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Interdisciplinarity in Education: What Perspectives?

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Could the question of interdisciplinary perspectives be contemplated in future plans for graduate or postgraduate degrees in our departments nationwide? Disciplinary studies may lead to a dead end if one remains within the confines of his own intellectual territory. Globalization is moving fast and it is a great challenge to meet the ever increasing needs of a Knowledge Society where knowledge, just as any other commodity, is pushing us to broaden our horizons and expand our networks.

It is now widely accepted that one way of meeting this challenging world project is to view not only research and scholarship, but also curricula and teaching methods from interdisciplinary perspectives. What would be the benefits for students of an interdisciplinary approach to teaching? According to Kavaloski (1979) and Newell (1990), this approach can help students to develop knowledge, insights, problem-solving skills, self-confidence and a passion for learning. It can also foster advances in cognitive ability (Repko 2009). The students are taught to "recognize bias, think critically, tolerate ambiguity, acknowledge and appreciate ethical concerns" (Kavaloski 1979). Students can also overcome their tendency to maintain preconceived notions,

> "…by recognizing the source of the pre-existing understandings they arrive with, and by introducing (students) to subject matter from a variety of perspectives that challenge their existing notions… when students put aside their pre-existing notions, they position themselves to learn facts more readily and are more open to adopting a range of methodologies that promote understanding. Teachers can thus spend more time exploring issues with them that promote *significant learning"* (Bransford et al 2000; italics in original).

'Significant Learning' *(*Fink 2003) takes place when meaningful and lasting classroom experiences occur. According to Fink, when students see the educational process as meaningful and salient to them they are engaged in the learning process and greater learning occurs. Fink identifies six features that lead to significant learning and are common features of interdisciplinary forms of instruction:

1. Foundational Knowledge: acquiring information and understanding ideas

Auteur correspondant :

2. Application: acquiring an understanding of how and when to use skills

3. Integration: the capacity to connect ideas

4. Human Dimension: recognition of the social and personal implications of issues

5. Caring: acknowledgment of the role of feelings, interests and values

6. Learning How-to-Learn: obtaining insights into the process of learning (Fink 2003)

Students can also gain a capacity to develop both declarative knowledge (factual information) and procedural knowledge (process-based information) ; each of these forms of knowledge are needed to solve complex problems and deal with more complex issues.

In addition, students can integrate conflicting insights from alternative disciplines and obtain a clear understanding of problems with roots in multiple disciplines. They can also tolerate ambiguity which often results from alternative perspectives on issues that are advanced by different disciplines rather than a shortcoming of a particular discipline. Thus, students acquire a better understanding of the complexity of the problems and of the associated challenges of solving them.

Finally, interdisciplinary understanding entails seeing an issue from an array of perspectives and recognizing how each of the alternative approaches influences one another. (Repko 2009)

It is evident that a specific methodology should be designed and implemented in the classroom. This may include six key steps (Repko and Welch 2005):

1. Pre-Instructional Planning : prior planning to establish the topics to be examined in an interdisciplinary manner, and allow the teacher to acquire the requisite knowledge; also to develop activities that include open ended questions , brainstorming, etc , to guide the classroom experience.

2. Introducing the Methodology to Students : explaining the nature of interdisciplinary, rather than discipline- based ,learning and stressing the importance of integrating insights and approaches from multiple disciplines to form a framework of analysis that will lead to a rich understanding of complex questions. The teacher must ensure that he will be modelling how to approach an issue in an interdisciplinary manner, and that ultimately the students will be asked to master this skill. They will be given assignments that help them reach this objective by practising approaching topics as “interdisciplinary investigators”.

3. Practice Interdisciplinary Thinking: the students practise interdisciplinary thinking by re-enacting what they observe in the classroom. This is an effective way to acquire this higher- order cognitive skill. They can be assigned the task of rethinking an issue discussed in a discipline- based manner in class by bringing another discipline to bear and then attempting to synthesize and integrate their analysis.

In a small class setting (i.e. post-graduate seminars) students can be asked to prepare *interdisciplinary position papers* for each assigned reading that extends the analysis to reflect the interdisciplinary process; they may then consider other disciplinary perspectives, synthesize and integrate. Collaborative forms of learning can be used to promote the development of interdisciplinary analysis skills.

