

Title:

CREATIVITY IN MATERIALS DEVELOPMENT: A RESOURCE TO ENHANCE
ACTIVE LEARNING IN HIGHER EDUCATION

Theme:

Using Scholarship to Enhance Learning Resources

Subtheme:

Advancing Active Learning

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ABSTRACT

Contemporary higher education faces many challenges: funding cuts and diminished resources, large class size, wider university participation, increased student diversity, and rapidly changing student characteristics. In the midst of these challenges, teachers are a very important factor in student engagement. Using examples from teaching an undergraduate course in Educational Psychology, the author discusses ways in which teachers can be creative in developing authentic, interesting and meaningful course materials to engage students in active learning.

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INTRODUCTION

Trends and statistics report a growth in student population in recent decades (Phillippe & Sullivan, 2005). There is evidence of a steady decline of first-generation students (first-time, full-time college freshmen) between 1971 and 2005 in the USA (Higher Education Research Institute, 2007). Moreover, there are changes in student characteristics as well. For example, the average age of a college student in community colleges in 1998 – 99 was 25.4 years old. Five years later, the average age had dropped to 25.1. The number of students aged 17 – 24 is increasing, so does the number of African American and Hispanic students (Winn & Armstrong, 2004). Research has shown that accessibility to colleges and universities has increased for women, students from low-income families, and people of color

Changes in student profile in turn present different student characteristics in age, attitudes, expectations and aspirations, gender, ethnicity and family conditions (Moore, Moore & McDonald, 2008; Terenzini, Springer, Yaeger, Pascarella & Nora, 1996). Recent US national reports have shown that 9.7 to 11 percent of all undergraduates have a disability (U.S. Department of Education, 2006; Wagner, Newman, Cameto, Garza & Levine, 2005). Survey trends show that the increasing college enrollees of minorities, low socioeconomic background, persons with disabilities fit the profile of “high-risk” students (Jones & Watson, 1990). These students are more likely to drop out of college. Taken together, these findings present new challenges to student engagement, academic and non-academic support. To paint a gloomier picture, higher education is facing drastic funding cuts (Zumeta, 2009), which makes extra funded resources to support students a dream rather unlikely to be realized.

ACTIVE LEARNING TO ENGAGE STUDENTS

Despite these challenges, colleges and universities are taking active steps to engage students (Belcheir, 2003; Kinzie, 2009; USA Today, 2010). Active and collaborative learning is one measure to engage students.

What is active learning?

The term active learning has yet to attain a well-established definition. Chickering and Gamson (1987) asserted that for learning to be active, students must do more than sit

in class. This means that students must talk, write, relate or apply what they are learning. In short, they need to be engaged in doing some tasks. These can be structured exercises, team projects, or challenging discussions.

Bonwell & Eison (1991) considered active learning to be characterized by:

- Students doing more than listening;
- More emphasis on developing students' skills;
- Students doing some higher-order thinking tasks;
- Use of activities, such as reading, writing or discussion
- Instructional strategies (e.g. role play) are employed to influence students' attitudes and achievement.

The role of the teacher in active learning

King (1993) argued that the transmittal model of university teaching in which the professor is the central figure who transmits knowledge to the student is outdated for the twenty-first century. In its place is the constructivist theory of learning whereby the professor is a facilitator of learning and uses active learning techniques to help students construct knowledge.

Regardless of what active learning strategies are employed, teachers are a very important factor in student engagement. As one student in the High School Survey of Student Engagement remarked: "A good engaging teacher makes all the difference between a pass or a fail" (Yazzie-Mintz, 2010).

Using examples from teaching an undergraduate course in Educational Psychology, the author discusses ways in which teachers can be creative in developing authentic, interesting and meaningful course materials to engage students in active learning.

THE COURSE AND AIMS OF MATERIALS DEVELOPMENT

The course:

The course "*Educational Psychology*" is a ten-credit middle-level course designed for students who intend to become teachers in primary or secondary schools but is also suitable for those who are interested in learning about how children and adolescents develop and learn. It is available to students from different kinds of double-degree (Education and English language studies) programs. This course is offered as an elective to freshmen in the autumn term and runs for two semesters. However, when offered in the summer, it is a required, intensive course for first-year students who are enrolled in the double honors program. Students from this program who do not pass this course must re-take and pass it in Year 2, or else

they are not allowed to register for another advanced course in Year 3, which in turn can delay their graduation.

