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# Defining Conceptual Understanding for Teaching in International Business

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## ABSTRACT

The aim of this exploratory study is to develop a definition of conceptual understanding for teaching in international business. In international business, professionals face complex problems like what to produce, where to manufacture, which markets to target, and when to expand abroad. A clear definition of conceptual understanding needed to solve such problems would provide design input for international business education. In three cycles, two independent expert panels with backgrounds in academic research, international business education, and international business practice identified and validated key components of conceptual understanding in international business. Key components are the global and local contexts, general and specific business practices, and theoretical business concepts and mechanisms. Other key characteristics include factual knowledge, explanation, and out-of-the-box thinking.

## KEYWORDS

Conceptual understanding;  
Higher professional education;  
Teaching in international business;  
Out-of-the-box thinking

## 1. Introduction

Preparing students for careers as international business professionals is no easy task for educators. To function competently, international business professionals need conceptual understanding (Aggarwal & Goodell, 2011; Kedia & Englis, 2011; Vos, 2013). International business professionals need to solve complex problems, make decisions, and apply creativity using specialized theoretical and factual knowledge (International Labour Organization, 2012). To decide the best problem-solving strategy, to take the best decision, and to apply the right measure of creativity, professionals in a domain like international business need to recognize what combination of knowledge to apply in any given situation (Middleton, 2002; Spiro, Feltoovich, Jacobson, & Coulson, 1992; Van Oers, 1998). Knowing what knowledge to apply to effectively solve complex problems, make decisions, and capitalize on creativity requires a thorough understanding of the concepts involved (Entwistle, 2000; Harteis & Billett, 2013). For conceptual understanding, professionals need to have internalized domain-related concepts and routines (Billett, 2001; Schaap, De Bruijn, Van der Schaaf, & Kirschner, 2009).

Defining conceptual understanding for teaching in international business is complex. To begin with, international business professionals follow many occupations. Of the 10 groups of occupations identified by the International Labour Organization (2012), the two most relevant groups for international business professionals are managers and professionals. Manager occupations include directors, chief executives, and managers of finance, human resources, policy and planning, business

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services and administration, sales and marketing, advertising and public relations, research and development, manufacturing, supply and distribution, information and communications technology services, and retail and wholesale trade. Professional occupations include accountants, financial and investment advisors, financial analysts, management and organization analysts, and professionals specialized in policy administration, personnel and careers, training and staff development, advertising and marketing, public relations, and information and communications technology sales.

The task of defining conceptual understanding for teaching in international business is further complicated because international business professionals work in every industry: from agriculture, energy, mining, manufacturing and construction to communications, education, environment, health, and transport. They work in the private sector and they work in the public sector. They work in their home countries dealing with their own governments and bureaucracies; they work in foreign countries dealing with foreign governments and foreign bureaucracies. They communicate in their native languages; they communicate in foreign languages. Not only must they understand the cultures and traditions of their own professional occupations and organizations, they must also understand the cultures and traditions peculiar to different industries, economic sectors, nations, and ethnic groups.

Scholars and educators of international business seek more powerful teaching strategies to better prepare graduates for the multitude of multidisciplinary occupations in international business (Milhauser & Rahschulte, 2010; Prestwich & Ho-Kim, 2007; Yeoh, 2002). Enhancing conceptual understanding is key to this process. To enhance conceptual understanding of an academic discipline, a definition is needed that makes educators and students aware of what is required to develop deep understanding (Entwistle & Smith, 2013). International business schools need a definition of conceptual understanding that can be used for assessment. Existing definitions of conceptual understanding tend to be generic (Newton, 2012), or specific to other domains like chemistry (Nieswandt, 2007) or mathematics (Silver, Mesa, Morris, Star, & Benken, 2009). A necessary first step for developing a definition for teaching in international business is to answer the question, “How can conceptual understanding for teaching in international business be defined?”

This study takes an exploratory research approach to define and specify characteristics of conceptual understanding for teaching in international business. A preliminary definition is first formulated based upon earlier research and theory. In three rounds of sessions, two independent focus groups with backgrounds in academic research, international business education, and professional international business practice then identify and validate key components of conceptual understanding for teaching in international business. Results suggest that conceptual understanding involves the articulation of general, specific, abstract, and concrete knowledge specific to international business, with the deepest level signifying original, lateral, and groundbreaking thinking.

## **2. Toward a definition of conceptual understanding for teaching in international business**

The starting point for defining conceptual understanding for teaching in international business was to look at general taxonomies of educational objectives. Educators created Bloom’s Taxonomy to inspire a holistic approach to education through hierarchical, cumulative learning goals, from (a) knowledge, through (b) comprehension, (c) application, (d) analysis and (e) synthesis, to (f) evaluation (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956). Later, Romiszowski (1981) developed a taxonomy to deal with a need to address skills and attitudes as well as knowledge. One of the original Bloom team has since published a revised taxonomy with significant changes to the first, fifth and sixth levels—namely, (a) remembering, (e) evaluating, and (f) creating (Krathwohl, 2002).

Taxonomies more specific to conceptual understanding also abound. Shulman (2002) suggests a hierarchical table of learning comprising six levels starting at (a) commitment and identity, and rising through (b) judgement and design, (c) reflection and critique, (d) performance and action, and (e) knowledge and understanding to (f) engagement and motivation. In what they term “learning conceptions,” Van Rossum and Hamer (2010) describe six levels of understanding in higher

professional education: (a) increasing knowledge, (b) memorizing, (c) reproductive understanding, (d) understanding subject matter (e) widening horizons, and (f) growing self-awareness. Yet educators of international business need a definition of conceptual understanding specific to international business. Existing taxonomies do not specify the domain-specific knowledge required by international business professionals.

An initial definition with potential to be relevant for teaching in international business was Oonk's (2009) definition of the nature and level of theory used by student teachers in mathematics classes. Oonk's definition describes three levels of increasing complexity from what could be labeled surface to deep learning, the latter being required for developing conceptual understanding (Entwistle, 2000). The reason Oonk's definition could be relevant for teaching in international business is because the types of theory use are generic enough to be applied outside the mathematics domain.

