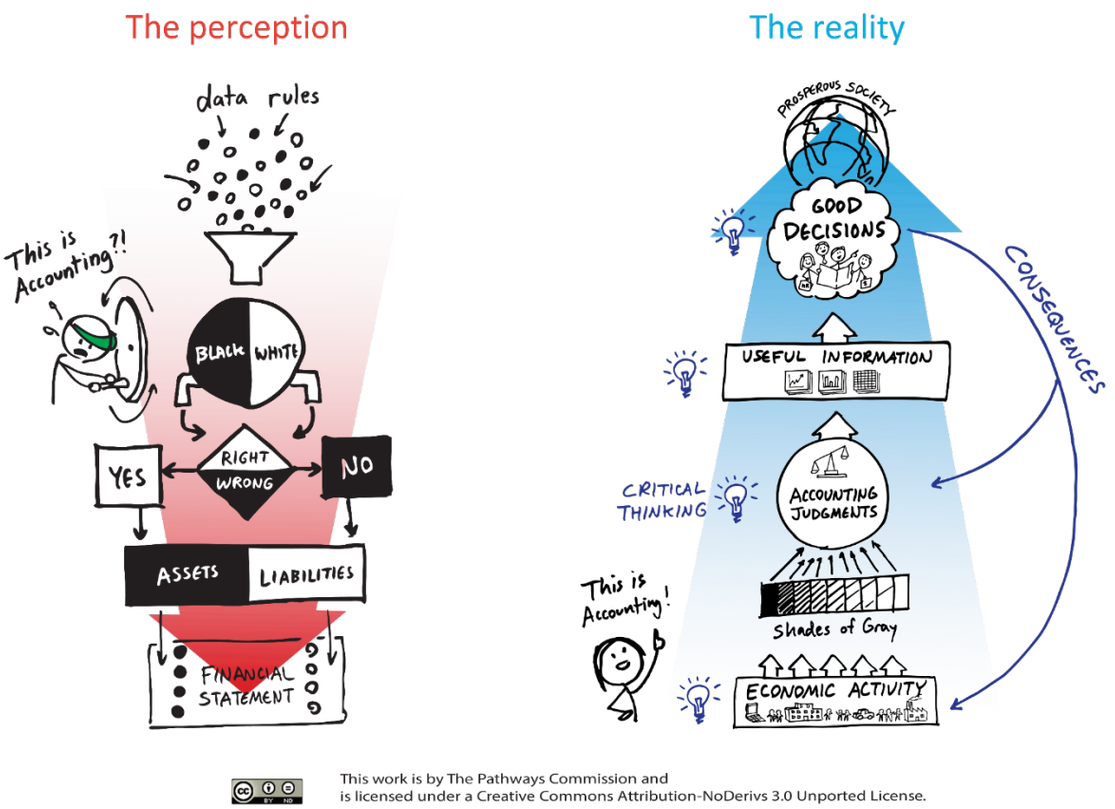
A Proposal for Building Critical Thinking Skills for the New CPA exam

The American Institute of Certified Public Accountants (AICPA) launched a new version of the Uniform CPA Exam on April 1, 2017. Professional content knowledge will remain fundamental to protecting the public interest, but newly licensed CPAs must also possess higher order cognitive skills (critical thinking, problem solving and analytical ability), professional skepticism, an understanding of ethical responsibilities, an understanding of the business environment, and effective communication skills, according to Tysiac 2016.

Examples of changes to the exam include a document review simulation. A document review simulation requires the ability to analyze and interpret documents such as reports, memos and emails since this is a critical part of a CPA's job. The candidate must determine what information from ledgers, invoices, emails and contracts is or is not relevant and make edits or changes as appropriate. Multiple choice questions will decrease from roughly 60% to 50% of the overall exam as task based simulations testing higher-order skills will increase (Tysiac, 2016).

