

# What makes interdisciplinary research original? Integrative scholarship reconsidered

Mordechai Gordon\*

*Quinnipiac University, Connecticut, USA*

This paper focuses on the scholarship of integration in the field of education and argues that although it has gradually been moving into the mainstream of educational research, it is all too often judged on the basis of criteria more applicable to assess the scholarship of discovery. First, I examine the questions: what constitutes original research in education and what makes the scholarship of integration ‘original’. I assert that the reluctance on the part of many educators to consider integrative scholarship as original research is in part a result of the prevailing conception of originality that is too limiting and often not relevant to evaluate this form of scholarship. Such a conception is incompatible with the valuable lessons that constructivism has taught us about knowledge and learning. Finally, I propose a number of criteria to evaluate integrative research studies, ones which are different from those that apply to other forms of scholarship.

## Introduction

It has been about fifteen years since Ernest Boyer published his important book *Scholarship Reconsidered* in which he called for an expanded view of scholarship and a broader definition of what it means to engage in research. In this book, Boyer claims that the common view of scholarship that privileges basic research over all other forms of scholarship is overly narrow and does not do justice to the wealth of talents and abilities of the professoriate. Instead, he proposes a much more comprehensive and dynamic view of scholarship, ‘one in which the rigid categories of teaching, research, and service are broadened and more flexibly defined’ (Boyer, 1990, p. 16). Specifically, Boyer identifies four separate but overlapping areas of scholarly activity: discovery, integration, application and teaching. However, Boyer correctly maintains that discovery research is still considered by many people in the academy as the most

---

\*Division of Education, Quinnipiac University, 275 Mount Carmel Avenue, Hamden, CT 06518, USA. Email: Mordechai.gordon@quinnipiac.edu

important form of scholarly activity. The other forms of scholarship are regarded as, at best, marginal types of research and, at worst, merely practical as opposed to scholarly activities.

In this paper, I would like to expand on Boyer's concept of 'the scholarship of integration' and explain what makes this form of scholarship original. For Boyer, the scholarship of integration means 'making connections across disciplines, placing the specialties in larger context, illuminating data in a revealing way, often educating nonspecialists, too' (Boyer, 1990, p. 18). It is a form of research that attempts to interpret ideas, synthesise diverse fields and shed new light on existing theories. There are many renowned scholars who were very successful doing integrative work including Thoreau, Sartre, Flaubert, Levi-Strauss and Edward Said, to mention only a few. In education, John Dewey conducted interdisciplinary research and analysis, integrating fields such as philosophy, psychology and sociology into his educational research.

To clarify the scholarship of integration further, Boyer points out correctly that the distinction between discovery and integration hinges on the questions posed in each form of research:

Those engaged in discovery ask, 'What is to be known, what is yet to be found?' Those engaged in integration ask, 'What do the findings *mean*? Is it possible to interpret what's been discovered in ways that provide a larger, more comprehensive understanding?' (Boyer, 1990, p. 19)

The latter questions require researchers to engage in critical analysis, interpretation and synthesis. They point to a form of scholarship that transcends the requirement to stick to a single disciplinary boundary, reaching out across fields in order to make connections and interpret ideas in a broader, more holistic context. Thus it is somewhat ironic that the scholarship of integration, which seeks to bridge the gap between diverse fields, is in some circles relegated to the fringe of academic life.

This paper focuses on what Boyer calls the scholarship of integration in the field of education and argues that although it has gradually been moving into the mainstream of educational research, it is all too often judged on the basis of criteria more applicable to assess the scholarship of discovery. In what follows, I first examine the questions: what constitutes original research in education and what makes the scholarship of integration 'original'? I assert that the reluctance on the part of many educators to consider integrative scholarship as original research is in part a result of the prevailing conception of originality that is too limiting and often not relevant to evaluate this form of scholarship. Such a conception is incompatible with the valuable lessons that constructivism has taught us about knowledge and learning. Finally, I propose a number of criteria to evaluate integrative research studies, ones which are different from those that apply to other forms of scholarship. Beginning with a broader view of original research and a more coherent set of assessment criteria can help pave the way to move the scholarship of integration into the mainstream of educational research.