For a definition of conceptual understanding more relevant to international business, some changes were made to Oonk's (2009) four types of theory use—namely, *factual description*, *interpretation*, *explanation*, and *metacognitive reactions*. Factual description is considered necessary for a definition of conceptual understanding for teaching in international business and so is explanation because explanation represents a stage of reflection which is important for developing conceptual understanding (Sparks-Langer, Simmons, Pasch, Colton, & Starko, 1990). However, interpretation was changed to *evaluation* because evaluation seems closer to what Oonk means by “opinion or conclusion without foundation” (p. 140). Moreover, *metacognitive reactions* was changed to *interdisciplinary thinking* because international business professionals need interdisciplinary thinking to deal with complex professional practice (Sternberg, 2008). Figure 1 represents an initial definition of conceptual understanding for teaching in international business based on these changes.

The initial definition of conceptual understanding for teaching in international business shows four cumulative types of understanding (A to D), each with the three levels (1–3) described by Oonk (2009): Level 1 (A1 to D1) without theoretical concepts, Level 2 (A2 to D2) with at least one theoretical concept without mutual connection, and Level 3 (A3 to D3) with at least one theoretical concept with a meaningful connection.

How closely this initial definition describes conceptual understanding for teaching in international business was unknown. Research was carried out to determine how closely the definition fits conceptual understanding for teaching in international business.

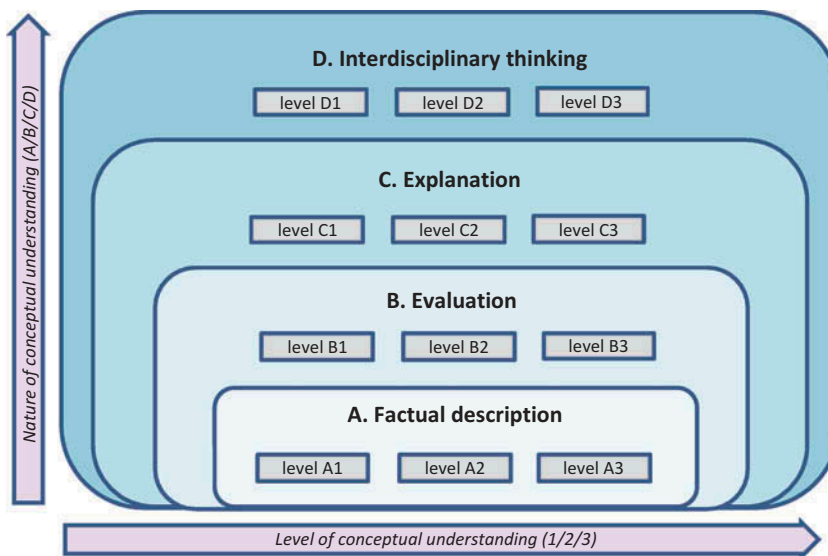


Figure 1. Initial Representation of Conceptual Understanding for Teaching in International Business.

### 3. Method

#### 3.1. Design

This exploratory study involved three rounds with two independent focus groups with backgrounds in academic research, international business education, and professional international business practice to ensure content validity (Messick, 1995). First, essays and concept maps produced by students were used to trigger statements from the first panel (Panel 1) about characteristics of conceptual understanding. Since the development of a definition of conceptual understanding was expected to benefit from a variety of stimuli, Panel 1 articulated and explicated criteria used to assess the students' essays and concept maps. Essays were expected to provide a variety of stimuli because writing stimulates cognitive processes (Flower & Hayes, 1981). Concept maps were expected to provide a variety of stimuli because they stimulate visualization of integrated knowledge (Huijts, De Bruijn, & Schaap, 2011). Therefore, it was expected that the variety of stimuli would result in a wide range of characteristics of conceptual understanding. Member check procedures, involving participants confirming results during the three rounds of sessions, were used to validate findings (Onwuegbuzie & Leech, 2007). As this was a qualitative study involving a complicated research problem, a detailed account of the data collection and analysis was needed to ensure transparency of the findings (Akkerman, Admiraal, Brekelmans, & Oost, 2008). Such a detailed account of the procedure and data analysis that were used to develop a valid definition follows.

#### 3.2. Participants

Since dynamics within groups can generate a rich array of data, focus groups are considered a suitable method for exploratory research (Kidd & Parshall, 2000; Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). For this study, two sequential focus groups were used. Panel 1 contained three international business lecturers who knew each other well. Such a small, homogenous group provides a safe environment for panelists to share, question, and challenge each other's opinions (Kitzinger, 1995). Panel 2 comprised a larger, more heterogeneous group. While still small enough to cultivate a safe atmosphere for discussion, Panel 2 embraced a wider range of perspectives to validate data emerging from Panel 1 (Kidd & Parshall, 2000). In the third round of the procedure to validate the operationalized model, Panel 1 and Panel 2 members met with each other so panelists again had the chance to share, react, reflect, and develop their own points of view.

##### 3.2.1. Panel 1 members

The three Panel 1 members were faculty staff. Member 2 ran his consultancy business 4 days a week (Table 1).

##### 3.2.2. Panel 2 members

Of the six Panel 2 members, four were faculty staff. Member 5 was retired and Member 6 was from another Dutch university (Table 2).