Changes in the Accounting Curriculum

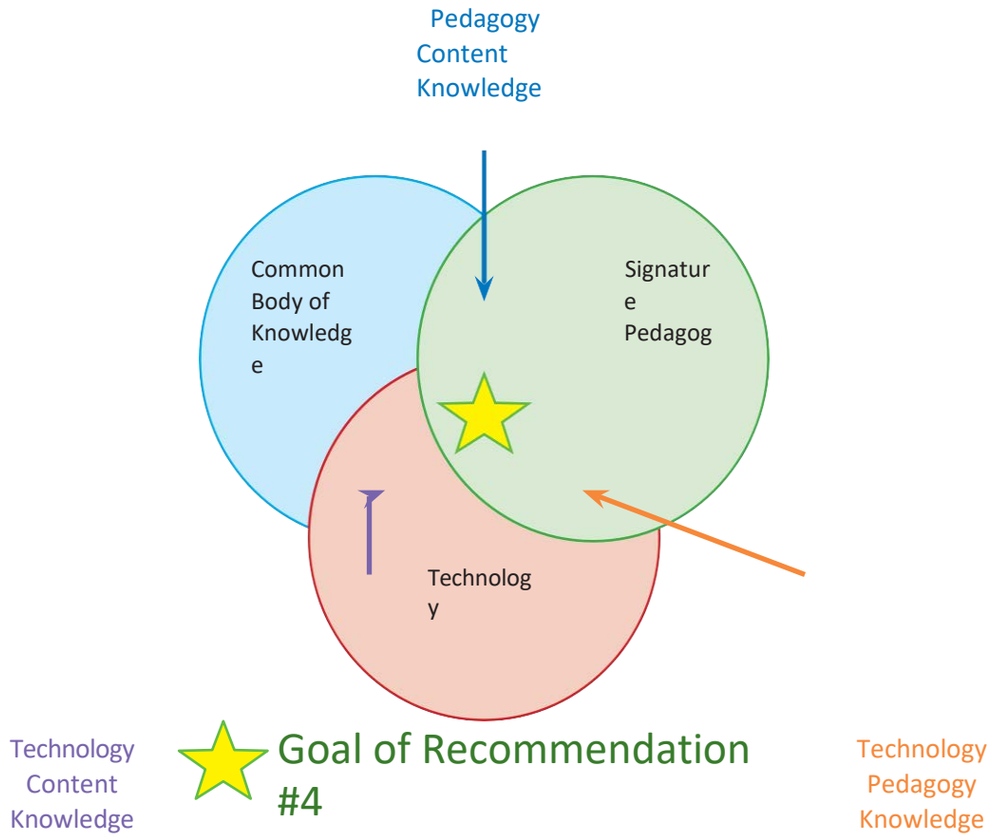
The changes in the new CPA exam follow the Pathways Commission that calls for reform in accounting education. The Pathways Commission found students in accounting classes, all too frequently, are exposed to technical material in a vocation-focused way that is disembodied from the complex, real-world settings to which the students are bound and from the insights that research can bring to practice.



Creating effective learning experiences is a vital part of accounting educators' work. Programs, courses, and approaches require systematic attention to curriculum and pedagogy The practice of accounting is changing rapidly while many accounting programs and requirements have remained constant and accounting curricula have evolved with limited commitment or agreement about core learning objectives, (Pathways Commission, 2012). The new CPA exam reflects the need to build these skills through more careful instructional design.

Accounting Curriculum of the Future

The Pathways Commission formulation of goal 4.1(2015) advocated for faculty to engage in curriculum of the future. This paper provides a framework for doing so. The Pathway Commissions goal 4.1 recognizes an overlap that should occur between the common body of knowledge, the signature pedagogy that develops professional judgment, and the technology used by the accounting profession. Although each has distinct characteristics, there are shared areas. An accounting generalist must master the intersection of technology skills with accounting knowledge. Plus, synergies are possible with technology-enabled pedagogies. Therefore, the ultimate outcome for all task forces is at the intersection of all three: signature pedagogy for learning the common body of knowledge enabled by technology used in the profession and teaching.


Pedagogy Content Knowledge
Common Body of Knowledge
Signature Pedagog
Technology
Technology Content Knowledge
Goal of Recommendation #4
Technology Pedagogy Knowledge

Problem Statement

Some faculty rely almost exclusively on textbooks to design courses although textbooks often don't meet the highest levels of critical thinking. Accounting departments are populated with faculty that have content knowledge, delivering instruction rules-based instruction stressing on overreliance on traditional lecture-based teaching methods (Deberg & Chapman, 2012).

Faculty often rely heavily on accounting textbooks to teach accounting. Many courses follow Fink's (2013) list of topics approach.

