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# Improving Higher Education Through User-inspired Research: Findings from Multi-national Needs Assessments

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## Abstract

Higher Education is rapidly expanding and diversifying across all regions of the globe. The swift pace of growth and innovation in this sector requires strong management in order to negotiate the dynamic challenges facing postsecondary educational institutions throughout the world. However, while higher education is growing most quickly in traditionally under-developed countries, most of the existing information about effective management on college and university campuses comes from knowledge that has been generated primarily in North America and Western Europe. This approach is a potentially troublesome trend as western models are merely adopted, regardless of suitability, rather than adapted to local contexts and needs. In response to this situation, this paper describes an approach that has been successfully used to conduct needs assessments that provide an empirical basis for designing and implementing organizational and leadership development initiatives in high need national contexts. This approach has been utilized in a series of projects that have occurred in colleges and universities in multiple countries - Malawi, People's Republic of China (the northwest provinces), Afghanistan, Egypt and Philippines.

## Background

Higher Education is rapidly expanding and diversifying across all regions of the globe (Altbach & Knight, 2009; Altbach et al., 2009; Marginson, S. & M. Considine, 2000). The swift pace of growth and innovation in this sector requires strong management in order to negotiate the dynamic challenges facing postsecondary educational institutions throughout the world. However, while higher education is growing most quickly in traditionally under-developed countries, most of the existing information about effective management on college and university campuses comes from knowledge that has been generated primarily in North America and Western Europe (Berger, 2010). This is a potentially troublesome trend as western models are merely adopted, regardless of suitability, rather than adapted to local needs. It is clear that much more emphasis needs to be given to user-inspired research as we seek to both better understand and improve higher education throughout our increasingly globalized world.

Focusing on user-inspired research is particularly appropriate within higher education as a field of study and as an applied professional context. Despite that fact that higher education is an applied multi-disciplinary field of study, there has been scant attention paid to developing cogent strategies for developing this line of inquiry as a major thrust within this particular scholarly community despite repeated calls from the leadership of the profession to do so (Berger & Milem, 2000; Tierney, 1998). This situation is even worse in comparative and international studies in higher education; most of which are purely descriptive or comparative in nature; with little attention paid to real-world applicability (Berger, 2010).

In response to this situation, this paper describes an approach that has been successfully used to conduct needs assessments that provide an empirical basis for designing and implementing organizational and leadership development initiatives in high need national

contexts. This approach has been utilized in a series of projects that have occurred in colleges and universities in multiple countries - Malawi, People's Republic of China (the northwest provinces), Afghanistan, Egypt and Philippines. Each of these projects in described briefly below:

- **Malawi University Partnerships for Institutional Capacity (UPIC)** - a collaborative partnership with the University of Malawi's Chancellor College, the Malawi National Examinations Board (MANEB), and the Ministry of Education, Science and Technology (MOEST). The $2.3 million USAID-funded Advanced Degree Activity (ADA) was a five-year project designed to build human resource and institutional capacity to promote the planning and leadership functions of the education sector through three activities.

- **Northwest China Leadership Development**– a needs assessment and collaborative partnership with Shaanxi Normal University and the Northwest China Regional Education Training Institute to improve professional development for educational leaders across the five northwestern provinces of China.

- **Afghanistan Higher Education Project (HEP)** - a $8.6 million grant from USAID to work with the Ministry of Higher Education and 19 postsecondary educational institutions in Afghanistan in order to improve the capacity of faculties of education to better train secondary teachers in Afghanistan and for Kabul Medical University to better train medical and public health professionals. Activities included strategic planning, organizational development, leadership

development, faculty development and the creation of the first two master's programs in post-Taleban Afghanistan.

- **American University of Cairo (AUC) Higher Education Development Initiative** – consulting on the development of a Graduate School of Education and an Institute for Higher Education for the Middle East.

- **Enderun Colleges (Philippines) Academic Development** - a needs assessment focusing on faculty development and institutional governance needs during the start-up phase of a new private university.

The findings from the assessment activities and the associated development projects are as much about what can be learned by the consulting "experts" from the clients and participants as it about what is needed by the people being served by these projects. The remainder of this article describes what has been learned from these efforts about how to conduct user inspired research.