**Table 1.** Characteristics of Panel 1 Members.

| Member | Gender | Nationality | Area of Expertise       | Primary Experience (PE) | Years of PE |
|--------|--------|-------------|-------------------------|-------------------------|-------------|
| 1      | Female | Iranian     | International economics | Economics lecturer      | 5           |
| 2      | Male   | Dutch       | International marketing | Marketing consultant    | 19          |
| 3      | Female | U.S.        | International banking   | Finance lecturer        | 12          |

**Table 2.** Characteristics of Panel 2 Members.

| Member | Gender | Nationality   | Area of Expertise          | Primary Experience (PE)        | Years of PE |
|--------|--------|---------------|----------------------------|--------------------------------|-------------|
| 1      | Male   | Dutch         | Business administration    | Education and research manager | 13          |
| 2      | Male   | Dutch         | Economic decision making   | Business practitioner          | 7           |
| 3      | Male   | South African | Management and innovation  | Product and market developer   | 15          |
| 4      | Male   | Dutch         | Reflective practice        | Educational consultant         | 35          |
| 5      | Male   | Dutch         | Telecommunications         | Company director               | 20          |
| 6      | Female | Dutch         | Professional communication | Professor                      | 11          |

### 3.3 Procedure

#### 3.3.1. Round 1: Panel 1 procedure

Five essays and five concept maps were randomly chosen from 26 produced by final-year bachelor students, 19 of whom were male (73%). The students were from 14 countries—namely, Afghanistan (2), Bulgaria, Ghana, Iraq, Kuwait, Morocco, The Netherlands (11), The Netherlands Antilles (2), New Zealand, Nigeria, Romania, Somalia, Turkey, and the USA. The students had 1 hour to “explain as clearly and in as much detail as you can the business area you are interested in researching for your graduation project at an international company,” an assignment expected to elicit students’ knowledge because it is considered a complex task for students (Kellogg & Whiteford, 2009).

At the first 90-minute recorded session, Panel 1 discussed their assessments of the essays and concept maps, compared criteria they had used to assess the essays and concept maps, and considered key characteristics of conceptual understanding. At the second 90-minute recorded session, the improved definition of conceptual understanding for teaching in international business was discussed as member check. The main points were distilled in a summary of the transcript. A further improved definition of conceptual understanding for teaching in international business was based on this outcome.

#### 3.3.2. Round 2: Panel 2 procedure

The further improved definition of conceptual understanding was sent to Panel 2, together with seven discussion questions. During a 90-minute taped session, the Panel 2 members discussed whether they thought the further improved definition adequately defined conceptual understanding and whether they agreed with Panel 1’s characteristics of conceptual understanding.

A summary of the main issues raised in the session was made based on the transcript of the session. This summary was emailed to Panel 2 as member check. An operationalized definition was developed from the outcome.

#### 3.3.3. Round 3: Operationalized definition validation procedure

To stimulate discussion in the third round of sessions, an operationalized definition was sent to eight of the panelists together with three essays and three concept maps, again randomly chosen from those made by the final-year bachelor students. In taped sessions, the panelists met for 90 minutes in two focus groups of four to discuss the suitability of the operationalized definition for assessing conceptual understanding in international business. The two Panel 1 lecturers joined the director and professor from Panel 2 in one group; the Panel 1 consultant joined the Panel 2 education manager and two international business practitioners in the other. The resulting definition was based on the outcome.

### 3.4. Analysis

#### 3.4.1. Round 1: Panel 1 analysis

At the first session, extensive notes were taken as Panel 1 members discussed their rankings and assessment criteria. Data were grouped under key headings. A 1,000-word summary revealed three

characteristics of conceptual understanding. The initial representation of conceptual understanding for teaching in international business (Figure 1) was modified in light of these characteristics, resulting in the improved definition, which was subsequently sent to Panel 1 for member check.

After Panel 1 had discussed the improved definition of conceptual understanding for teaching in international business, the first author made a 13,000-word transcript of the session. After isolating key themes related to conceptual understanding, the first author then made a five-page summary. The second and third authors discussed and checked the quality of the transcript and summary. This 2,000-word summary included improved and further improved definitions of conceptual understanding. Further collating and summarizing resulted in two characteristics of conceptual understanding.

### 3.4.2. Round 2: Panel 2 analysis

During the Panel 2 session, the seven questions asked were: (a) Does the further improved definition describe conceptual understanding for teaching in international business?; (b) Should the continuum from abstract to context-specific knowledge be “general to specific” and/or “abstract to concrete”?; (c) Are levels or types of conceptual understanding more suitable?; (d) Should levels or characteristics, for instance, “theoretical to practical,” be used?; (e) Should articulation be a criterion for interdisciplinary thinking?; (f) Can the further improved definition be used to assess conceptual understanding in international business students?; and (g) What tips do you have to operationalize the further improved definition so that it can be used to assess conceptual understanding in international business students?

From the 8,000-word transcript of the Panel 2 session, answers to the seven questions were listed with explanatory text resulting in a 2,000-word summary. Five propositions were identified for defining conceptual understanding for teaching in international business. Member check responses to these propositions from Panel 2 were collated and considered in the operationalized definition.

### 3.4.3. Round 3: Operationalized definition validation analysis

Transcripts of the two extra focus group sessions to operationalize the definition of conceptual understanding totalled 10,000 words. A table summarized the characteristics of conceptual understanding in five rows—namely, topic, knowledge, evaluation, explanation, and creativity. Two columns summarized the sessions and a third column summarized proposed components of conceptual understanding specific to international business. To check content validity, comparisons were made with theory in extant literature (Kidd & Parshall, 2000).

## 4. Results

### 4.1. Panel 1 results

The Panel 1 marketing consultant and Finance lecturer assessed the essays and concept maps more consistently than the Economics lecturer. For the essays, the Economics lecturer gave more weight to language and structure than the other two panelists, resulting in comparatively lower scores. For the concept maps, assessments among the three panelists were more similar.