## What is original research?

Educational researchers who have submitted articles for publication in scholarly journals and had them rejected typically receive comments such as these from the reviewers: ‘The main problem with this essay is that much of the ground it deals with has been covered before’; ‘this article offers nothing new to our readers’; ‘there is nothing really original in the ideas presented in this paper’. Such comments, I would argue, are based on a traditional notion of original research that *may not* be relevant for every essay under review. Traditionally, being original meant that a person had to discover that single method, make that unique argument, or find that one law or theory that had never existed beforehand. I reject this definition of being original not because it is incorrect but because it is too narrow and limiting. Human beings live and operate in a social context that includes the family, friends, community and many other groups of people. They constantly get ideas from other people, books, the media and a host of other sources with whom they interact. As such, it is virtually impossible, especially with the amount of information that is at our disposal today, that someone will discover something that is entirely new or unprecedented.

However, the fact that each one of us is influenced by other people, texts and ideas, and that it is extremely difficult to articulate something completely unique, does not mean that we can no longer be original. Instead, this fact indicates that we must *reformulate* what it means to be original in order to broaden the traditional definition so that we take into account the influence of the social context. Much in the same way that our conception of what it means to engage in research has changed in the last several decades, the significance of being original cannot remain static. John Furlong and Alis Oancea recognise this point when they claim that:

Recent changes in the relationship between research and society and the changing role of research in knowledge production and use mean that there is a need to rethink and adapt the concept of quality as it is employed in current research evaluation procedures. (Furlong & Oancea, 2005, p. 9)

Once we acknowledge the impact of society on us, we realise that being original can mean taking an idea that was invented in one context and applying it to another set of conditions and circumstances. Likewise, being original can mean interpreting the results of existing research in new and exciting ways. From this perspective, being original can also refer to the ability to synthesise ideas from different sources and integrate them to construct a unique argument. These are only a few of the many ways of being original that take into account the impact of the social context on people. What unites most, if not all, of these ways is a shift in perspective and the ability to look at an issue or problem in a different and more complex manner.

To be sure, educational scholars have constructed new ways of conceptualising the curriculum (Pinar *et al.*, 1995), designed innovative approaches of classroom management (Kohn, 1996) and created novel methods of mentoring beginning teachers, all of which definitely constitute original research (Ball & Cohen, 1999). Such research falls under the domain of what Boyer calls the scholarship of discovery, in which new ideas, approaches and methods are invented. Yet, educational scholars

have also conducted original research by analysing curriculum theory from the perspective of psychoanalysis, cultural studies and postmodernism (Kincheloe & Pinar, 1991). They have used existing models of classroom management to evaluate current practices in schools and classrooms (Gordon, 2005). And researchers have drawn on a model of mentoring new teachers in order to demonstrate the need for such models in the context of preparing English educators (Smith *et al.*, 2003). These latter forms of research, which represent Boyer's notion of the scholarship of integration, are original in the broader sense of originality described above. They are original in that they open up a deeper and more complex perspective from which to view issues that have been previously discussed in a narrower context.

In fact, Carole Barbato argues that although the scholarship of discovery is usually heralded as original research:

The scholar who integrates research literature findings, interprets these findings in new and exciting ways, tests and questions old assumptions, shakes up the status quo, and provides connections that otherwise might not have been made because the findings were read and interpreted in isolation from other findings, can be the true innovator in the field. By pushing the intellectual boundaries and providing meaning to research findings, this scholar can push discovery researchers into going places they otherwise would not go. (Barbato, 2000, p. 237)

For Barbato, integrative scholarship is original because it creates possibilities for questioning, understanding and further research that were previously obscure or completely hidden from sight.

In light of Boyer's distinction between the scholarship of discovery and the scholarship of integration, it is my contention that traditional criteria of originality, which are more appropriate for discovery research, are often used to evaluate integrative studies. In other words, the same standards of newness as defined by traditional discovery research are used as a benchmark for other forms of research. Furlong and Oancea echo this point when they argue that traditional dimensions of quality 'form the dimension of quality that is often extended to cover almost the entire concept of quality used in assessing social research' (2005, p. 10). In our context, the question of whether or not a topic has been addressed before is used as a kind of generic definition of newness that is applied across the board to different types of educational studies. The problem is that such an approach ignores the notion that the criteria by which we evaluate research should depend on the nature of the subject that is being researched. According to Richard Pring, 'it is essential to recognise that there can be different forms of enquiry, different ways of being systematic, different modes of criticism depending on the nature of the research questions and of the subject matter being examined' (Pring, 2000, p. 497).

To be perfectly clear, I am not objecting to the notion of requiring scholarly work to be original in the sense of holding scholarship to what Glassick, Huber and Maeroff call the 'significance standard'. As these authors put it, 'any act of scholarship must also be judged by the significance of its results. A project should contribute to knowledge or to artistic expression, stimulate learning, or, where appropriate, help solve problems outside the academy' (Glassick *et al.*, 1997, p. 29). Their point is

that every scholarly project should in some way address the ‘so what’ question; it should be able to respond to the issue of why the goals or results of the project are so important. The significance standard ensures that the results of research are not trivial or self evident but have some value for the scholars in the field and hopefully for humanity at large.