Aims of materials development:

Given that students who take this course are in their first year of university education, I would like to design course materials that fulfill certain criteria and serve the following purposes:

- Promote active learning
- Be relevant to students and to the course content
- Invite all students to participate, not just some of them
- Enhance understanding of theories and concepts
- Encourage deep learning
- Be original and creative
- Be interesting
- Be motivating

EXAMPLES OF MATERIALS DEVELOPED

An attempt to use a variety of strategies to develop tailor-made materials for students in the Educational Psychology course was made. The following are examples of the materials created for various topics:

Design of a guessing game to introduce research methods

Students often find research methods difficult to understand. Moreover, when reading research studies, sometimes they go to the other extreme to see results as “common sense”. In order to dispel these biases, students were divided into two large groups (A and B) and then told to form their small groups of 4 – 5 members. Each small group was given a strip with an idiom on it. Their task was twofold:

1. To discuss whether they agree with the idiom and explain reasons for their position.
2. To use whatever ways to present the idiom in class for students in the other large group to guess the answer. The only restriction was that when they presented, they could not mention any of the words in the idiom.

After discussion, groups that agree to the idiom were asked to raise their hands. Then, two small groups from A and B were asked to present the idiom for other students to guess the answer. Afterwards, they were asked to explain why they agreed with the idiom. Although these two different groups both agreed with the idioms and gave good justifications to support their position, these idioms in fact contradicted each other. The teacher then revealed the idioms in class, which were: “Absence makes the

heart grow fonder” and “Out of sight, out of mind.” This took them by surprise. Seeing that students felt puzzled, the teacher explained the need for good research to replace seemingly wise common sense. This game served to help students to see the value of scientific research. It also created a pleasant, inviting classroom climate. The session went on with discussions on what conditions and factors might account for the wisdom in these idioms. Ideas generated from the discussions were later translated into research terminologies. The exposition increased students’ motivation to learn and a mini-lecture on the different research methods smoothly followed.

Use of role play to understand Kohlberg’s theory of moral development

The classical moral dilemma in Kohlberg’s theory is well-known in educational and developmental psychology. Heinz was confronted with whether to steal an expensive drug to cure his wife in the dilemma. To make this theory more comprehensible and interesting, students formed groups of six and were randomly assigned different roles to discuss the dilemma: the sick wife’s husband, son (aged 10), teenage daughter, wife’s sister (a housewife), wife’s brother-in-law (a shopkeeper), a family friend (students to decide his/ her occupation and background).

Students had to discuss and decide as a group whether to steal the drug or not, and each person had to explain his/ her thinking and the reasoning behind the decision. After reporting the decision in class, the stage was set for an introduction of Kohlberg’s theory by the teacher. Afterwards, students continued with another exercise: using Kohlberg’s theory to analyze the responses from their previous role play discussion. This exercise ensured a good grasp of the theory, provided students with an opportunity to apply the theory in daily life, and at the same time, involved students actively in meaningful interactions.

Multiple tasks to examine the nature of intelligence

The nature of intelligence has been a hot topic of study. There are many approaches and theories in this area. To experience and examine this topic in some detail, students were given modified sample items from intelligence and nonverbal tests (such as the WAIS and the Raven’s) to try out so as to have some hands-on experience with psychometric tests. On another occasion, after learning Gardner’s theory of multiple intelligences, they were asked to identify the kind of intelligences necessary for certain occupations, or vice versa. Some occupations discussed included: journalist, teacher, politician, botanist, driver, researcher, singer, counselor, priest, farmer, and dancer. The exercise aimed to connect daily life to theoretical concepts taught. It also increased students’ interest in learning the theories, developed their analytical ability,

and enhanced students' self-understanding.

STUDENT FEEDBACK

Positive feedback was obtained from students, both from the year-long course (September 2008 to April 2009) and the summer intensive courses (May to October 2008 and 2009). Student evaluations collected from the University's Planning Unit were very positive. Ratings were above the University's averages (3.7 to 3.9 out of 5). For example, students thought that class time was used effectively (mean score: 4.50) and presentation was clear (mean score: 4.43). They found that the course content was relevant and useful (mean score: 4.14). Qualitative feedback about the teaching and course content was also very positive. Here are some examples:

There are many learning activities. Most of the classmates are actively engaged in them. We learn from "doing." The content of the course is useful in preparing us to be teachers and the course is presented in an interesting way. (Student A)

I like the lectures and tutorials because we are valued in discussion and we can raise questions and get feedback right away. (Student B)

The contents were interesting and Dr. Lai-Yeung prepared interesting activities for the lessons. (Student C).

I like the effective way of teaching. It's because every lesson is clear and intense: you get the main ideas of the chapter each lesson. Time management is good and time is used effectively. (Student D).

In sum, students enjoyed the activities and found them relevant and effective. Initial experience in developing the materials has been positive. However, further work can be done in future to examine the extent to which these materials and activities contribute to different aspects of student learning.

CONCLUSION

It is hard fact that teaching in higher education is becoming increasingly demanding, with challenges of changing student characteristics, heavy workload, and few resources. The outlook for increase funding support in the near future is grim (Zumeta,

2009). However, with some creativity, teachers can turn around the situation and more than live with the constraints — we can develop interesting activities and materials to engage students in active learning. That makes teaching and learning more enjoyable for both the students and the teachers.

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