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## Research on Effects of Ability Grouping and Tracking

### Position Statement on Ability Grouping and Tracking

The National Association of School Psychologists (NASP) supports the instruction of students within heterogeneous classrooms that recognize and accommodate individual student differences in learning style, ability, and interests. NASP opposes the use of tracking, a permanent approach where students are assessed and placed into specific classrooms with peers of similar ability, because of its demonstrated negative effect for many students.

Tracking is a form of whole-group instruction that is characterized by a single and a set curriculum which is delivered at the same pace for all students within the classroom. Placement is based solely upon the child's perceived ability level and is therefore considered to be an unacceptable approach for the grouping of students (Tieso, 2003). The effects of ability grouping have been analyzed and debated related to various populations including individuals identified as gifted and talented, individuals identified with educational disabilities, individuals of minority status, and economically disadvantaged students. Research has demonstrated that the use of whole class ability grouping disproportionately impacts minority students, economically disadvantaged students, and students with lower ability. Related to individuals identified with educational disabilities, whole class ability grouping does not comply with the requirements of placement within the least restrictive educational (LRE) environment. Further, the practice of whole class ability grouping/tracking can deny many children of their statutory right to equal educational opportunity.

Demonstrated best educational practice can lead to the establishment of excellence for all learners without resorting to the use of ability grouping. Such positive educational practices supported in the research and literature include:

- Cooperative learning is well established methodology which demonstrates positive success related to student achievement. Students work collaboratively to successfully achieve a desired educational outcome. Students develop a greater understanding and respect for individual differences. All forms of diversity within the learning environment are embraced (Felder & Brent, 2001; Freeman, 1993).
- Differentiated instruction requires educators to respond to the individualized needs of all learners within the regular education environment (Kulik & Kulik, 1992). The practice of differentiated instruction allows all students equal access to the curriculum while maintaining high expectations for students. All students benefit from the exposure to a challenging curriculum that is appropriate for their specific learning needs. Differentiated instruction provides options related to the process, the product, and the content utilized for learning (Tomlinson, 1999).
- Small group instruction makes it easier to monitor student mastery of educational concepts, and accommodate individual learning needs (McMillion, 1994). Remediation and direct instruction occur more easily within small learning groups.
- Curriculum modification is a procedure for removing repetitive, unnecessary, and unchallenging content, and/or enhancing existing curricular materials with higher level questioning, critical thinking components, independent thinking, transferring skills and insights into new contexts (e.g., Halpern, 1996). Scaffolding is an approach which should be utilized to match the curriculum with the student's learning needs. Opportunities must also be provided for both guided and independent practice related to student learning activities and high expectations are maintained for all learning tasks (Tomlinson, 1999).

- Essential understandings are a curricular development plan that facilitates students' understandings of the "big ideas," key concepts, and principles of a discipline, as opposed to a collection of seemingly random and unrelated facts (Erickson, 1998).
- The 'structure of disciplines' techniques teach students about the overarching structures underlying academic disciplines. They learn about the construction of knowledge within domains and learn how to follow developments within a field. This foundation helps students remember facts in a meaningful context (Gardner, 1999).
- Learning Communities have been demonstrated to positively impact school climate, professional development, and student achievement. Through the practice of learning communities, students are strongly encouraged to have ownership in the learning process. Students assist with the establishment of learning goals, objectives, and in the development of criteria utilized for evaluation. Students participate in providing direction for learning tasks and ultimately become self-assessors of their own learning (DuFour & Eaker, 1998).
- Flexible grouping can also be a positive learning strategy, when it is not over used. Homogeneous grouping by skill level has been demonstrated to be effective for instruction in the areas of mathematics and reading (Marzano, Pickering, & Pollack, 2001). Three keys to flexible grouping are using it sparingly, monitoring student progress closely, and allowing for the continual remixing of assigned groups. This allows students to move between smaller homogenous skill-based groups and then back to larger heterogeneous groups for creative and problem solving activities. Flexible grouping surrounding student skills and across age grouping allows students performing at various levels to share their

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combined areas of knowledge and strength (Marzano, Pickering, & Pollock, 2001). If utilized effectively and in a sensitive manner, the method of flexible grouping does not have to carry a negative stigma for the learner (Tieso, 2003).

With their high level of training and expertise, school psychologists should continue to strongly advocate for best educational practices meeting the diverse needs of all students. School psychologists should strive to impact the school system on an organizational level, focusing on a problem-solving model and the demonstration of student progress through outcome-based measures.

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**Hot Topic:  
Does Ability Grouping Help or Hurt?  
A Talk with Anne Wheelock**

**Does ability grouping — or tracking — enhance academic achievement?**

No, and research tells us that it is not a neutral or benign practice, either. Although it is widespread and widely accepted, ability grouping generally depresses student achievement and is harmful to kids.