Clearly, then, scholarly work should be judged according to the significance standard. What is at stake here is that this standard has often been interpreted in an overly narrow way to suggest that the approach, results, or the methodology of the researcher have to be unprecedented. In this way, the significance standard is reduced to the traditional notion of originality mentioned above, thereby excluding other important questions such as whether the work opens additional areas for further exploration, whether it analyses an existing problem from a more complex perspective, or whether it synthesises debates in several disciplines. Thus, my underlying claim is not that *integrative work is not being done; nor is it that it is being done and not published*. My assertion is simply that when integrative work is submitted for publication, it is often assessed by the same standards that are used to evaluate discovery work rather than ones that apply specifically to this type of research. Following Pring, I would argue that such standards are not only unfair to apply to integrative work, but also that they do not provide valuable feedback for the researchers who are looking for a constructive critique of their work.

Yet why is it that the traditional notion of originality is used to evaluate integrative studies? Why is it, in other words, that the most common concern raised by many reviewers pertains to the extent to which the topic has been addressed before? One reason for this practice is the academy’s obsession with specialised research which, according to David Damrosch, leads to a uniformity of standards:

Our universities have always housed a great many sorts of people doing a wide variety of tasks; to the extent that a single standard begins to dominate the others, the result is a real decrease in the diversity of the *forms* of academic work, even as we see a steady growth of one form, namely specialized research. (Damrosch, 1995, p. 42)

For Damrosch, the triumph of specialised research has resulted in a situation in which the standards which govern this form of research are used to assess all other forms of research. His book, *We scholars: changing the culture of the university*, illustrates how specialisation has shaped the way in which our universities, curricula and academic work are all structured. In a culture marked by specialisation and fragmentation, it makes sense to talk about original work as something that *adds* knowledge to the existing body of inquiry in a particular field.

Of course, the accumulation of knowledge in recent decades has contributed to the prominence of specialised research since the sheer volume of information in any particular discipline is extremely difficult to keep up with, let alone conducting interdisciplinary work. Those few scholars who attempt interdisciplinary studies are often viewed as engaged in ‘soft’ research as opposed to the rigorous work of those that spend their entire careers digging deep into one topic. Practically speaking, it is convenient to assess all research in the same way since it enables us to apply

common standards to all forms of academic work. Moreover, as Damrosch illustrates, finding a generalist to evaluate new research is much more difficult than a specialist since the former is quite rare. In most cases, it is much easier to assess whether or not a particular topic or issue has been covered before (discovery) than it is to determine the merit of a particular interpretation, analysis or synthesis (integration).

Another reason that integrative research is being evaluated according to traditional standards of originality is the resurgence of scientifically based research in the United States and perhaps in other countries as well. The 2001 No Child Left Behind Act has mandated an emphasis on scientifically based research. In this context, scientifically based research means 'research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs' (Horn, 2004, p. 196). This type of research relies on measurements or observational methods that provide reliable and valid data across different researchers. Critics of this definition charge that it 'will result in strictly controlled scientific studies that will be narrowly experimental and quasi-experimental. They fear the lack of latitude that would allow a diversity of research ranging from qualitative studies to literary explorations of educational issues' (Horn, p. 198). One implication of the dominance of a narrow definition of scientifically based research is that it is likely to be used to legitimise a very limiting notion of original research.

Finally, the lack of clarity on how to evaluate integrative work contributes to the fact that traditional criteria of originality are used to assess this type of scholarship. Despite Glassick, Huber and Maeroff's efforts to define those performance standards that can be used to evaluate different forms of scholarship, there is still quite a bit of uncertainty about how to assess the scholarship that is integrative in nature (more on this later). This lack of clarity on how to assess integrative scholarship, together with the fact that the standards that apply to discovery research are much more accepted and clearly defined, helps explain why these standards are frequently used to evaluate integrative studies.

What is particularly troubling about the tendency to evaluate integrative scholarship in education according to the traditional notion of originality is that it is reminiscent of earlier practices in which research that did not conform to a particular methodology or ideology was excluded or marginalised. For instance, just a few decades ago, scholars in education and other disciplines were disregarded if their research was not based on an empirical, positivist model. I remember hearing an anecdote from one of the leading philosophers of education in the United States who had been nominated in the early 1980s to become the president of the American Educational Research Association (AERA). Some board members of AERA who reviewed the academic vita of this prominent scholar were concerned about the fact that she had not done any empirical research and noted that, 'there is still time for you to do this kind of research before you take office'. The scholar, who conducted very insightful, integrative research, synthesising philosophy, the arts and education, replied to these members: 'You do it!'