Panel 1’s review of the essays and concept maps revealed a wide range of potential characteristics for assessing conceptual understanding in international business. The characteristics fitted the following five categories: (a) topic, (b) structure, (c) information, (d) language usage, and (e) creativity, with only superficial differences between essays and concept maps (e.g., under *structure*, a criterion for essays was *introduction/conclusions* and for concept maps, *use of arrows*). Panel 1 typified high quality essays and concept maps representing conceptual understanding in terms of (a) a central topic, (b) structural logic, (c) support for arguments, (d) grasping of concepts, and (e) information relevance. For example, the panelists agreed an essay on neuromarketing showed conceptual understanding the best. They considered it had a clear central topic, and was logically

**Table 3.** Panel 1 Characteristics of Conceptual Understanding for Teaching of International Business.

| Propositions  | Reasoning  |
|---|--|
| Meaningful connections between concepts around a central theme                              | Business systems evoke multifaceted, interrelating processes. Isolated factual information would not suffice.  |
| Interdisciplinary thinking as the most important characteristic of conceptual understanding | Interdisciplinary thinking requires “out-of-the-box” approaches, seeing novel ways of looking at old problems. |
| Abstract and context-specific knowledge   | Extensive theoretical (abstract) and practical (context-specific) detail reflect a broad knowledge base.       |

structured with well-supported arguments, well-grasped concepts and relevant information. Here is an excerpt from this essay (grammar uncorrected):

Neuromarketing is determining consumers want or need based on the measurement of the consumers’ neural (brain) activity. There are several methods to measure neural activity. A general real-time measurement of the activity, or a time consuming full brain scan. Marketers can identify true thoughts of consumers by mapping the measured neural activity and create marketing strategies based on the maps.

Meanwhile, the panelists agreed an essay on technology showed hardly any conceptual understanding: it lacked a clear central topic and logical structure, arguments were not well-supported, concepts were not well-grasped, and the relevance of information was unclear. An excerpt follows:

The need for technology comes together with knowledge of technology. At first a demand must be created before this demand could be fulfilled by companies and professionals. At first the target group must be researched along with a possible demand. The demand will vary from organization to organization.

In further discussion, Panel 1 elaborated on the characteristics of conceptual understanding. These are presented as three propositions (Table 3).

#### **4.1.1. Meaningful connections between concepts around a central theme**

The first characteristic Panel 1 specified for assessing quality was meaningful connections between concepts around a central theme. Panel 1 typified this characteristic as clusters of theoretical concepts logically bound by inter and intraconnections. The marketing panelist suggested these clusters resembled the activity systems used in business to explain how competitive advantage is achieved through the interaction of a variety of events and resources (Porter, 1985). According to Porter’s (1996) strategic business model, the synergy that results when production, distribution, and marketing complement each other can thwart competitors. The panelist who presented this idea indicated that just as businesses require meaningful connections between processes for entrepreneurial success, so too does students’ conceptual understanding require meaningful connections between different types of knowledge. All three panelists agreed that the best essays and concept maps possessed this characteristic.

#### **4.1.2. Interdisciplinary thinking as the most important characteristic of conceptual understanding**

Panel 1 agreed interdisciplinary thinking was the most important characteristic when assessing quality because it indicates an “out-of-the-box” mentality. Panel 1 valued original methodological approaches and novel solutions to problems more highly than application of standard practices. Particularly in the essay on neuromarketing, the panelists felt the student makes an attempt to look beyond the marketing theory learned in the classroom to the groundbreaking field of neuroscience.

#### **4.1.3. Abstract and context-specific knowledge**

Another characteristic Panel 1 specified for assessing quality in essays and concept maps was abstract and context-specific knowledge. By abstract knowledge, Panel 1 meant typical theoretical knowledge in a business-related college textbook like *Macroeconomics* (Mankiw, 2010) or *Principles of Marketing* (Kotler, Armstrong, Wong, & Saunders, 2008); for instance, the theory of comparative



advantage and the 4Ps model (i.e., Product, Place, Price, Promotion). Panel 1 saw context-specific knowledge as the knowledge relating to specific artifacts, situations, and activities in business practice, like accounts, acquisitions, and audits. Panel 1 highly rated the essays and concept maps that had detailed descriptions of relevant business theories (abstract knowledge) and specific examples from international business practice (context-specific knowledge).

**4.2. Improved definition of conceptual understanding for teaching in international business**

The initial definition of conceptual understanding for teaching in international business (Figure 1) had three levels of conceptual understanding. However, these three levels were rejected because Level 1 (without theoretical concepts) and Level 2 (with at least one theoretical concept without mutual connection) did not meet Panel 1’s specification “meaningful connections between concepts around a central theme.” Panel 1 recognized four levels of conceptual understanding: from *factual description*, through *evaluation* and *explanation*, to *interdisciplinary thinking* as the deepest level. At each level, Panel 1 felt understanding could be based predominantly on abstract knowledge, predominantly on practical knowledge or, ideally, on a combination of both abstract and practical knowledge.

The improved definition based on Panel 1’s first session (Figure 2) therefore depicts four levels of conceptual understanding rather than three levels, with a continuum at each level from abstract knowledge to context-specific knowledge. The abstract end of the continuum signifies a lack of practical knowledge; the context-specific end of the continuum signifies a lack of theoretical knowledge. The middle position in the continuum indicates both abstract and context-specific knowledge, signifying knowledge of both practice and theory.

When presented with the improved definition (Figure 2) at the second session, Panel 1 agreed with four levels of conceptual understanding. They also recognized the continuum of *abstract to context-specific* knowledge. However, they proposed changes as well (Table 4).

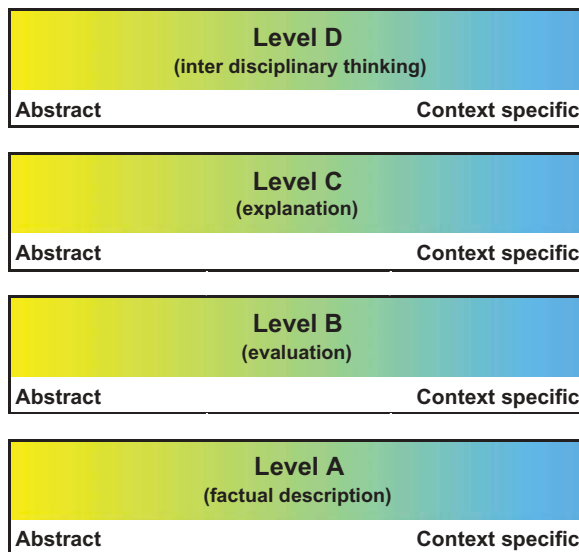


Figure 2. Improved Representation of Conceptual Understanding for Teaching in International Business.