**Approach**

The work discussed in this paper comes out of a collaborative effort among a group of colleagues who comprise an academic community that exists within the Department of Educational Policy, Research and Administration (EPRA) in the School of Education at the University of Massachusetts Amherst. EPRA consists of four graduate-level academic programs - Educational Administration, Higher Education Administration, International Education and Research and Evaluation Methods - along with three research centers - Center for Educational

Assessment (CEA), Center for Educational Policy (CEP), and Center for International Education (CIE).

Over the last seven years, faculty members in CIE, along with others in EPRA, have intentionally engaged in a process of working together across academic programs and research centers in order to generate, apply and disseminate knowledge that has both (1) sustainable local impact in a variety of high need international contexts and (2) broader impact that informs the improvement of educational leadership, management and organization. These efforts have been collaborative in nature, involving internal and external partners. Internally these efforts have most directly involved faculty colleagues and graduate students; externally, partners have included the usual array of other traditionally-defined "experts" found in universities, non-governmental organizations and among the ranks of consultants. However, we also recognize that other forms of expertise – particularly in local settings embedded in the cross-cultural contexts in which we do our work. Hence, the very people we are serving, studying and educating are our partners who bring their own forms of expertise and insight to bear on "our"[1] collective work.

The projects, outcomes and approach discussed in this paper are driven by what we call "user-inspired" research. As noted by the recently created Mosakowski Institute for Public Enterprise (2009) at Clark University:

> Use-inspired research is a term used to denote approaches to conducting basic research that maximize the utility of the work for user-communities. Over the last decade there have been several

[1] We define "our" to be as fully inclusive as possible here – "our" refers to all of us engaged in a project – from project leaders, to all levels of staff to those we are studying and serving.

> indicators of interest in a new approach to research along these lines and several fields have coined a variety of terms that refer to this kind of work. What holds them together is a paradigm shift away from a rigid distinction between basic and applied work. The sciences and psychology have primarily drawn on the term translational research, political scientists and economics have used policy relevant research, and education researchers and others have referred to useable knowledge.

The choice of use-inspired research for the institute was guided by the fact that this has been the term used by the widest number of disciplines and also has been adopted by various national societies and foundations such as AAC&U, Spencer Foundation, Carnegie Foundation, Council on Undergraduate Research, and the National Research Council in material about a vision of research. An excellent source for a deeper understanding of use-inspired research can be found in Stokes' important book *Pasteur's Quadrant: Basic Science And Technological Innovation*, published in 1997 by the Brookings Institution. Stokes places the issue of use-inspired research in historical and political context while examining the evolving relationship of universities, governments, and other institutions to scientific research.

Stokes (1997), in his path breaking book asserts, that despite centuries of scientific tradition in which basic and applied science have been pursued as distinct endeavors, it is erroneous to assume a dichotomy between basic and applied research Price & Behrens (2003) observe that:

> Instead, Stokes argues that the motive for fundamental

understanding and the drive for application are not separate or in opposition to each other. Instead, these two motives for research can be combined in various ways. For example, Stokes argues that in his initial search for the structure of the atom, Neils Bohr was concerned entirely with fundamental understanding and not at all with considerations of application and use. On the other end of the spectrum, Stokes describes the work of Thomas Edison as being completely uninterested in fundamental understanding, and entirely motivated by considerations of application.

These are extreme examples of the pursuit of only a single one of the two motives of understanding or application. Can they be successfully combined? Stokes also offers us examples of scientists in history who successfully combined the drive for fundamental understanding with a desire for application. Louis Pasteur was the prototypical scientist who uncovered fundamental understanding about the nature of disease while doing applied research on the preservation of cheeses, beer, and milk! Pasteur never considered himself to be a basic researcher. *Instead he carried with him into his applied projects the desire to solve a vexing puzzle* and so was able to use what he observed in practical projects to assemble the jigsaw of the microbiological genesis of infectious disease. (p. 220).

In applying Stokes concepts to the field of community psychology, Price & Behrens proposed the models presented in Figure 1. In presenting this model, Price & Behrens (2003) describe it in the following manner:

> First, like Bohr, our existing understanding could be pursued through research primarily motivated for new understanding. This is the path shown on the left side of Fig. 1 moving from bottom to top. A second pathway from existing applications to new ones suggests that existing technologies can be improved by engaging in purely applied research devoid of an interest in theory as Edison did. This is the path on the right of Fig. 1 from bottom to top. But Fig. 1 also suggests that we can engage in use inspired basic research in communities, drawing on *both* existing technology and existing theory in ways that expands *both* our theoretical understanding and our technical capability. Can we identify an example of use-inspired basic research in our own field concerned with both theoretical understanding and community change? (p. 220).