## Constructivism, knowledge, and original research

In the past few decades, a constructivist worldview has emerged as a very powerful model for explaining how knowledge is produced in the world as well as how students learn. For constructivists like Joe Kincheloe, knowledge about the world does not simply exist ‘out there’, waiting to be discovered, but is rather constructed by human beings in their interaction with the world. ‘The angle from which an entity is seen, the values of the researcher that shape the questions he or she asks about it, and what the researcher considers important are all factors in the *construction* of knowledge about the phenomenon in question’ (Kincheloe, 2001, p. 342). To assert that knowledge is constructed rather than discovered implies that it is neither independent of human knowing nor value free. Indeed, constructivists believe that what is deemed knowledge is always informed by a particular perspective and shaped by a specific ideological stance.

According to Mark Windschitl, constructivism is based on the assertion that learners actively create, interpret and reorganise knowledge in individual ways. ‘These fluid intellectual transformations’, he maintains, ‘occur when students reconcile formal instructional experiences with their existing knowledge, with the cultural and social contexts in which ideas occur, and with a host of other influences that serve to mediate understanding’ (Windschitl, 1999, p. 2). In this view, teaching should promote experiences that require students to become active, scholarly participators in the learning process. Windschitl goes on to note that ‘such experiences include problem-based learning, inquiry activities, dialogues with peers and teachers that encourage making sense of the subject matter, exposure to multiple sources of information, and opportunities for students to demonstrate their understanding in diverse ways’ (p. 2).

Informed by the insights of theorists such as Piaget, Vygotsky and Freire constructivism has helped to shift the way in which knowledge is understood and assessed. Piaget believes that to understand the nature of knowledge, ‘we must study its formation rather than examining only the end product’ (Kamii & Ewing, 1996, p. 260). His developmental theory demonstrates that the way one arrives at knowledge is equally, if not more, important than the final result. Vygotsky’s concept of the ‘Zone of Proximal Development’ enables us to realise that human learning, intelligence, and knowledge are all embedded in a particular social and cultural context in which people exist and grow (Vygotsky, 1978). Freire (1994, p. 53) insists that knowledge is not a gift or a possession that some individuals have and others lack. On the contrary, knowledge is attained when people come together to exchange ideas, articulate their problems from their own perspectives and construct meanings that makes sense to them. It is a *process* of inquiry and creation, an active and restless process that human beings undertake in order to make sense of themselves, the world and the relationships between the two.

Based on a constructivist worldview, how would we define the notion of original research? The recognition that knowledge is constructed by human beings in their interaction with others and the world implies that original research cannot be

confined to the traditional standards of newness—of discovering or revealing the unknown. Rather, original research is a much broader notion that includes the act of creating, interpreting, synthesising and reorganising knowledge in new and interesting ways. In this view, taking Paulo Freire's concept of true and false generosity and applying it to analyse a current educational problem in the United States could be considered original research (Gordon, 2003). Likewise, subjecting the traditional school curriculum to a psychoanalytic and postmodern critique, as William Pinar does, constitutes original research. From a constructivist perspective, taking a number of diverse theories and synthesising them to construct a unique argument, as Kincheloe and others have done, should also be deemed original research (Kincheloe, 1999). These studies are all original in that they open up fresh ways of looking at a particular part of our world.

There is little doubt that the constructivist model has made a significant impact on our conception of knowledge, learning and the way in which teachers instruct their students and conduct their classrooms. To date, however, this model has had very limited bearing on the question of what counts as original research in education. On the contrary, I would argue that the common conception of original research—defined as discovering something entirely new—rests on the traditional conception of knowledge outlined above.

To illustrate this point, consider the doctoral dissertation. In 'The Ph.D Squid,' Theodore Ziolkowski points out that the Ph.D dissertation, which was imported to the United States from Germany during the heyday of positivism, was meant to serve as a 'badge of research competence in the sciences' (Ziolkowski, 1990, p. 191). Initially, the doctoral dissertation was designed to get students to produce an 'original' piece of research. However, in the natural sciences and engineering this requirement was gradually modified so that the dissertation would constitute a contribution to knowledge, 'certifying the ability to carry out research according to the current standards of the discipline' (Ziolkowski, p. 191). Consequently, in these disciplines the dissertation is no longer required to be a monograph, that is, a highly detailed and thoroughly documented study written about a very limited field of inquiry. Rather, the Ph.D dissertation is increasingly conceptualised as a presentation or paper that adheres to the publication practices in the field.

