Flexible Grouping in the Higher Education Learning Environment

Dr. Laurie Bedford, Capella University and Northcentral University,
Matthew Wiebe, National American University,
Mimi Tschida, Capella University

1. Abstract:

Active learning strategies are a topic of significant interest and research for instruction in higher education. Active learning discourse includes discussion of the difference between learning outcomes in courses facilitated with active learning strategies versus traditional techniques. This article argues that active learning environments within higher education lack a critical component, the use of flexible grouping techniques that capitalize on the diversity of the learners. Flexible grouping has been successfully used in the K-12 environment as a method to differentiate instruction primarily to accommodate diverse levels of readiness. Drawing upon the K-12 flexible grouping literature, we outline flexible grouping strategies aligned with the principles of adult learning and discuss their application and effectiveness in the higher education classroom.

Keywords

Flexible Grouping, Active Learning, Diversity, Deep Learning, Instructional Strategies

2. Introduction

Active learning as a strategy for instruction in higher education is a topic of significant interest and research. The discourse aligned with active learning includes discussion of the difference between learning outcomes in courses facilitated with active learning strategies versus traditional techniques (Bonwell & Eison, 1991). Two of the primary active learning strategies that are encouraged are the use of instructor facilitation based on a learner-centered paradigm and the use of inquiry type questioning based on Bloom's taxonomy and aligned with a competency-based perspective.

We argue that an additional component that is often missing from the active learning environment but critical to its effectiveness is the use of flexible grouping techniques that capitalize on the diversity of the learners. Learners need to be exposed to diverse and unique perspectives to develop an appreciation for the complexity of course content and for deep, meaningful learning (Schroeder, 2003). In the context of flexible grouping, facilitating learners' understanding of diversity can create an integrated, systematic approach to achieve learning outcomes (Ford, 2005). Combined with high-quality questioning and instructor expertise, flexible grouping dependent upon diversity becomes essential to a successful learning experience.

Flexible grouping has been successfully used in the K-12 environment as a method of differentiating instruction primarily to accommodate diverse levels of readiness

(Tomlinson, 1999). Drawing upon the K-12 flexible grouping literature, we have modified traditional K-12 flexible grouping strategies to increase their effectiveness with adult learners. This necessitates that the strategies involve two stages. First the grouping of students to align with stated learning outcomes and, second, to capitalize on the diversity of experience, prior knowledge, and preparation that learners bring to the classroom. The strategies outlined also take into consideration classroom constraints such as subject matter and time management.

3.   Active Learning

In contemporary institutions of higher education, the concept of active learning has become a mainstream paradigm in which the learner is the primary focus. This is often accomplished through dialogue among peers and engagement with the course content. Fink (2007) suggests that in order to promote an active learning environment, instructors need to do "more than simply develop a list of topics in a course and then provide lots of information about each topic" (p. 14). Rather, courses need to be designed that in a way that is learner-centered. A learner-centered approach provides individuals with opportunities to intellectually interact with the content and with their peers in ways that allow them to integrate their prior knowledge and understanding with the new information. Knowles (2005) identifies this cognitive activity as a "process of mental inquiry, not passive reception of transmitted content" (p. 35). As such, learning activities using the principles of active learning need to include a focus on purposeful, intellectual interaction among the learners aligned with a cycle of discourse and reflection opportunities.

A hallmark feature in the active learning environment is the use of student discussion groups in which dialogue and reflection become the primary pedagogical tools (Bonwell & Eison, 1991). Often referred to as cooperative learning or collaborative inquiry, instructors carefully select topics and facilitate these discussion groups with the specific purpose of drawing upon the unique perspectives and experiences of the students. As noted in their meta-analysis of cooperative learning studies, Johnson, Johnson, and Stanne (2000) found that "hundreds of research studies demonstrate that cooperative efforts result in higher individual achievement than do competitive or individualist efforts" (p. 120).

As a result of our experience and observations, we concur that learning within the context of a cooperative, engaging environment is most conducive to the spirit of active learning. This increases the likelihood that instructional efforts will result in a level of learning that focuses on the underlying meaning of the content rather than superficial knowledge that categorizes rote memorization and surface thought (Fink, 2007). When learners interact with the content, each other and the instructor in an intellectual atmosphere, learning can evolve from a superficial acquisition of knowledge to a transformative experience that includes a holistic change in how the learner relates to the topic. This kind of deep learning, according to Laird (2005), provides learners with the opportunity to integrate and synthesize information with "prior learning in ways that become part of one's thinking and approaching new phenomena and efforts to see things from different perspectives" (p.4).