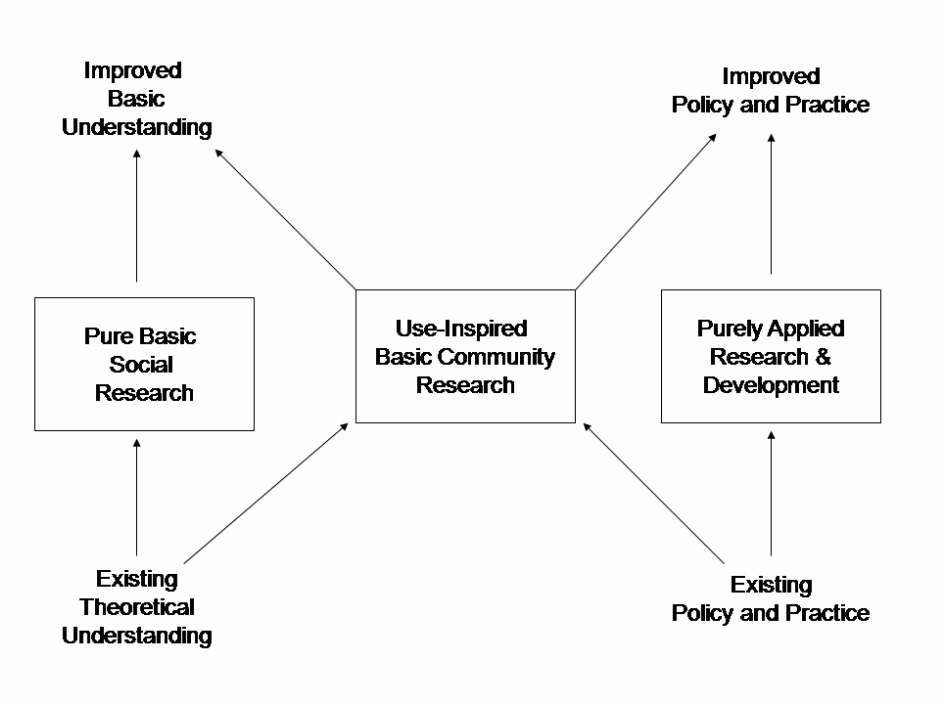


**Fig. 1.** Use inspired basic research for community psychology (Price & Behrens [2003] as adapted from Stokes [1997]).

Building upon the work of Stokes (1997) and Price & Behrens (2003), Figure 2 provides an overview of a model which extends "use inspired" research such that "user inspired" research provides a label that more aptly encompasses the type of research conducted within social science and related professional fields. The shift from "use inspired" to "user inspired" is a subtle change in language that has important implications for work in which human behavior, knowledge, and dispositions are at the heart of the work being conducted by researchers in real world settings. In the work that is described in this article, the term "user-inspired" has been chosen rather than "use-inspired" because the goal of the research is to improve the work and lives of the participants in the studies and projects. More specifically, the use of the knowledge is

a means to end, the improving the work and experience of users is the ultimate goal of this type of research. Therefore, "user" inspired, rather than "use" inspired research is more appropriate for work in fields like education development, organizational improvement and cross cultural management.