In contrast to the natural sciences, students in the humanities and the social sciences have not experienced, for the most part, a significant change in the requirements for the doctoral dissertation. According to Ziolkowski, in these fields most doctoral students are still required to produce an original piece of research in the form of a monograph, which is often quite long and dull (p. 192). Many students in the humanities and social sciences spend a great deal of time searching for a highly specialised topic that no one has addressed before so that they can cover new ground and be original. Although this search can lead students to an area that has not been traversed, the danger is that their study will not have any real significance and value for a wider audience, apart from the students and their sponsors.

In any event, the point I wish to make here is that the requirement to produce a dissertation that amounts to 'original research' is generally informed by a traditional

conception of knowledge. When doctoral candidates in the humanities and social sciences are encouraged to go beyond the existing knowledge and to cover new ground, the assumption is that original research means to *discover, create, or articulate* something entirely new. In this context, engaging in original research implies that the candidates need to demonstrate that they know virtually everything that has been written on a particular topic as a prerequisite for attempting to unearth what has yet to be said. Informed by a traditional notion of knowledge, doctoral candidates feel that they must *add* something to the existing body of information in the discipline. Little attention is given to the amount of information that these candidates have to master in the present information glut or to the value of the new knowledge that is supposedly discovered.

Of course, the dissertation example is not the only case that shows that the common conception of original research in education rests on a traditional notion of knowledge. Even Boyer and his colleagues at the Carnegie Foundation, who argue emphatically for an expanded view of scholarship, seem to associate the notion of original research primarily with the scholarship of discovery. In his discussion of the scholarship of integration, Boyer characterises it as ‘serious, disciplined work that seeks to interpret, draw together, and bring new insight to bear on *original research*’ (Boyer, p. 19, emphasis added). The implication, albeit unintentional, is that integrative work, though certainly a form of scholarship, does not amount to original research. From this perspective, only the scholarship of discovery, aimed at revealing the unknown, can properly be called original research.

Ultimately, one of the main reasons that Boyer and his colleagues’ efforts to expand the view of scholarship falls short is that they do not appreciate the extent to which their own understanding of original research is still tied to a traditional conception of knowledge. For instance, in *Scholarship Assessed*, Glassick, Huber and Maeroff write that new developments in research ‘can contribute to ideas about teaching or application, while ideas generated in teaching, integration, or application can suggest new lines of research’ (p. 30). This quote suggests that integration, like teaching and application, should not really be considered research, let alone original research. For them, the term research is reserved solely for the kind of scholarship that discovers or adds new knowledge. In this way, they perpetuate the traditional hierarchy between research, teaching and service in which the first of these is located at the top of the pyramid. Hence the attempts of Boyer and his colleagues to make the notion of scholarship more inclusive and democratic cannot succeed as long as they continue to regard discovery research a notch above all other forms of scholarship.

What we need, then, is not only a broader definition of the notion of original research that expands on what I have outlined above but also a better way of evaluating research in education, one that is not limited to the criteria that apply to the scholarship of discovery. Specifically, the field of education would greatly benefit if educational researchers could create more detailed and explicit ways of assessing the type of scholarship that is integrative in nature. In the final part of this paper, I would like to propose some criteria with which to assess this type of scholarship. These

criteria are not meant to serve as a recipe or as a conclusive account, but to initiate a conversation with other educators on this vital issue.

### **Assessing integrative scholarship**

In *Scholarship Assessed*, Glassick, Huber and Maeroff attempt to characterise standards of performance that can be used to evaluate the four types of scholarly activities, those that capture and acknowledge what they have in common. Their argument is that in order ‘to give the four kinds of scholarly activities the weight that each deserves, they all must be held to the same standards of scholarly performance’ (Glassick *et al.*, p. 22). To facilitate their goal of identifying these common norms, they surveyed and analysed the performance criteria and guidelines that are used to assess scholarship in discovery, integration, application and teaching. Based on their analysis, they concluded that there are six qualitative standards that are used to evaluate all works of scholarship: clear goals, adequate preparation, appropriate methods, significant results, effective presentation and reflective critique.

