to provide



accountability to capital providers instead of God; all of these are similar to how we choose to follow the strict hours of class session rather than having *shalat* on time.

Can We Leave Out Religious Values In The Name Of Professionalism?. If professionalism is achieved through tolerance, then how far would we go to be professional? This issue has been raised in several papers. Shafer, Lowe, & Fogarty (2002) have pointed out that the term professionalism has changed over the past years since the blossom of corporatization. Accountants are forced to leave out their beliefs and personal morals to be more professional. Professionalism may include gender issues (Keller et al., 2007), racial issues (Annisette, 2003), and even disability issues (Duff & Ferguson, 2012). In this session, the question was raised concerning professionalism and religion: can we leave out religious values in the name of professionalism?

Business and Professional Ethics Class (Undergraduates B)

In a session opening a new semester, we discussed the concept of ethical relativism. We watched the azan and ave Maria being played harmoniously in a church from a youtube site (<https://www.youtube.com/watch?v=6ZjOMHjDpbo>). Azan, as we all know, is the calling of *shalat*. In the video it is shown how, in the name of harmony and humanity, azan was being chanted in the church, simultaneously with the song "Ave Maria". The video only lasted for 2.07 minutes but the discussion on ethical relativism took approximately 30 minutes. After the video has been played, I asked the class, who felt that what they had just seen was ethical. Out of 32 students, only one felt it was ethical. The discussion commenced:

"I am Christian, but I feel offended that the azan and Ave Maria should be played together in church", a student began, "I think azan is a call for *shalat* while Ave Maria is a song to glorify the Virgin Maria. This doesn't feel right".

"This shows togetherness. I think it is just beautiful to see that two religions can go hand in hand. At the moment, Indonesia is very vulnerable to differences in religions. People hate other religions. They burn mosques and churches. I think combining the two is a good effort to achieve tolerance," answered different student.

"I see... This gives picture of tolerance, right?" I guided the discussion, "If by having this song and azan together, many become united, then this is ethical. Under Ethical Theory of Utilitarianism, this action is ethical and justified. It serves greater purpose, that is to unite the people". The students were instantly buzzing with discussions. "It is all right to have different opinions," I said. Several hands were up.

"But I think it is just not right," one student protested, "every action has intention...yes.. but not just intention, we have to understand the origin of azan and the origin of the Ave Maria. The two may have contradictory values. Yes, we have to be in harmony with other religions, but this is not the way. There can be some other way."

"Okay, this is a good discussion," I calmed the class down, "I am trying to relate professionalism and religion. In this case, the event organizer may think that it is professional to combine azan and Ave Maria to achieve harmony. If I were to say that this combination is a good art, would you agree?" The class nodded.

"Good music, good art, it touches your heart," a student agreed.

"But if you see from religions, this combination is not good. Most of you have agreed with me. This shows that art has been seen separated from religions, when it should not have been. The problems, in every day life, it is not just art that has been separated from religions, but science including the concept of professionalism. I am happy that you see this as a holistic view between arts and religions- hence holistic view between professionalism and religions".

Through intense discussion, the students have been triggered to enter a higher consciousness of the unity in reality. They can realize that in every aspect of life, religions should be the guidance of action. They learn that religions can not be separated from science and its building, including the concept of professionalism.



Tolerance and Professionalism. What if the practice of *shalat* that is conducted in non-Islamic university occurred in a class that does not only consist of Muslim but also non-Muslim? Will such practice offend the non-Muslim students? Should different beliefs enhance professionalism, or otherwise?

Research Method Class (Postgraduates C)

"I do not want my class to be the hindrance for you to enter heaven. I do not want to hear that in the day of the judgment, you will all be postponed to enter the heaven because you postpone your *shalat* time for my class. So go ahead we take 15 minutes time off. We are not leaving the class, since *shalat* is also part of having this class. May Allah notes this as good deed for all of us: that we do not adjust *shalat* time with our schedule, but we adjust our schedule with *shalat* time." I began the class after we were silent for the Ashr azan. "So please take 15 minutes of this class and we will proceed with our discussion after *shalat*".

The muslims students and I took our time to pray. When I returned approximately 10 minutes later, I saw that the number of non-Muslims students was 25 percent of the whole class. As the entire students returned to class, I directed the discussion towards religion differences, research, and professionalism.

"So... how are we after *shalat*?" I asked.

"Refreshed," answered one student, gleaming happily.

"Did you pray?" I asked again, "if so what did you pray for?"

"I prayed that my study would be successful."

"I prayed so that my knowledge will be beneficial," answered another.

"Amin," I said, "I prayed too. I prayed for you, my students. I prayed that you would be a wiser person, most beneficial person for all."

"You prayed for us?" asked one student in bewilderment, "that is very nice. We will pray for you next time."

"Thank you," I smiled, "I believe that education does not stop in classes only. I believe if we want to have a holistic education, we should pray for each other. After all, education is about value transfer, and the best values to be transferred are religious values. Now, I noticed that we are not all Muslims here. How do you feel that we took a break to do a prayer?" I asked one of the non-Muslim students, "do you feel left out, is this a professional thing to do?"

"It is all right. I think you have your obligation and we respect that." He answered. "Would you do the same thing if I were to have my religious obligations?"

"Of course, if you have to leave class because you have your religious celebration or worship, I would not mind at all. One point to note is that what we do reflect our beliefs, and as human beings we have to respect each others' beliefs. Now, let's talk about research method. Do you think how we do research is related to our beliefs?"

"I guess so," one student answered, "I mean isn't that multi-paradigm all about? If you choose to be an interpretivist, you are not wrong because you see the world as such and you want to understand how people make sense of the world. But if you are taking critical paradigm you are also right, since you see that we need to change and to emancipate ourselves from certain domination."