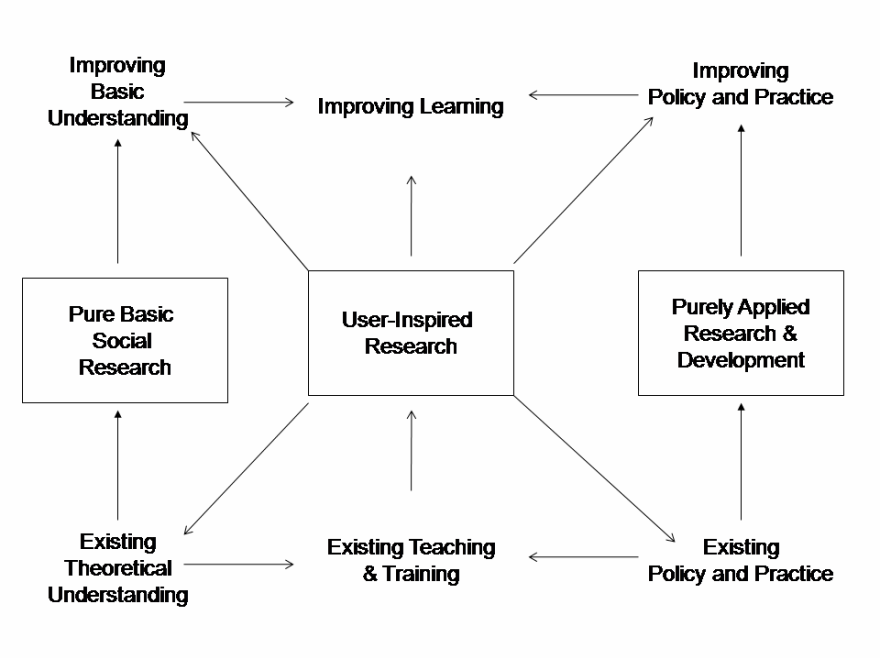


**Fig. 2.** User inspired basic research for community psychology (adapted from Price & Behrens [2003] and Stokes [1997]).

Returning, to Figure 2 – the user inspired model is also designed to bridge pure basic social research and purely applied research development by responding to both existing theoretical understandings and existing policy and practices; both of which inform existing learning in tertiary educational institutions. The user inspired model enhances the previously developed use inspired model by incorporating recognition that pre basic, purely applied, and user inspired research activities lead to improving learning directly (in the form of user inspired research) and indirectly through both improving knowledge and improving policy and practice.

It is worth noting that the user inspired model also uses the term "improving" rather than "improved" in order to recognize the dynamic nature of continuous improvement of knowledge, policy, practice, and learning. This model provides the over-arching conceptual framework that guides the work described in the remainder of this article.

## Guiding Principles

In conducting the user inspired , there are a number of guiding principles that have been developed over time that serve as the foundation to our work. Although many of the projects differ greatly in their specific objectives, scope, activities, outcomes and cultural context – the following principles inform the choices we make regarding which types of projects to engage in, how to approach them and, ultimately, how to implement them with intentionality and integrity. These principle include:

- Thinking and acting dynamically" is essential for conducting user-inspired research
- Recognizing that education is an "applied, multi-disciplinary field"
- Engaging in Cross-cultural work requires humility and "collaboratively shared expertise"
- "Acting with and valuing intentionality and integrity"
- Recognizing the ubiquitous nature of "Trade-offs" in decision-making and acting.

Each of the principles is described in greater detail in the following section of this article.

<u>"Thinking and acting dynamically" is essential for conducting user-inspired research</u>

Before proceeding further to provide more detail about what each of these principles actually means – it is necessary to take a pause to reflect on a few important issues related to the language used to describe this work. To begin with, it is worth reiterating just how vitally essential it is that the core principle of user-inspired research be a driving force in all of our work. Furthermore, it is worth a momentary digression to comment about the language used in constructing the phrasing used in the presentation of the listing of the seven guiding principles. The core label for each is noted in the parentheses within the text associated with each bulleted principle in the list provided above. The core labels tend to be "noun-oriented" – principles are in fact nouns; they are things. However, intentional use of active verbs (lots of words that end in "ing") is the starting point for the description of each principle because this type of articulation emphasizes doing. User inspired research isn't real unless we are actively engaging in it. Ideas, models, theories and research no matter how profound, rigorously-developed and sophisticated; are meaningless if they remain primarily conceptualized as things and are not engaged in purposeful action. For example, it is preferable to speak of "leading" rather than of "leadership"; because leading is active and dynamic, whereas leadership is a noun that is all too often a vague, abstract concept. Unfortunately, the academic world and the research conducted within it is all too often focused on generating concepts that are dynamic in theory, but static in practice because they are written, studied and debated; but not engaged in real world settings. Hence, the way in which the descriptions of the guiding principles are phrased is a guiding principle in and of itself, one that reads – "Thinking and acting dynamically" is essential for conducting user-inspired research. Building upon that principle, the following sub-sections describe each of these other seven principles.