Generally speaking, I am sympathetic with Glassick, Huber and Maeroff’s efforts to identify those performance standards that the four forms of scholarship have in common. In particular, I agree with their assertion that identifying these shared criteria is essential in order to give more weight to those scholarly activities—like integration, application and teaching—that have historically been trivialised or dismissed. The problem, however, is that their description of these six standards is so general and sketchy that it does not do justice to the unique ways in which each standard is achieved in the different forms of scholarship. For instance, their discussion of significant results and the idea of making a contribution to the field pertains much more to the scholarship of discovery than to integration. They give a number of examples from anthropology, physics and literary criticism that illustrate the point that researchers in different disciplines interpret the requirement to make a contribution to the field in a specialised sense, which makes sense to the scholars in that discipline. However, these authors say almost nothing about how we can assess the significance of the results when the work in question is of an interdisciplinary nature.

Aside from Boyer and his colleagues, I have found very little discussion among educational researchers about what it means to conduct integrative scholarship and how to evaluate this kind of scholarship. My intention is, therefore, to begin to construct a more explicit set of criteria—different from those that apply to discovery research—that can be used to determine whether or not an integrative work meets the significant results standard. Specifically, I would like to propose three different criteria by which to evaluate three types of integrative studies that have distinct goals. Each one of these standards can be used to determine if an integrative work has made a significant contribution to the field of education.

The first standard that can be used to evaluate the significance of a piece of scholarly work that is integrative in nature is the *extent to which this work raises questions and challenges old assumptions in such a way that the status quo is shaken*. In this case, what is significant is not so much the answers proposed to address the questions but the

process of raising these problems and analysing them in a powerful way. The goal of this kind of integrative research is to undermine various tacit beliefs and practices that are taken for granted and have become almost common sense notions.

An example of an integrative scholarly work that challenges accepted assumptions and shakes up the status quo is Heather-Jane Robertson's insightful essay titled 'Toward a Theory of Negativity: Teacher Education and Information and Communications Technology' (Robertson, 2003). In this essay, Robertson confronts 'the technopositivist ideology that perpetuates a naïve faith in the "promises" of technology', and argues that most teachers remain uninformed about the ways in which this ideology has been used to market the increased use of information and communications technology (p. 280). She challenges the accepted notion that constructivism and technology are integrally related and claims that there is a noticeable lack of evidence to support the common conception that constructivist learning environments can be facilitated by technology. Most importantly, Robertson raises some critical questions not often addressed concerning technology, questions that deliberately expose its weaknesses.

To be sure, Robertson is not the first educator to explore and challenge some of the limitations of information and communications technology and our infatuation with these new tools. Other researchers, such as Cuban (1986, 2001), Armstrong and Casement (2000) and Postman (1997) have previously taken up this issue in some depth. Yet, it seems to me that by examining technopositivism as a marketed ideology and by raising a host of questions that are generally ignored, Robertson's article makes a unique contribution to the field of education. Moreover, unlike other studies that have investigated this issue from a humanist, progressive point of view, Robertson analyses technopositivism from a traditional educational perspective. As such, she shakes up the status quo and undermines the existing balance concerning educators' views on technology in order to try to create a new balance. In her words, 'A dose of technonegativity, even if its roots are to be found in the discredited traditional world of fact-and-information-based learning, may be exactly what the profession needs if it is to reach equilibrium' (Robertson, p. 293).

A second criterion that can be used to evaluate the significance of an integrative scholarly work is one that verifies *whether or not the perspective that the author is taking is particularly interesting and helpful*. In this case, the question is: to what extent does the author provide an insightful interpretation of the issues raised and a broader, more complex understanding of these issues? This kind of integrative scholarly work is designed to interpret and conceptualise existing phenomena in different ways from those they have been previously dealt with. Thus what is at stake here is not the discovery of a new problem, issue or phenomenon in education, but rather the way in which this problem, issue or phenomenon is formulated and explained.

Lyn Corno's article 'Looking at Homework Differently' is a good example of a study that provides the reader with an interesting and more complex interpretation of an issue that has received much attention over the years (Corno, 2000). Unlike most of the studies on homework that have focused on its effects on achievement, Corno's article situates this issue in a broader social and cultural context that includes the

family, peers, the media and a host of other factors that mediate students' understanding of homework. She argues that a student's comprehension of homework assignments cannot be separated from this broader context:

What any one student comes to understand about a given homework assignment is not separate from the situation, existing as has so often been thought 'in the student's head'... Rather, a student's own understanding is joined with the situation in which the homework was assigned—by a particular teacher, with pertinent goals, for a given group of students who will complete the assignment under certain circumstances. By virtue of a shared context, an individual student who participates in homework activities, in turn, affects other students in the same classroom community. (Corno, p. 545)

In situating the issue of homework in a broader social and cultural context, Corno helps us arrive at a better, more holistic understanding of homework, one which transcends the much more narrow debate about its effects on achievement. For instance, her essay enables us to see that we need to consider issues such as the tacit knowledge that students gain from doing homework, its impact on students' sense of self, and how the circumstances of homework influence students' attitudes toward school. Although Corno does not really discover anything unprecedented about homework in this essay, her analysis gives fresh meaning to homework and opens up additional areas for further exploration. To the extent that Corno's essay provides new meaning and a more complete understanding of homework, it definitely meets the significant results standard.