"That is very true," I smiled, "I think you have understood the concept of differences very well. Everyone is right in their own terms. Is that agreed?" The class nodded unanimously. I continued, "however, do not get lost. Respecting each other does not mean that every thing or everyone is right. If you believe everyone is right, today you are a muslim, tomorrow you will become a Buddhist, the next day a Christian, and so on. Is it professional to set aside these beliefs and embrace that all beliefs are right?"

this session, the students learn about the wholeness of reality. Relating to ethics, the students could grasp on their own that religious tolerance has boundary. Tolerance does not mean relativism in principles owned. Tolerance should stop at understanding and respecting other as to why they think and act the way they are, but it should not go further beyond true individuals beliefs. Professionalism should acknowledge these differences.



CONCLUSION

The sessions gave a clear picture of the integration of Islam with teaching materials. Without doubt, *shalat* can provide a way to intervene the secular conventional teaching materials, in whatever courses that are not limited to courses with the label of Islam, such as Shariah Accounting or Shariah Financial Management. This embedded transfer of knowledge lies in the hand of lecturers. As Kamayanti, Triyuwono, Irianto, & Mulawarman (2012) have elucidated, every course should be tied to the concept of tawhid.

A holistic view of Islamic (accounting) education will be able to trigger consciousness, not just critical consciousness, but further, spiritual consciousness that in turn will become the fuel to ignite the need to change. The change is from within, as well as the will to change the society. (Accountants') Professionalism should not start with the majority of voice- people's voice. Professionalism should always start with the understanding about adherence to religious values. We have learnt that a holistic education can be carried out through the practice of *shalat*, mutual prayers, as well as *shalat* derivation (such as *azan*, a calling for *shalat*). Every course material can always be related to *shalat*, in this case in International Accounting, Business and Professional Ethics, as well as Research Methods.

This paper also reminds the heavy responsibility that must be owned by the lecturers to continuously integrate Islam and course materials. It is not easy especially if the system still follows the secular conventional ways, but it does not mean that we have to wait for the system to change. As enlightened beings, it is our jobs to strive with changes for the better civilization in every breath that we take. System change will always take longer time, and we can not wait that long to start the change. This holistic education is the least we can do, *in sya Allah*.

REFERENCES

- Akhtyamova, N., Panasyuk, M., & Azitov, R. (2015). The Distinctive Features of Teaching of Islamic Economics: Philosophy, Principles and Practice. *Procedia - Social and Behavioral Sciences*, 191, 2334–2338. <http://doi.org/10.1016/j.sbspro.2015.04.707>
- Al Attas, S. M. N. (1981). *Islam dan Sekularisme*. Bandung: Penerbit Pustaka.
- Annisette, M. (2003). The colour of accountancy: examining the salience of race in a professionalisation project. *Accounting, Organizations and Society*, 28(7-8), 639–674. [http://doi.org/10.1016/S0361-3682\(02\)00030-2](http://doi.org/10.1016/S0361-3682(02)00030-2)
- Bakre, O. M. (2006). Accounting education, training and the profession in the Commonwealth Caribbean: Integration or internationalisation? *Accounting Forum*, 30(3), 285–313. <http://doi.org/10.1016/j.acfor.2006.07.001>
- Duff, A., & Ferguson, J. (2012). Disability and the professional accountant: insights from oral histories. *Accounting, Auditing & Accountability Journal*, 25(1), 71–101. <http://doi.org/10.1108/09513571211191752>
- Hoque, Z. (2002). Using journal articles to teach public sector accounting in higher education. *Journal of Accounting Education*, 20, 139–161. [http://doi.org/10.1016/S0748-5751\(02\)00006-4](http://doi.org/10.1016/S0748-5751(02)00006-4)
- Kamayanti, A., & Rahmanti, V. N. (2014). Melucuti “Kerudung” Manajemen Keuangan Syariah: Pembelajaran Berbasis Pendekatan Kritis Islami. In *Percepatan Pembangunan Ekonomi Indonesia Perspektif Kewilayahan dan Syariah* (pp. 507–524). Kendari: Universitas Halu Oleo.
- Kamayanti, A., Triyuwono, I., Irianto, G., & Mulawarman, A. D. (2012). Philosophical Reconstruction of Accounting Education: Liberation through Beauty. *World Journal of Social Science*, 2(7), 222–233.
- Keller, a. C., Smith, K. T., & Smith, L. M. (2007). Do gender, educational level, religiosity, and work experience affect the ethical decision-making of U.S. accountants? *Critical Perspectives on Accounting*, 18(3), 299–314. <http://doi.org/10.1016/j.cpa.2006.01.006>
- Michalos, A. C. (2007). Education, Happiness and Wellbeing. *Social Indicators Research*, 87(3), 347–366. <http://doi.org/10.1007/s11205-007-9144-0>



- Mintz, S. M. (2006). Accounting ethics education: Integrating reflective learning and virtue ethics. *Journal of Accounting Education*, 24(2-3), 97-117. <http://doi.org/10.1016/j.jaccedu.2006.07.004>
- Shafer, W. E., Lowe, D. J., & Fogarty, T. J. (2002). The Effects of Corporate Ownership on Public Accountants' Professionalism and Ethics. *Accounting Horizons*, 16(2), 109-124. <http://doi.org/10.2308/acch.2002.16.2.109>
- Singh, G. (2004). The brave new world of higher education. *Critical Perspectives on Accounting*, 15(4-5), 655-665. [http://doi.org/10.1016/S1045-2354\(03\)00052-2](http://doi.org/10.1016/S1045-2354(03)00052-2)