> "The instructor looks at the subject and identifies eight to twelve major topics and proceeds to work up lectures on each topic. With the addition of the midterm exam or two and the final, the class is ready to go. The benefit is that it is extremely quick and easy. The downside is that it focuses on the organization and delivery of information, usually through many lectures and pays little attention to the quality and quantity of student learning."

Accounting instructors may fail to meet higher learning outcomes by relying solely on accounting textbooks. Stokes found weaknesses in the learning objectives of accounting textbooks. Textbooks often fail to aid the professor in pushing the student's cognitive levels higher. Stokes (2008) recommended rewriting the stated end of chapter objectives to aim for higher levels of learning.

Critical Thinking as a Theoretical Foundation

A major question for accounting departments is how to design an accounting program with learning activities in each major accounting class that collectively build critical thinking skills? Brookfield (2011) described critical thinking as a process of appraisal where we judge the accuracy and validity of assumptions by viewing them from different perspectives. The development of critical thinking elements can be assigned to specific courses. Critical thinking is also consistent with the Pathways Commission that identified professional judgment as a foundational skill. The following proposes how common accounting courses can help develop critical thinking in an accounting program by incorporating assignments outside of the textbook that align with Bloom's taxonomy.

The teaching activities are based on simulating what accountants do. These teaching practices represent examples where faculty developed activities outside of the textbook exercises.

Accounting Class Critical Thinking Activities

Course	**Behavioral actions**	**Activity**	**Examples**
Principles	Employ precise terms.	Basic case focused on a single company but with multiple solutions	Build a business plan with financial statements and use financial ratios to determine if the business could raise additional funds.

Intermediate	Apply knowledge to new situations. Tolerate ambiguity. Recognize personal bias.	Students apply standards to a case by using research to find and explain their answers.	Use the FASB Codification to write memos to senior management on options in applying accounting principles.
Advanced	Welcome divergent views. Resist overgeneralization.	Collaborative learning exercises. Role play	Contrast different reporting formats. "React to the past" role play by assigning students pro and con roles to play related to significant accounting pronouncements.
Cost/Managerial	Modify judgments in light of new information	Students demonstrate the ability to use financial info to make decisions and provide written explanation of their decisions.	Split class into teams to competitively bid on a project using financial statement information that needs to modified for Cost-Volume-Profit analysis.
Audit	Define problems accurately	Use professional judgment for risk assessment.	Students perform a risk assessment, identify risky

			accounts, map the accounts to management assertions and present an audit plan that expands work for risky areas.
Systems	Analyze data for value	Build data base & extract data from data base & identify bad files	Document a process and identify internal control weaknesses
Tax	Apply knowledge to new situations	Research activities	Research activities to synthesize a tax plan

Introductory Accounting class

Attempts to establish a first year accounting courses are often perceived as too specialized for non-accountants or too general for specialists. Development of this class should move towards forming a business plan and understanding accounting as an information system to make business decisions. The approach could include the following steps.

- Students will be asked to imagine setting up a new business of their own choice and creating a min business plan.
- Teaching students to understand the impact of transactions on the financial statements through the transactions relevant to their business plan by using the accounting equation in lieu of debits and credits.
- Requiring students to evaluate their businesses with financial statement analysis focusing on relevant ratios.

The goal of the project is to promote student engagement in the need for accounting information, conducting research and producing relevant and informative information to combine various aspects of the class (Hand, L., Sanderson, P. and O'Neil, M. 2014).

Intermediate Accounting

Intermediate accounting is recognized as an area with heavy emphasis on application. Current designs include requiring students to understand the accounting cycle, financial reporting requirements, and to understand the impact of a transaction on the financial statements. Hence course requirements include closed book exams requiring students to memorize the rules are common across accounting curriculums.

More recent activities include projects that require students to retrieve information from the FASB codification database to understand the judgment in applying accounting standards like through the use of Trueblood cases available from Deloitte. These cases include real world problems that require judgment. Additional development ideas can include requiring students to write summarizing memos to senior management on adopting different accounting standards and their impact on the financial statements. Finally students may be introduced to the internal controls through a series of case studies that encourage students to solve a problem like how to design internal controls for an absentee motel owner.

These types of case studies promote learning by requiring students to frame the problem, separate the relevant and material from the irrelevant, develop alternative courses of action, and finally choose one of their identified options for their recommendation (Adler and Milne, 2014).