The final criterion presented here that can be used to determine whether or not an integrative work meets the significant results standard is *the extent to which the work is able to make informative and useful connections across diverse fields*. Here the question is: how well does the research in question synthesise different disciplines and use the findings of one discipline to shed light on others? The aim of this type of integrative scholarly work is to establish connections that otherwise would not be visible if the fields are viewed and interpreted independently from each other. In short, this type of research does not attempt to discover new information or to reveal the unknown, but rather to integrate ideas from diverse disciplines in order to construct a more complete understanding of these ideas.

A good example of an integrative scholarly work that does this is Elliot Eisner's well known article 'What the Arts Taught Me About Education' (Eisner, 1991). In this essay, Eisner reflects on the most important contributions that his immersion in the visual arts has made for his understanding of education. One of the key lessons that Eisner learned is 'that neither cognition nor epistemology can be adequately conceptualized if the contributions of the arts to these domains are neglected' (p. 12). Of course, this assertion contradicts the legacies of both traditional education, which reduced knowing to memorising facts and thinking abstractly, and positivism that viewed knowing as making meaningful assertions about the empirical world. However, Eisner insists that taking the experience of artists seriously forces us to acknowledge that thinking and knowing cannot really be separated from perceiving, sensing and feeling. He points out correctly that this insight has tremendous implications for numerous issues in education, such as the

nature of good teaching and learning, the curriculum and the basics, and creating reliable assessments.

Eisner is certainly not the first to assert that the traditional conception of thinking and knowing is too narrow and limiting. As he acknowledges, other theorists like Dewey, Langer and Polanyi, have already argued for a broader conception of cognition and epistemology (p. 13). Neither is Eisner the only researcher who has recognised that the arts have something important to contribute to education (the works of Maxine Greene come to mind). Yet, there is no doubt that by using his personal experience in the visual arts to reflect on the dominant conceptions of thinking and knowing in philosophy, psychology and education, Eisner has made a valuable contribution to these fields. Taking seriously the insights that Eisner gained from art forces us to rethink some of the basic tenets of education. For instance, his experience with the arts underlines the fact that nuances count in teaching just like in painting, that not all outcomes can be measured or predicted, and that 'knowledge cannot be reduced to what can be said' (Eisner, p. 19). In short, Eisner's work is significant not only because it creates some very useful connections between art and education but also because it enhances our understanding of many key educational issues.

## **Conclusion**

The three criteria presented with which we can evaluate integrative scholarly work should be viewed neither as mutually exclusive nor as a comprehensive list of standards to assess this type of scholarship. Indeed, my hope is that other researchers will take up this challenge to debate my criteria or enhance them in order to create a better assessment system for the scholarship of integration. Likewise, it seems to me that the other assessment standards that Glassick, Huber and Maeroff have identified should be defined more clearly with respect to integrative work. To date, we only have a vague sense of what it means to have clear goals, appropriate methods and effective presentation in the scholarship of integration and of how to assess these standards.

In this paper I have argued for a broader definition of original research in education, explained what makes an integrative work original, and identified a number of criteria that can be used to determine whether or not an integrative work meets the significant results standard. To the extent that an integrative work raises questions and challenges old assumptions in such a way that the status quo is shaken, or that the interpretation that the author is providing is particularly interesting and helpful, or that the work is able to make informative and useful connections across diverse fields, the results are indeed significant. In so far as an integrative scholarly work has met either one of these three standards, I would argue that it is original.

## **Notes on contributor**

Mordechai Gordon is an Associate Professor of education in the Division of Education at Quinnipiac University. His areas of specialisation are teacher education, foundations of education and democratic education. He is author of

*Ten common myths in American education* (Holistic Education Press, 2005) and the editor of *Hannah Arendt and education: renewing our common world*, winner of the 2002 AESA Critics' Choice Award. Dr Gordon has published numerous articles in scholarly journals such as *Educational Theory*, *Journal of Thought* and *Encounter: Education for Meaning and Social Justice*.