Recognizing that education is an "applied, multi-disciplinary field"

Before delving deeper into this what may seem at first glance to be an eclectic list of principles – it is worth pausing to reiterate how vitally essential it is that the core principle of user-inspired research be a driving force in all of our work. This is particularly salient given that this type of user inspired research is conducted in complex educational settings in cross-cultural contexts. "Educational" and cross-cultural" are highlighted in the previous sentence because understanding these two features is fundamental to being able to appreciate what it means to engage in this particular brand of user-inspired research and why the following principles are so important. To begin with, education is among the most important drivers of social and economic development in any society (Coelen & Berger, 2005). Education is a dynamic enterprise, that, when done well, realizes tremendously positive multiplier effects across all sectors of society. It is also a "multi-disciplinary" "applied" field of study; meaning that we have a responsibility to use conceptual, methodological and practical tools from a variety of other disciplines and fields in order to best address the complex and challenging work of educating others. Education and human development does not rely on any one particular strand of knowledge. For example, knowledge from psychology needs to be applied to better understand cognitive development, affective response and individual motivation (too name a few) while at the same time there is a need to use sociological concepts in order to inform the way such work impacts groups of people and structures organizations to efficiently maximize positive impact. As another example, economic knowledge is needed to make better decisions about how to finance education and steward resources and concepts from political science inform policy-making and so on;

education is about generating, disseminating and using knowledge in all of its forms from a wide range of disciplines.

Engaging in Cross-cultural work requires humility and "collaboratively shared expertise"

The projects described above in which user inspired research is employed are conducted in a variety of cultural contexts around the globe. Cross-cultural research and work is challenging; because as the researchers are often outsiders (interlopers may be an even better term), it would be foolish and untenable to believe that outside researchers could ever be experts in the culture in which they are temporarily working. The expertise of the outside researcher has been honed and developed elsewhere – thus, it is imperative that anyone working in cross-cultural contexts be ever vigilant of the challenges and trade-offs associated with such endeavors. Given this explicit awareness about the nature of such work and the contexts in which they engage with it, the following principles have been incorporated over time as a basis for fulfilling mission-driven work in a responsible and rigorous manner. Even in development work where the researchers are responsible for helping improve an existing situation (e.g. creating new academic programs in Malawi, China, Afghanistan, Egypt and elsewhere); they must be humble to recognize how much help they need from local experts and how they must be responsive to the needs of the local context.

Facilitating the "adapting, rather than adopting", of models, concepts and tools from our culture into another culture

One of the perils of cross-cultural work is that it is often all too easy to merely adopt knowledge and models from own culture and apply it with relatively little examination to another

culture; regardless of its suitability. Ideally, the letters "R & D" mean "Research and Development"; unfortunately in education and educational research, particularly in cross-cultural contexts this all too often is an eviscerated concept that may more aptly stand for "Rip-off and Duplicate." It is important that concepts in one culture not be inappropriately adopted without working with local collaborators who have the requisite cultural expertise in collaborative conjunction with those who bring substantive scholarly and professional expertise from the external culture (Fisher-Yoshida & Geller, 2009). Local cultural expertise is absolutely essential to these kinds of successful cross-cultural endeavors. Substantive expertise is necessary, but not sufficient for success; although this has often been ignored on many Western-Non-Western educational partnerships.

Recognizing the ubiquitous nature of "Trade-offs" in decision-making and acting.

The two models of organization that are widely used across the social sciences and that have been derived directly from the study of colleges and universities as organizations are Cohen & March's (1974) "organized anarchy" and Weick's (1982) "Loosely-coupled" systems models. Both emphasize the non-rational, loosely-structured and often chaotic aspects of how colleges work (or as some suggest – how they don't work). Others (e.g. Birnbuam, 1988; Berger, 2000; Berger & Milem, 2000) have tried to explain the complexity and lack of cohesiveness in higher education organization by fitting existing theoretical models (e.g. bureaucratic, collegial, political, anarchical, cybernetic) to the analyses of organizational functioning as a multi-dimensional approach in which higher education organization is best understood as a mix of structures and models that co-exist amidst a dynamic array of shifting accommodations and inherent tensions.