**Table 4.** Panel 1 Revised Characteristics of Conceptual Understanding for Teaching in International Business.

| Panel 1 Propositions (Table 3)  |  | Panel 1 Revised Propositions   |  |
|---|--|--|--|
| Propositions  | Reasoning  | Propositions   | Reasoning  |
| Meaningful connections between concepts around a central theme                              | Business systems evoke multifaceted, interrelating processes. Isolated factual information would not suffice.  | Integrated thinking as the deepest level of conceptual understanding | Integrated thinking represents the deepest level of conceptual understanding because it involves making meaningful connections between concepts from different disciplines which requires out-of-the-box thinking. |
| Interdisciplinary thinking as the most important characteristic of conceptual understanding | Interdisciplinary thinking requires “out-of-the-box” approaches, seeing novel ways of looking at old problems. |  |  |
| Abstract and context-specific knowledge   | Extensive abstract (theoretical) and context-specific (practical) detail reflect a broad knowledge base.       | Context-specific knowledge   | Knowledge of practical situations is important; theoretical knowledge is less important.   |

#### 4.2.1. *Integrated thinking as the deepest level of conceptual understanding*

Panel 1 decided *interdisciplinary thinking* should be called *integrated thinking*. They preferred the term integrated to interdisciplinary because integrated emphasizes making meaningful connections with other disciplines rather than possessing domain-specific knowledge of other disciplines. Panel 1 agreed that integrated thinking is the deepest level of conceptual understanding because it involves making meaningful connections with ideas and theories from other disciplines to solve problems which requires out-of-the box, creative thinking.

Regarding the improved representation of conceptual understanding for teaching in international business, Panel 1 advised placing Level A, factual description, at the top and Level D, integrated thinking, at the bottom. They thought shallow understanding at the top and deep understanding at the bottom was more logical.

#### 4.2.2. *Context-specific knowledge*

Panel 1 changed their mind about the continuum of abstract to context-specific knowledge. Originally, they thought it possible to occupy any point in the continuum at any level. After the second session, they decided that while the deepest level of conceptual understanding did not require abstract knowledge, the deepest level of conceptual understanding did require context-specific knowledge. Panel 1 thought it was possible to have deep conceptual understanding about how to market a product without any academic theoretical knowledge but thought it was not possible to have deep conceptual understanding about marketing without any practical experience.

#### 4.3. *Further improved definition of conceptual understanding for teaching in international business*

Figure 3 shows the further improved definition of conceptual understanding for teaching in international business based on Panel 2’s second session. Integrated thinking replaces interdisciplinary thinking as the deepest level of conceptual understanding and is presented at the bottom to represent depth of conceptual understanding. The shorter continuums at Levels B, C, and D reflect the fact that deeper levels of conceptual understanding require context-specific knowledge.

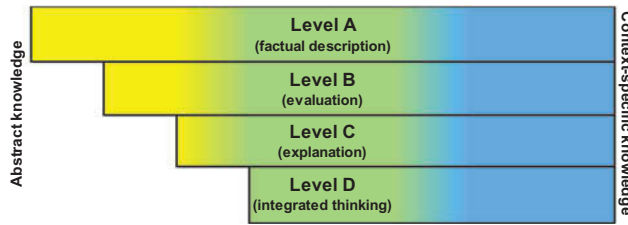


Figure 3. Further Improved Representation of Conceptual Understanding for Teaching in International Business.

4.4. Panel 2 results

Panel 2 found it difficult to define conceptual understanding for teaching in international business. However, they were convinced conceptual understanding was important for professionals to function adequately in business practice.

Based on the session with Panel 2, five propositions regarding conceptual understanding for teaching in international business were formulated (Table 5). Four of the six Panel 2 members confirmed these propositions with the words “very accurate,” “reflect my memory,” “no objections,” and “an adequate report of the panel discussion.” One panelist added that students face increasingly complex tasks during their studies so need to deal with increasingly complex contexts and therefore needed increasingly deeper conceptual understanding. She also thought it undesirable not to consider language skill as a characteristic of conceptual understanding. She could follow the reasoning for leaving it out but felt that conceptual understanding would be difficult to assess without a specific language criterion. She suggested at least including language skill implicitly as a part of articulation. Another panelist had just one point in his feedback about integrated and out-of-the-box thinking. He thought integrated thinking should be explained in terms of right and left-brain thinking rather

Table 5. Panel 2 Characteristics of Conceptual Understanding for Teaching in International Business.

| Panel 1 Revised Propositions (Table 4)                               |  | Panel 2 Propositions                                |   |
|--|--|---|---|
| Propositions   | Reasoning  | Propositions  | Reasoning   |
| Integrated thinking as the deepest level of conceptual understanding | Integrated thinking represents the deepest level of conceptual understanding because it involves making meaningful connections between concepts from different disciplines which requires out-of-the-box thinking. | Characteristics of conceptual understanding         | Factual description, evaluation, explanation, and integrated thinking are characteristics of conceptual understanding rather than levels.   |
|  |  | Relevant out-of-the-box integrated thinking         | Panel 2 agreed integrated thinking requires out-of-the-box thinking, but stressed the need of relevance for international business to ensure meaningful connections between disciplines.  |
|  |  | Articulation  | Articulation means that knowledge is explicit. It shows objective reasoning based on facts rather than intuition. Conceptual understanding requires theoretical knowledge as well as practical knowledge. It also implies having the flexibility to move between general to specific instances, as well as abstract to concrete concepts. |
| Context-specific knowledge   | Knowledge of practical situations is important; theoretical knowledge is less important.   | General to specific, abstract to concrete knowledge | Conceptual understanding requires theoretical knowledge as well as practical knowledge. It also implies having the flexibility to move between general to specific instances, as well as abstract to concrete concepts.   |
|  |  | Knowledge specific to international business        | Knowledge must be specific to international business when defining conceptual understanding in this domain.   |

than in terms of interdisciplinary thinking. He did not feel it was always necessary to think in terms of other disciplines.