4.   Flexible Grouping in the K-12 Environment

While mention of discussion groups based on participant diversity is limited within the higher education literature, there is an abundance of references to this strategy in the K-12 realm. Flexible grouping is the term often used within the K-12 environment to describe how educators consider diversity as a critical component of their instructional repertoire. Flexible grouping as defined by Radenchich and McKay (1995) is "grouping that is not static, where members … frequently change (p. 11). This change in grouping is a planned instructional process that considers the strengths, needs, and experiences of the individuals in the groups as well as the articulated learning outcomes. It takes advantage of, rather than ignores, the diversity that students bring to the classroom.

In the K-12 environment, flexible grouping has become a salient issue in instructional planning because, according to Ford (2005), "the overuse of homogenous small groups often meant that … [students] never had access to the same quality of instruction as others did" (p.1). This is because the homogenous groups were based on ability. Once a student was placed in an ability group, they rarely received opportunities to interact with peers with diverse skill levels. Flexible grouping patterns as a means by which students could emerge from these static groups became the defining characteristic of a classroom designed to support and celebrate diversity. According to Tomlinson (2003), flexible grouping is a way to encourage students to see themselves in a variety of roles with expertise and experience that situates them as a contributor to the curriculum rather than a simple consumer of the content.

5.   Flexible Grouping in an Adult Context

Instead of relying on convenience or self-selected groups in active learning experiences, flexible grouping strategies suggest purposeful consideration of student-led teams within a meaningful context of course content that leads to deep learning (Laird, 2005). They also provide purposeful opportunities for students to express themselves within their own comfort level. While the majority of the literature about flexible grouping is derived from and targets K-12, we believe that it can also lead to positive outcomes in higher education, including purposeful, intellectual interaction among learners; a greater appreciation for the subtle nuances in diversity; and an education focused on deep learning outcomes.

The term diversity connotes a variety of definitions depending upon the context in which it is used. Many learners have come to understand diversity as pertaining to racial, ethnic, regional, and socioeconomic differences. As such, students, according to Galligani-Casey (2005), do not always recognize the "innumerable ways that difference manifests itself and of the concurrent but varied strategies required to accommodate it genuinely" (p. 34). Purposeful, facilitated dialogue in which diversity is a differentiating factor can allow students to develop competence in recognizing and respecting the experiences of others. It also places their own assumptions into a context that challenges their own beliefs through the examination of alternative perspectives. This situates the learner in a position of being able to interact with multiple perspectives and to construct new or revise previous interpretations of their own experience (Mezirow, 2000). Instructors relying on these techniques have come to realize that diverse learner experience is the key to deep learning. Since deep learning has recently been identified

as an important focus in undergraduate education (Schroeder, 2003), grouping strategies would seem an important tool for instruction.

Although higher education has long positioned itself as a hub for diversity and innovative thinking, much of the instruction has traditionally assumed that all learners have essentially the same linguistic, cultural and academic backgrounds (Gillani, 2005). This positions all learners as a single entity without consideration for how individuals or groups of students might differ in their readiness, prior experiences, willingness to learn and a myriad of other variables. Consideration for flexible grouping opportunities capitalizing on both the subtle and the obvious diversity among learners is a strategy to build instruction that is inherently differentiated. In turn, this places the curriculum at the level and perspective of the individual learner rather than at an arbitrary point aimed at an artificial target in hopes that all learners might relate.

The concepts and challenges associated with flexible grouping in higher education are similar to the K-12 environment, but the application needs to be situated within the context of adult learning principles. Drawing upon the work of Tomlinson (2003), Marzano, Pickering, and Brandt (1990), and Radencich and McKay (1995); and juxtaposed with Fink (2007) and Knowles (2005), we summarize some of the questions that should be considered when determining the most appropriate grouping strategy for interacting with adult learners:

- What experiences do the learners bring to the classroom that would strengthen a discussion on this topic?
- What passions and motivations are inherent in this group of learners?
- Under what conditions will the learners develop and grow within the context of this topic?
- What are the outcomes articulated for this learning opportunity?
- How is learning expected to transform over time?
- What critical and creative thinking skills will learners need to interact with this content?

Once these questions have been reflected on, the instructor can begin to develop a strategy for grouping learners that will enhance the dialogue and capitalize on their potential contributions.

6.   Flexible Grouping Strategies

Working in groups does not mean that learners engage only in triads or quads. Purposeful grouping includes the use of whole-class activities, paired activities, individualized work, as well as student-instructor interactions. Students in a course in which purposeful grouping strategies are aligned with articulated learning outcomes have the opportunity to work with many different peers throughout the course (Tomlinson, 1999). The flexible grouping literature offers a plethora of strategies on which grouping decisions can be made, including the match of the task to student goals, interests, or learning styles. Other strategies allow instructors to create skills-based or interest-based teams that are heterogeneous or homogeneous based on a number of characteristics. Sometimes work teams can be student choice, but teachers should also

direct students to teams based on a variety of characteristics. Student team assignments can sometimes be convenience driven but should more often be purposeful. Currently, we observe the most common strategies used to group teams are convenience, self-selection or whole class. However, by teaming students with a variety of purposes in mind, we believe instructors can facilitate a much wider range of learning experiences.