The term "organized anarchy" itself suggests that there are two paradoxical tensions that define the nature of organization in higher education – organization with its emphasis on order and structure on the one hand; and anarchy with its emphasis on chaos and unpredictability on the other. Similarly, "loose-coupling" is a concept that recognizes the existence of ambiguity and lack of order ("loose") and the seemingly simultaneous need for structure and order ("coupling"). Most traditional approaches (including most of the seminal literature in this area including the works by leading scholars such as Robert Birnbaum and Marvin Peterson) to understanding organization in higher education tend to focus on order and structure while de-emphasizing anarchy and chaos. Yet, the lack of explanatory power in any one model provides clear evidence that despite the seemingly compelling need to impose structure on the functioning of postsecondary campuses often leads to frustration. These frustrations are manifest in the gap between theory and practice and are found in continued reliance on temporary solutions that often generate problematic unintended consequences as well as other pressing problems that arise from an over-simplified approach to understanding and improving organizational behavior on campus (Berger & Milem, 2000). More pragmatically, Birnbaum (2000) notes that management fads (e.g. Management by objectives, zero-based budgeting, and total quality management) come and go as institutional leaders try to implement on structural response after another, only to have them fail, because no one structural response adequately attends to all of the inherent tensions in the loosely-couple organized anarchies that are found on every campus.

**Assessing Needs for User-inspired research**

**Needs assessment** is a process for determining and addressing *needs*, or "gaps" between current conditions and desired conditions, often used for improvement projects in education/training, organizations, or communities. In the context of community improvement, it is known

as **community needs analysis**. It involves identifying material problems/deficits/weaknesses and advantages/opportunities/strengths, and evaluating possible solutions that take those qualities into consideration. (Gupta, Sleezer & Russ-Eft, 2007).

However, the common technical definition of needs assessment as described by Gupta et al. only accounts for one-third of the purpose for conducting needs assessments in education (and other professional settings) in cross-cultural contexts. The other two purpose of needs assessment for the types of projects described in this article include cultural and relational. Each of these three purposes are described below:

- Technical – the rigorous collection and analysis of empirical data that informs the research questions that guide the study and respond to the needs of the client.
- Cultural – the intentional effort to be immersed in and engaged with the local culture in order to better understand the unique context in which the conceptual models and practical tools can be properly adapted rather than merely adopted as the cross-cultural work commences and endures.
- Relational – the identification and building of personal relationships across cultures that serve as the foundation of future work. Organizational agreements and contracts are necessary, but not sufficient, for the success of sustainable improvement in cross-cultural projects – strong personal working relationships are essential for success.

## Producing Positive Outcomes

Given that higher education is a complex and unique mission-driven enterprise that exists with an increasingly dynamic and diverse global environment; the purpose of CIE and HELMS within the Department of Education Policy, Research and Administration (EPRA) in the School

of Education at the University of Massachusetts Amherst has been and continues to be a commitment to produce, disseminate and apply knowledge about education in order to promote continuous improvement in socially responsible academic work. To these ends, these efforts focus on how leadership and management in higher education organizations can be improved through research, teaching and consultative outreach activities.

As noted above, we use a wide range of conceptual and practical tools that focus on progressively improving leadership and management in higher education organizations. These tools are applied through user-inspired research and consultative outreach projects that are designed to respond to the real world needs of higher education institutions. Each project is uniquely adapted to the specific context and challenge at hand. Each project includes research, teaching and application – covering the full range of Boyer's (1980) expanded definition o scholarship. Moreover, each of these activities informs the other. Development projects and course materials are informed by research; while research and teaching are intentionally "user-inspired" as we work with cross-cultural partners in institutions around the world.

As a result of the research and development projects that we have been engaged in, our teaching and training activities focus on three core areas of expertise that have been developed from research that has been conducted in the field. These three areas are Leadership, Management, and Organization. Each of these areas is further divided into modules that can be packaged in various combinations in academic course formats or be used to construct workshops. All workshops and courses are designed to provide participants with opportunities to adapt and apply the conceptual knowledge and practical tools to their own unique work settings. Furthermore, the three areas and associated modules are designed to inform critical challenges that must be addressed if higher education organizations are going to meet the mission-driven

mandates and ethical obligations of the Academy. All of the courses and most workshops include the use of innovative pedagogy and cutting-edge on-line tools that enable students to generate, develop and analyze their own context-specific case studies that are relevant to their own experiences. This approach is particularly effective with students from different countries and cultures.

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