4. Provide Feedback: *interdisciplinary position papers* should be evaluated regularly. The aim is to provide the students with feedback on their ability to understand and delineate the underlying structure and analytical framework of other relevant disciplines (*multidisciplinary thinking*) and to produce an integrated analysis (*interdisciplinary thinking*). Some tutoring/advising may be necessary for those students struggling to master the integration element of interdisciplinary learning. The goal is for students to improve their capacity to think in an interdisciplinary manner.

5. Assessment : the students should engage in self -evaluation periodically by rating their ability to set out the structure of multiple disciplines that are well suited to the problem under discussion, synthesize insights from multiple disciplines, and integrate ideas across disciplines. This information will allow them to evaluate their progress, identify challenging areas, seek help and set goals for improvement.

As can be seen from these steps, the organization of interdisciplinary courses is a structured task that should take time and reflection. The interdisciplinary approach could be implemented in postgraduate seminars. But it seems essential that one starts with disciplinary courses and teach specific disciplines like English/American/African Literature, Linguistics/ Sociolinguistics /Psycholinguistics, Discourse Analysis, Language Teaching or African/ British/American Civilisation, wherein fundamental concepts of the discipline are covered. The aim of is to equip students with a solid understanding of the discipline's techniques and conceptual orientation, and to apply the discipline's *way-of-thinking* to questions central to the field.

Therefore, it is necessary that students develop a deep enough understanding of the underlying principles, assumptions, and methodologies of their discipline in order to get well-prepared and well- positioned to critique their field of study based on insights from related disciplines. Indeed, some educators believe that students cannot fully benefit from interdisciplinary studies until they acquire a solid grounding in their ‘home discipline’ (Jacobs and Borland 1986).

It seems possible to organize Advanced Interdisciplinary Seminars for students to engage in interdisciplinary examination of issues. These could relate to “Language and Political Issues”, “Literature and Social Issues”, “African and American Dilemmas”, “Issues of Race and Equality in Britain”, etc. This can create a fertile environment for debate and exchange of views and opinions on topics that have many points in common and therefore could be viewed in broader perspectives (arts, language, society, politics, religion, anthropology, ecology , psychology, etc). Furthermore, the intellectual experiences inherited from the languages we speak and/or write (Arabic, Berber, French, etc) are invaluable assets and resources for such perspectives in this country. So why not set up a graduate programme in

"Algerian Studies" in our departments, as one colleague suggested, that would include the contributions of scholars from all human sciences?

If interdisciplinary forms of learning were adopted, students would need to understand the analytical framework and methodology of the additional disciplines , and such postgraduate interdisciplinary seminars would be much useful for students to identify the complexity of certain issues and to make them aware that disciplinary boundaries are sometimes artificial or 'porous'.

In an interdisciplinary post-graduate seminar, students will learn how to approach the same set of questions, how to explore issues and identify common ground and areas of friction, and how to integrate insights from multiple disciplines to form a coherent interdisciplinary perspective.

Furthermore, interdisciplinary approaches promote the critical thinking skills of analysis, synthesis and evaluation. Critical thinking requires thought to be analysed, assessed for its clarity, relevance, depth, breadth and logicalness. Since reasoning occurs within points of views and frames of reference, students need to be aware of an author's approach to a particular problem as well as their own. They need to be taught how to bring the basic tools of 'disciplined reasoning' into every subject they study (Paul 1997). Critical thinking teaches students to be more integrative and more 'inclusive thinkers', to think logically, critically, creatively and persuasively.

However, there are some personal barriers relating to the way one is raised. Many of the values and preferences one has, such as religious beliefs, work ethics, way of life, etc. are instilled in the individual since birth by his /her culture, and 'enculturation' goes on continually, independent of age. The extent to which students are able to think critically about ideas that conflict with their basic attitudes and values will closely depend on how ready or willing they are to resist these ideas or challenge them, to think critically about them or to test them against the intellect of others. And the more they are exposed to interdisciplinary approaches, the more they will need critical thinking skills. Because interdisciplinarity implies constantly adding new information and constantly expanding one's horizons, it is vital to remain always critical of what we read, hear or see.

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