#### **4.4.1. Characteristics of conceptual understanding**

Panel 2 argued that the elements factual description, evaluation, explanation, and integrated thinking are not levels of conceptual understanding; they are characteristics of conceptual understanding. Panel 2 discussed whether conceptual understanding for teaching in international business should be described as a learning process but in the end, they rejected the idea of a cumulative hierarchy, with each level linked to one characteristic (Figure 3). The panel decided that superficial explanation does not show deeper conceptual understanding than sophisticated factual description.

#### **4.4.2. Relevant out-of-the-box integrated thinking**

Panel 2 agreed with Panel 1 that integrated thinking is an important characteristic of deep conceptual understanding and requires out-of-the-box thinking to extend beyond the subject. Both panels also agreed that few students show out-of-the-box thinking. However, Panel 2 stressed that to make meaningful connections with other disciplines in order to understand and solve complex problems in international business, the connections have to be relevant for international business. Otherwise, the resulting definition would be too generic to describe conceptual understanding for teaching in international business.

#### **4.4.3. Articulation**

Articulation means making knowledge and thinking explicit (e.g., defining a problem and describing it to others), and explaining what you do and why (Collins, Brown, & Newman, 1989). Panel 2 discussed at length whether correct grammar, vocabulary, and spelling were essential but finally decided that while language accuracy is desirable, faulty grammar, limited vocabulary, and misspelled words do not of themselves indicate a lack of conceptual understanding. Ultimately, Panel 2 agreed with Panel 1 that articulation is an important characteristic of conceptual understanding for teaching in international business because it demonstrates objective reasoning based on facts rather than intuition. International business professionals need to actively explain decisions using rational argumentation; passive insight is not enough.

#### **4.4.4. General to specific, abstract to concrete knowledge**

Panel 2 did not understand why the continuum at Level D was narrower than at Level A in the further improved definition of conceptual understanding for teaching in international business (Figure 3). Panel 2 did not agree that deep conceptual understanding could be achieved without theoretical knowledge because even if the theoretical knowledge does not come from books, professionals develop their own theories based on practical experience.

Moreover, Panel 2 thought “abstract to context-specific” knowledge in the further improved definition of conceptual understanding for teaching in international business (Figure 3) was muddled because it contained two overlapping continuums. They argued that there should be two continuums: “general to specific” knowledge and “abstract to concrete” knowledge. The general to specific continuum of knowledge involves giving specific examples (e.g., a local company firing employees) of general concepts (e.g., an economic crisis) and vice versa. The second continuum, abstract to concrete knowledge, also involves switching back and forth; for instance, giving concrete examples (e.g., an annual report) of abstract concepts (e.g., business communication) and vice versa.

#### **4.4.5. Knowledge specific to international business**

Panel 2 suggested that a characteristic of conceptual understanding for teaching in international business is knowledge specific to international business. The definition would otherwise be too generic to explain the conceptual understanding needed to solve complex problems typical of the international business domain.

**4.5. Resulting definition of conceptual understanding for teaching in international business**

Panel 2 described conceptual understanding for teaching in international business in terms of factual description, evaluation, explanation, and relevant integrated thinking. Conceptual understanding requires the articulation of general, specific, abstract, and concrete knowledge specific to international business.

When developing this definition, the eight panelists had suggestions to make the definition more relevant for teaching in international business. The panelists argued that knowledge does not exist in a vacuum: characteristics of the global and local contexts must be considered. The panelists also specified four knowledge types from the general to specific and abstract to concrete continuums—namely, (a) general concrete, (b) specific concrete, (c) general abstract, and (d) specific abstract. For international business, general concrete knowledge concerns business practices. Specific concrete knowledge concerns instances of business practices. General abstract knowledge concerns business concepts. Specific abstract knowledge concerns business mechanisms (Table 6).

For the resulting definition of conceptual understanding for teaching in international business, each component of conceptual understanding is assessed along a 5-point scale: (1) negligible, (2) weak, (3) moderate, (4) strong, and (5) extraordinary. Both panels agreed factual description, evaluation, explanation, and integrated thinking are important characteristics of deep conceptual understanding. A missing, trivial, or false description counts as *negligible*. A blurred, woolly, or unclear account is considered *weak*. A general description listing essential features rates *moderate*. Panel 2 stressed that articulation is an important characteristic of conceptual understanding because it shows “objective reasoning based on facts” so for *strong* conceptual understanding, claims must be defended, justified, and supported. Finally, both panels agreed that integrated, out-of-box thinking is an important characteristic of conceptual understanding for teaching in international business. In the resulting definition, out-of-the box thinking represents *extraordinary* conceptual understanding. Extraordinary conceptual understanding is typified by alternative viewpoints, novel links to other disciplines, and exploring possibilities (e.g., using *if* and *although*). Table 7 provides examples to illustrate the levels for each component.

The resulting definition comprises six components and five degrees of conceptual understanding for teaching in international business. The deepest level signifies original, lateral, and ground-breaking thinking. Table 8 shows the resulting definition of conceptual understanding for teaching in international business.