Managerial Accounting

Managerial accounting teach students algorithmic and non-algorithmic methods to provide information for resolving management problems. Many of the issues addressed in managerial

accounting are suited for teaching students to modify judgments in light of new information as financial statement information should be recast in order to prepare cost volume profit analysis. In addition, product mix decisions can change depending on short-run or long-run perspectives are employed.

Development of this course can include a competitive pricing game that can simulated by creating student teams, providing these teams with the same financial statements and explaining that due to excess capacity the buyer is looking for short term opportunistic pricing. Teams would be responsible to review the financial information and recast the information into CVP status and submit a bid recognizing the bid may have to go lower than normal prices to prevail. By having students explain their pricing strategy, the project recognizes CVP requires additional analysis that may not exist in financial statements.

Advanced Accounting or Advanced Managerial Accounting

These courses can require students to combine their cumulative accounting knowledge with their critical thinking skills. These courses can develop the need to define the problem accurately and distinguish fact from opinion. This may be best employed by employing advanced cases or research projects on controversial subjects such as evaluating a consolidation performed incorrectly, or evaluating new standards in advanced accounting. Advanced managerial courses could require students to evaluate a compensation system for purposes of aligning managerial and shareholder goals like whether leasing equipment can impact residual income performance bonuses.

Auditing, Systems and Tax

Students should be moving towards advanced stages of critical thinking in these courses by requiring students to support their opinions with evidence and compare and contrast activities.

The temptation of students may be to believe everything is relative but the instructor should push for students to analyze data for value and content and synthesizing information. One strategy for promoting the higher level of learning is for the instructor to withhold some information and only provide it when students ask for it.

- Systems classes that require students to document processes, identify controls, build databases and extract information from databases are a step in the right direction.
- Audit courses that require students to identify risk factors, evaluate controls and significant accounts, and design audit procedures are valuable.
- Tax class that require tax planning activities are also consistent with the new trend.

References to internal control standards, audit standards, and tax law should be required.

Conclusion

The CPA exam is speaking for important skills that need to be taught in accounting curriculums to reflect the skills that the profession demands. Accounting programs must ensure that students achieve learning goals by measuring achievement of expected skills using appropriate academic assessment methods (Fink, 2013). Faculty can help prepare students by building signature assignments that are strategically linked to critical thinking skills.

References

Adler, R.W., Milne, M.J. and Stringer, C. P. (2014). Identifying and overcoming obstacles to learning centered approaches in tertiary accounting education: A field study and survey of accounting educators' perceptions. In *Accounting Education Research: Prize-winning contributions.* (Edited by R.M.S. Wilson) P. 163 New York, Routledge

Brookfield (2011) Stephen Brookfield. Teaching for Critical Thinking: Tools & Techniques to Help Students Question their Assumptions. San Francisco: Jossey-Bass.

Deberg, C.L. and Chapman, K.J. (2012). The first course in accounting: An assessment program based on student learning outcomes and alternative pedagogies. *Advances in Accounting Education.* 13

Fink, D.L. (2013). Creating significant learning experiences: An integrated approach to designing college courses. P.68. San Francisco, CA. Jossey-Bass.

Hand, L., Sanderson, P. and O'Neil, M. (2014). Fostering deep and active learning through assessment. In *Accounting Education Research: Prize-winning contributions.* (Edited by R.M.S. Wilson). P. 76. New York: Routledge.

Kimmel, P. (1995) A framework for incorporating critical thinking into accounting education. *Journal of Accounting Education. 13 (3) pp 299-318*

The Pathways Commission. Charting a national strategy for the next generation of accountants. (2012). American Accounting Association and the American Institute of Certified Public Accountants.

The Pathways Commission. Charting a national strategy for the next generation of accountants. (2012). American Accounting Association and the American Institute of Certified Public Accountants.

The Pathways Commission. In pursuit of Accounting's curricula of the future (2015). American Accounting Association and the American Institute of Certified Public Accountants.

Stokes, L. (2008). A preliminary study of learning objectives across the curriculum: An analysis of various accounting textbooks. *Advances in Accounting.* volume 9

Tysiac, K. (2016). What will be tested on the next CPA exam. *Journal of Accountancy*. May 2016.