## References

- Armstrong, A. & Casement, C. (2000) *The Child and the machine: why computers may put our children's education at risk* (Beltsville, MD, Robins Lane Press).
- Ball, D. L. & Cohen, D. K. (1999) Developing practice, developing practitioners: toward a theory of professional education, in: L. D. Hammond & G. Sykes (Eds) *Teaching as the learning profession: handbook of policy and practice* (San Francisco, Jossey-Bass), 3–32.
- Barbato, C. A. (2000) Scholarship of integration: pushing, blurring, and connecting theoretical perspectives, *Journal of the Association for Communication Administration*, 29(3), 236–243.
- Boyer, E. L. (1990) *Scholarship reconsidered: priorities of the professoriate* (Princeton, NJ, Carnegie Foundation for the Advancement of Teaching).
- Corno, L. (2000) Looking at homework differently, *The Elementary School Journal*, 100(5), 529–549.
- Cuban, L. (1986) *Teachers and machines: the classroom use of technology since 1920* (Toronto, ON, Guidance Centre).
- Cuban, L. (2001) *Oversold and underused: computers in the classroom* (Cambridge, MA, Harvard University Press).
- Damrosch, D. (1995) *We scholars: changing the culture of the university* (Cambridge, MA, Harvard University Press).
- Eisner, E. W. (1991) What the arts taught me about education, *Art Education*, 44(5), 10–19.
- Freire, P. (1994) *Pedagogy of the oppressed*. (Trans. Myra Bergman Ramos) (New York, Continuum).
- Furlong, J. & Oancea, A. (2005) Assessing quality in applied and practice-based educational research. A framework for discussion. Available online at: <http://www.bera.ac.uk/pdfs/Qualitycriteria.pdf> (accessed 7 December 2005).
- Glassick, C. E., Huber, M. T. & Maeroff, G. I. (1997) *Scholarship assessed: evaluation of the professoriate* (San Francisco, Jossey-Bass).
- Gordon, M. (2003) Standards, testing, and educational reform: the politics of false generosity, *Encounter: Education for Meaning and Social Justice*, 16(2).
- Gordon, M. (2005) *Ten common myths in American education* (Brandon, VT, Holistic Education Press).
- Horn, R. A. (2004) The new federal definition of educational research: implications for educators, *The Teacher Educator*, 39(3), 196–211.
- Kamii, C. & Ewing J. K. (1996) Basing teaching on Piaget's Constructivism, *Childhood Education*, 72(5), 260–264.
- Kincheloe, J. L. (1999) The foundations of a democratic educational psychology, in: J. L. Kincheloe, S. R. Steinberg & L. E. Villaverde (Eds) *Rethinking intelligence: confronting psychological assumptions about teaching and learning* (New York, Routledge).
- Kincheloe, J. L. (2001) From positivism to an epistemology of complexity: grounding rigorous teaching, in: J. L. Kincheloe and D. Weil (Eds) *Standards and schooling in the United States, an encyclopedia*, Vol. 2 (Santa Barbara, ABC-CLIO), 325–396.
- Kincheloe, J. L. & Pinar, W. F. (1991) *Curriculum and social psychoanalysis: essays on the significance of place* (Albany, NY, SUNY Press).
- Kohn, A. (1996) *Beyond discipline: from compliance to community* (Alexandria, VA, ASCD).

- Pinar, W. F., Reynolds, W. M., Slattery, P. & Taubman, P. M. (1995) *Understanding curriculum: an introduction to the study of historical and contemporary curriculum discourses* (New York, Peter Lang).
- Postman, N. (1997) Science and the story we need, *First Things*, 69, 29–32. Available online at: <http://www.firstthings.com/ftissues/ft9701/articles/postman.html>.
- Pring R. (2000) Editorial conclusion: a philosophical perspective, *Oxford Review of Education*, 26(3/4), 495–501.
- Robertson, H.-J. (2003) Toward a theory of negativity: teacher education and information and communications technology, *Journal of Teacher Education*, 54(4), September/October, 280–296.
- Smith, E. R., Basmadjian, K. G., Kirell, L. & Koziol, S. M. (2003) On learning to teach English teachers: a textured portrait of mentoring, *English Education*, 36(1), 6–34.
- Vygotsky, L. S. (1978) *Mind in society: the development of higher psychological processes* (Cambridge, MA, Harvard University Press).
- Windschitl, M. (1999) The challenges of sustaining a constructivist classroom culture, *Phi Delta Kappan*, 80(10).
- Ziolkowski, T. (1990) The Ph.D. squid, *The American Scholar*, 59, 177–195.

Copyright of Oxford Review of Education is the property of Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.