**5. Discussion**

Conceptual understanding is required to solve complex problems (Middleton, 2002; Netherlands Association of Applied Sciences, 2009), but existing taxonomies of educational objectives like those of Bloom et al. (1956) and Krathwohl (2002) are not designed to assess conceptual understanding

**Table 6.** Components of Conceptual Understanding for Teaching in International Business.

| Component                         | Description   | Examples  |
|-----------------------------------|---|---|
| 1 Global context characteristics  | What the global situation is like                                       | Import duties, global economic climate, government policies   |
| 2 Local context characteristics   | What the local situation is like  | Company hiring policies, council tax rates, local government spending   |
| 3 Business practices              | The methods, procedures, and rules companies follow to reach objectives | Just-in-time manufacturing, accrual accounting, pricing strategies  |
| 4 Instances of business practices | What particular organizations are doing                                 | IKEA’s distribution system, Phillips’ earning forecast, Disney’s marketing strategy                                     |
| 5 Business concepts               | Jargon and theories   | Theory of comparative advantage and international trade, international financial reporting standards, brand positioning |
| 6 Business mechanisms             | How things work   | Quality control mechanism, exchange rate mechanism, pricing mechanism   |



Table 7. Per Level Examples of Conceptual Understanding for Teaching in International Business.

| Component                         | 5-point Scale  |  |   |  |  |
|-----------------------------------|--|--|---|--|--|
|                                   | Negligible   | Weak   | Moderate  | Strong   | Extraordinary  |
| 1 Global context characteristics  | Mentions oil prices  | Implies oil prices are affecting profits                   | Describes the effect of oil prices on consumer demand   | Uses evidence to explain how oil prices are affecting consumer demand  | Considers growing environmental awareness when examining effects of oil prices on consumer demand  |
| 2 Local context characteristics   | Mentions local government                                  | Implies local companies buy locally                        | Describes how local government is offering tax breaks to local companies that buy locally produced goods and services                                     | Uses evidence to explain how the local government's <i>local purchasing</i> policy is positively affecting brand image and sales of local companies                  | Looks at other cities to examine potential problems like <i>local washing</i> —i.e., when companies make false claims about where goods are sourced from   |
| 3 Business practices              | States that companies charge prices                        | Implies that some companies use cost-plus pricing          | Describes how companies using cost-plus pricing add their profit margin to the production cost  | Argues that cost-plus pricing is widely used because companies can easily calculate, justify, and change prices  | Suggests that in circumstances such as a political boycott of competitors' goods, cost-plus pricing could mean prices do not rise in response to resulting scarcity  |
| 4 Instances of business practices | States that a particular company's smartphone is expensive | Implies that a particular company is using premium pricing | Describes how a particular company is using premium pricing meaning the price of its smartphone is over the market price                                  | Explains that premium pricing is advantageous for the company because it is creating product exclusivity and strong market entry barriers                            | Suggests that different pricing strategies could suit different markets: the company could consider selling a lower cost product in less affluent markets  |
| 5 Business concepts               | Mentions brand logos                                       | Implies brand positioning distinguishes brands             | Describes how brand positioning involves creating a unique selling proposition  | Explains how brand positioning means communicating a brand's unique value, which involves identifying the emotional benefit customers will experience from the brand | Reflects how global brand positioning can be problematic: different cultures have different traditions and values so customers from different cultures will not view a brand's emotional benefit in the same way |
| 6 Business mechanisms             | Mentions pricing   | Implies a relationship between pricing and demand          | Describes how market prices depend on an equilibrium where the quantity demanded by consumers is the same as the quantity producers are willing to supply | Explains how companies lose sales when they price their goods too high or too low: too high and consumer demand drops; too low and potential profit is lost          | Reflects that if a company can differentiate its products with brand positioning, it could price its products above market prices without risking a drop in customer demand                                      |

**Table 8.** Resulting Definition of Conceptual Understanding for Teaching in International Business.

|   | Component                       | 5-point Scale |         |           |           |               |
|---|---------------------------------|---------------|---------|-----------|-----------|---------------|
|   |                                 | Negligible    | Weak    | Moderate  | Strong    | Extraordinary |
| 1 | Global context characteristics  | Trivial       | Implied | Described | Explained | Examined      |
| 2 | Local context characteristics   | Trivial       | Implied | Described | Explained | Examined      |
| 3 | Business practices              | Trivial       | Implied | Described | Explained | Examined      |
| 4 | Instances of business practices | Trivial       | Implied | Described | Explained | Examined      |
| 5 | Business concepts               | Trivial       | Implied | Described | Explained | Examined      |
| 6 | Business mechanisms             | Trivial       | Implied | Described | Explained | Examined      |

and are too generic to describe conceptual understanding in a specific domain like international business (Harteis & Billett, 2013). A means to assess conceptual understanding for teaching in international business is needed to ensure adequate teaching and assessment strategies. Educators need insight into students' conceptual understanding so that they can best judge (a) how and when to give feedback (Chi, Siler, & Jeong, 2004) and (b) what types of assessment promote deep learning outcomes (Entwistle, 2000). A definition of conceptual understanding for teaching in international business is the first step toward such a means of assessment. This study therefore explores the question "How can conceptual understanding for teaching in international business be defined?"

From this exploratory study, we conclude that there are six components and five degrees of conceptual understanding for teaching in international business. Given the wide range of occupations international business professionals follow, it is not possible to provide an exhaustive list of the knowledge all international business professionals need to function effectively. The resulting definition therefore specifies the general components of conceptual understanding international business professionals need to function at different levels. Yet professionals in the field must decide which actions are most fitting according to the situations they face (Harteis & Billett, 2013). Besides declarative knowledge (knowing what), vocational experts like international business professionals need other types of knowledge including procedural knowledge (knowing how) and situational knowledge (knowing where, who and when) (Billett, 2001). The resulting definition for teaching in international business describes components of conceptual understanding needed by students but further research could investigate the *types* of knowledge international business professionals need in particular situations—including what, how, where, who, and when.

### 5.1. Relevance for other professional domains

The extent to which the resulting definition could be relevant to other professional domains is unknown. For international business, both the local and global contexts are important components of conceptual understanding. For domains that do not focus on the international environment, the global context might be much less relevant. Again, the components of conceptual understanding based on general, specific, abstract, and concrete knowledge could be adapted for other domains. Yet these components might also be much less relevant in domains with a narrower range of occupations and situations than international business. This study involved input from international business researchers, educators, and practitioners. To investigate the extent to which the resulting definition could be relevant to other professional domains, further research involving suitable experts from other domains would be required.