Drawing upon the work of a number of flexible grouping contributors (Tomlinson, 2003, Fink, 2007, Marzano, Pickering & Brandt, 1990, Radenchich & McKay, 1995, and Ford, 2005), we have identified five basic types of grouping strategies: homogenous, heterogeneous, self-selected, random, and convenience. The various teaming types, assignment methods, and rationales as they relate to adult-learning situations are outlined in Table 1.

Table 1
Teaming Types, Assignment Methods, and Rationales for Adult-Learning Situations

Teaming Type	Assignment Method	Rationale
Homogenous	Based on a specific skill set, academic discipline or goal. Examples include students who have participated in specific pre-requisites, have practical experience, are in the same major, or have the similar career goals. Students in a homogenous team tend to have a similar level of interest in and enthusiasm for the topic.	The rationale for homogenous teams is to allow the students who have the most experience with the material to move more quickly into higher level activity and provide extra time for those learners with less prior knowledge. Using this strategy provides for opportunities for all students to become engaged at their level.
Heterogeneous	Based on diverse skill sets, academic discipline or goals. In heterogeneous teams, instructors encourage teams based on diversity. In heterogeneous teams, students might have completed a variety of prerequisites, be working toward different majors, have diverse work experience, or possess varying career goals. Students in heterogeneous teams will likely have varying levels of interest for and enthusiasm in the topic.	There is a body of research evidence to support the teaming of students by heterogeneous characteristics. This research shows that the more experienced students will benefit from providing their expertise and interest to the less experienced student and the less experienced student will benefit from the more experienced student's expertise and enthusiasm.

Teaming Type	Assignment Method	Rationale
Random	These teams are based on superficial kinds of characteristics. Instructors can team students alphabetically, by commuting distance, or by any number of characteristics.	Random assignment allows for the possibility of students working with other students with whom they would otherwise not have an opportunity to work with. Random assignment provides novelty to students and may increase their engagement.
Self selected	Students choose their own partners, typically based on familiarity.	Students enjoy working with other students with whom they have a personal or interest association. They find it convenient to work with partners who might live or work in close proximity to them or with whom they have had previous, positive experiences.
Convenience	Convenience teams are determined by logistical simplicity, typically by whoever is sitting closest together.	Students often seat themselves in close proximity to those with which they are most familiar. Teaming students by convenience groups gives students an opportunity interact based on previous experience and comfort. Teams can be organized quickly and this strategy typically requires very little planning by the instructor (Tomlinson, 2003, Fink, 2007, Marzano, Pickering & Brandt, 1990, Radenchich & McKay, 1995, and Ford, 2005).

Random, self-selected, and convenience group membership can be determined by existing characteristics inherent in the grouping process itself. For example, convenience groups are likely based on where learners sit when they come into the classroom. Therefore, little attention needs to be given to the grouping strategy above and beyond the primary characteristic presented. In contrast, the criteria on which heterogeneous and homogenous teams are formed can be varied based on pre-determined standards and/or characteristics unique to the group.

In general, homogenous groups are formed to provide opportunities for students to work with individuals who are similar in a variety of ways. This method allows the teams to move forward more quickly because common ground is quickly found. Students in homogeneous learning teams enjoy camaraderie, collaboration and shared understanding. Students who are teamed homogeneously are able to capitalize on talents and abilities that are sometimes neglected in the traditional learning environment. In addition, working in a homogenous team allows for synergistic effects sometimes absent from heterogeneous teams who must work toward common understandings before making progress on team projects. Finally, in homogeneous teams, students can enjoy sharing their knowledge with peers who have similar interests and develop possible relationships outside the classroom.

Conversely, heterogeneous teams provide students with opportunities for students to interact with the content through the varying perspectives of their peers. They also give team members the opportunity to better understand the dynamics of the group process, including conflict management and compromise. According to Mahendra, Bayles, Tomoeda, and Kim (2005), promoting a collaborative, supportive classroom culture increases the opportunities for learners to be exposed to diverse viewpoints and values. Heterogeneous teams particularly capitalize upon the foundations of diversity, which have the capacity to advance students' appreciation for multiple perspectives on the topic and develop skills needed to work in diverse communities (Zúñiga, 1998). Through participation in heterogeneous groups, learners can come to a realization that diversity is an asset that can enhance the learning of all group members, moving them toward the achievement of target learning outcomes. An appreciation for diversity by learners is important as they prepare to move into authentic situations outside the educational setting in which cultural competence is necessary for successful integration into workplace and social settings (Mahendra, Bayles, Tomoeda, & Kim). With repeated rehearsal in negotiating conflicts created by interacting with diverse perspectives in the collaborative setting, learners become more aware of how these conflicts impact their own attitudes and behavior.