### 5.2. Other aspects of the resulting definition

#### 5.2.1. Learning outcome

The resulting definition describes conceptual understanding for teaching in international business in terms of a learning outcome. Conceptual understanding could also be described as a learning process where ever-deeper levels of understanding are achieved by cycling repeatedly through a series of

steps each linked to one characteristic. A definition of conceptual understanding as a learning process could be the basis of an effective teaching strategy because it would specify how students can achieve deeper levels. However, the ultimate aim of this study is to assess students' levels so conceptual understanding is described as a learning outcome.

### **5.2.2. Relevant out-of-the-box integrated thinking**

The resulting definition describes the deepest level of conceptual understanding for teaching in international business in terms of relevant out-of-the-box integrated thinking, which is considered necessary to solve the complex problems in international business occupations (International Labour Organization, 2012). The final definition describes outstanding conceptual understanding as “typified by alternative viewpoints, novel links to other disciplines, and exploring possibilities.” Yet it is possible that outstanding conceptual understanding can only be achieved in the workplace, with the development of “intuitive expertise” that comes from experience (Harteis & Billett, 2013). How feasible it is to assess outstanding conceptual understanding from students' written text will be a question for further research.

### **5.2.3. Articulation**

A characteristic of conceptual understanding is articulation. Articulation involves explanation, which is used in the resulting definition to describe strong conceptual understanding. Whether to assess grammar, vocabulary, and spelling when assessing conceptual understanding is debatable. Explanation and reasoning must be communicated through language and clear communication depends on clear language. However, undue attention to language mechanics like grammar, vocabulary, and spelling increases cognitive load during the writing process and therefore reduces deep processing capabilities (Bereiter & Scardamalia, 1987). Deep processing is needed for deep conceptual understanding (Entwistle, 2000). Language mechanics relate to language quality rather than conceptual understanding. While language accuracy is generally considered an important criterion for education assessment, language mechanics are not taken up in the resulting definition as a component of conceptual understanding.

### **5.2.4. General, specific, abstract, and concrete knowledge**

We conclude that conceptual understanding for teaching in international business requires general, specific, abstract, and concrete knowledge. Without general, context-free knowledge, transfer is limited and conceptual understanding is shallow (Ausubel, Novak, & Hanesian, 1978; Davydov, 1988; Mayer, 1992). Similarly, decontextualized knowledge limits knowledge transfer and impedes conceptual understanding (Billett, 2001). We also conclude that conceptual understanding in a domain like international business involves giving concrete examples of abstract concepts and forming abstract concepts from concrete examples (Ausubel et al., 1978; Davydov, 1988; Mayer, 1992). In the resulting definition, abstract knowledge has been described in terms of business mechanisms (how things work) and business concepts (jargon and theory). One question is whether this abstract, theoretical knowledge need be based on book learning: Individuals can also develop personal professional theories about a domain (Huijts et al., 2011). However, as the aim of this study is to develop a definition for educational purposes, abstract knowledge is described in terms of textbook knowledge specific to international business.

## **5.3. Methodological issues**

### **5.3.1. Validity**

This study's purpose was to explore a basis for educators to assess students' conceptual understanding of international business. For exploratory research like this study, focus groups with close involvement and knowledge about the research question have the potential to penetrate the problem (Kitzinger, 1995). When seeking expert opinions, purposive sampling is considered appropriate since the aim is to choose participants based on their expertise in answering the research question rather than their representativeness of the population (Skulmoski, Hartman, & Krahn, 2007). However,



using a small, nonrepresentative sample affects external validity so follow-up research is required to verify findings. To ascertain whether the definition can be applied across different settings, further research is needed involving a wider sample of international business experts that is more representative of all international business occupations, industries, and nations.

### **5.3.2. Reliability**

Developing and testing theories to uncover new phenomena using qualitative research requires rigorous practice (Seale & Silverman, 1997). While a detailed account of data collection was kept and analyses were checked by the other two authors, the first author was primarily responsible for transcribing, condensing, and analyzing data from panel sessions. On the one hand, internal consistency can benefit from one researcher taking a leading role in mediating sessions and conducting analyses (Kidd & Parshall, 2000). On the other hand, the first author's interpretations might have swayed the other authors' judgements. Similarly, despite a vested interest in the outcome of the study and three rounds of data collection to verify results, panelists' viewpoints might also have been impacted by the first author's interpretations. However, this study was exploratory by nature and subject to further research to clarify findings. To increase the strength of this study, further research could include extensive discourse, observation, or secondary data analysis as described by Silverman (2013).

### **5.3.3. Application**

Educational research is challenging because, for results to have practical as well as theoretical significance, researchers must consider the potentially conflicting motives and epistemic cultures of educators and curriculum developers (Akkerman, Bronkhorst, & Zitter, 2013). Since this study involved the researcher's own students, curriculum and colleagues, and the researcher also functioned as educator and curriculum developer, this study yielded results with real-world significance.

## **5.4. Practical implications**

This article provides an example of the process involved in developing a basis for assessing students' conceptual understanding of international business. As such, it could prove useful as a template for international business departments or schools developing assessment tools specific to their own courses or subject matter.

## **5.5. Further research**

This study describes conceptual understanding for teaching in international business. The definition is the first step toward a means for educators to assess students' conceptual understanding of international business. One next step is the development of a rubric, since rubrics provide a means to assess levels of attainment using explicit criteria (Allen & Tanner, 2006). With a suitable assessment tool, educators of international business can test the effectiveness of teaching strategies on students' conceptual understanding, identify the adequacy of students' conceptual understanding, and provide programs that optimize students' conceptual understanding. A rubric is a necessary forerunner for the development of a powerful curriculum that effectively prepares students for future careers as international business professionals.

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