Some of the more common criteria for homogenous and heterogeneous teaming strategies are summarized below (Tomlinson, 2003, Fink, 2007, Marzano, Pickering & Brandt, 1990, Radenchich & McKay, 1995, and Ford, 2005).

- Learning Style: Learning styles are determined through student-completed inventory or self-assessment.

- Multiple Intelligences: Preferred intelligence is determined through student-completed inventory or self-assessment.

- Interest: Interests are determined through student self-assessment and collaboration with peers.

- Prior Knowledge: Prior knowledge is based upon a combination of academic preparation and experience.

- Experience: Students categorize their experiences either with the content or with the application of the content based on prescribed criteria.

- Preparedness: Students self-assess their level of preparation for the activity in which they will engage. This includes reading, research, and/or having access to course materials.

7.   Conclusion

Active learning as an instructional strategy will likely continue to dominate the literature and best-practice rhetoric for deep learning in higher education classrooms. As instructors become more aware of the positive outcomes associated with active learning environments, so too their skills and expertise in its facilitation will become more important. Preparation for active learning facilitation should include dialogue about how best to capitalize on learner diversity to promote deep, meaningful learning (Laird, 2005). This should include both a philosophical discussion that focuses on how subtleties in diversity can create complex perspectives as well as provide strategies for the implementation of flexible grouping as a foundation for classroom discussion.

Acknowledging that incorporating flexible grouping strategies into an active learning environment will likely increase the workload of the instructor, require mechanisms to identify the diversity that exists among learners and increased facilitation skills, we believe that this is a salient component of an integrated, systematic approach to achieve learning outcomes. Combined with high-quality questioning and instructor expertise, flexible grouping becomes the stabilizing factor in the triad of prerequisites for a successful learning experience.

Authors Contact Information

Laurie Bedford, Ph.D., Instructional Development Consultant, Adjunct Faculty Capella University and Northcentral University, 2609 Badger Dr.; Sturgis, SD 57785 605-720-7882, laurie.bedford@gmail.com

Matthew Wiebe, Instructional Designer, National American University, 5301 S. Highway 16; Rapid City, SD 57701 605-721-5272, mwiebe@national.edu

Mimi Tschida, Instructional Development Consultant and Doctoral Candidate Capella University, 23972 Hungarian Court; Rapid City, SD 57701 605-348-1797, mimitschida@msn.com

References

Bonwell, C., & Eison, J. (1991). Active learning: Creating excitement in the classroom. ASHE- ERIC Higher Education Report No. 1. Washington, D.C.: The George Washington University.

Fink, L. (2007). The power of course design to increase student engagement and learning. Peer Review, 13-17.

Ford, M. (2005). Differentiation through flexible grouping: Successfully reaching all readers. Naperville, Illinois: Learning Point Associates.

Gallagani-Casey, J. (2005). Diversity, discourse, and the working-class. Academe, 91(4), 33-36.

Gillani, B. (2003). Learning theories and the design of e-learning environments. Lanham,

Maryland: University Press of America.

Knowles, M., Holton, E., & Swanson, R. (2005). The adult learner: The definitive classic in adult education and human resource development (6th ed). London: Butterworth-Heinemann.

Laird, T. (2005). Measuring deep approaches to learning using the National Survey of Student

Engagement. Paper presented at the Annual Meeting of the Association for Institutional Research. Chicago, IL.

Mahendra, N., Bayles, K., Tomoeda, C, & Kim, E. (2005). Diversity and learner-centered education. ASHA Leader, 10(16), 12-14.

Marzano, R., Pickering, D. & Brandt, R. (1990). Integrating instructional programs through dimensions of learning. Educational Leadership, 17-24.

Mezirow, J., & Associates. (2000). Learning as transformation: Critical perspectives on a theory in progress. San Francisco: John Wiley & Sons.

Radenchich, M. & McKay, L. (1995). Flexible grouping for literacy in the elementary grades. Boston, MA: Allyn and Bacon

Schroeder, C. (2003). What's going on in higher education? Charles Schroeder talks to Russell Edgerton. About Campus, 8 (2), 8-15.

Tomlinson, C.A. (2003). Deciding to teach them all. Educational Leadership, 6-11.

Tomlinson, C.A. (1999). The differentiated classroom: Responding to the needs of all learners. Alexandria, VA: The Association for Supervision and Curriculum Development.

Zúñiga, X. (1998) Fostering intergroup dialogue on campus: Essential ingredients. Diversity Digest. Retrieved on March 16, 2007 from http://www.diversityweb.org/Digest/W98/contents.html.