**Why is tracking harmful?**

It's harmful for a number of reasons.

- The criteria we use to group kids are based on subjective perceptions and fairly narrow views of intelligence.
- Tracking leads students to take on labels — both in their own minds as well as in the minds of their teachers — that are usually associated with the pace of learning (such as the "slow" or "fast" learners). Because of this, we end up confusing students' pace of learning with their capacity to learn.
- We associate students' placement with the type of learners they are and therefore create different expectations for different groups of students.
- Once students are grouped, they generally stay at that level for their school careers, and the gap between achievement levels becomes exaggerated over time. The notion that students' achievement levels at any given time will predict their achievement in the future becomes a self-fulfilling prophecy.

**How common is ability grouping?**

About 60 percent of elementary schools are breaking up students into different levels in every grade, or practicing some kind of whole-class grouping by ability — including creating Chapter 1 or gifted classes. While some schools institute rigid distinctions in the early grades — such as grouping students into transitional first-grade classes — others wait until fourth or fifth grade.

**What does tracking look like at the elementary level?**

Because teachers tend to give students a curriculum that matches their label, the "most able" or "fast" learners generally read whole books, go to the library frequently, do independent research, enjoy more choices, have additional access to the computer, go on extra field trips, have opportunities to collaborate on projects with community members, have a mentor, and so on. On the other hand, "slower" learners tend to read from the basal, do worksheets, have fewer choices, and so on.

**Are there advantages to grouping kids homogeneously for certain subjects, such as reading?**

Yes. Schools I've found that are exploring alternatives to tracking set up temporary groups for students who have similar skill levels, such as groups who need help grasping the concept of subtraction. Kids get extra help, not "instead of" help.

**What other alternatives to tracking have you seen?**

Sometimes teachers pre-teach groups of kids they think need help grasping a concept or skill. Before the topic is introduced to the rest of the class, the teacher works with the group to jump-start their learning. These groups are temporary.

Other schools offer double periods for particular subjects, such as additional reading or math lessons so kids have multiple chances to cover the topic — or provide extra support through after-school programs.

**Is cooperative learning an important strategy in heterogeneously grouped classrooms?**

Cooperative learning is one of many strategies, but it can't stand alone. It needs to be a linchpin of a high-content, activity-oriented, inquiry-based curriculum that provides access to all ability levels.

**Are gifted children challenged enough in heterogeneously grouped classrooms?**

If the curriculum is rich and varied, yes. So teachers should commit to creating a high-expectations climate and an engaging, hands-on curriculum for all.

In a sixth-grade class I visited, for example, students who were learning about the hearing impaired took turns translating announcements for me in sign language. They also had set up exchanges with schools for deaf children, and were reading personal memoirs of deaf children, composing a novel featuring a hearing-impaired character, testing their hearing at different decibel levels and graphing the results, monitoring their learning with portfolios, and so on. There was room in that unit for all kinds of kids to do all kinds of work. The teacher offered extra help to those who needed it and made sure gifted students had opportunities to further explore their learning.

Grouping students by ability is one of the most talked-about topics in education. Does it benefit students? Inhibit their learning? Not matter? To bring you this report, Senior Editor Meg Bozzone spoke to Anne Wheelock, author of *Crossing the Tracks: How "Untracking" Can Save America's Schools* (New Press, 1992).

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One of the main arguments against ability grouping is that the practice creates classes or groups of low achievers who are deprived of the example and stimulation provided by high achievers. Labeling students according to ability and assigning them to low-achievement groups may also communicate self-fulfilling low expectations. Further, groups with low performance often receive a lower quality of instruction than other groups. Slavin sees as the most compelling argument against ability grouping its creation of academic elites, a practice which goes against democratic ideals.

Slavin, Robert E. ABILITY GROUPING AND STUDENT ACHIEVEMENT IN ELEMENTARY SCHOOLS: A BEST-EVIDENCE SYNTHESIS. Baltimore, MD: Center for Research on Elementary and Middle Schools, 1986.

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**Wynne Harlen discusses the research evidence around setting, streaming and mixed ability grouping**

Reviewing research on the effects of grouping pupils by ability could easily generate cynicism about educational research. There

is something to please everyone – some studies lend support to grouping by ability, some point in the opposite direction and many show that there is little difference that can be ascribed *only* to the type of grouping.

The reasons for so much ambiguity arise because this is a very difficult area for research. Studies of setting or streaming generally involve comparison of classes containing a full range of ability with those in which pupils were more similar in ability. However the relative performance of pupils is affected by many variables other than the mix of ability; for example, class size, ability range (in some studies, classes labelled mixed-ability may have been more similar in ability than classes labelled as ability-based in other studies), teaching methods and materials, the degree of differentiation, the attitude of the teacher towards mixed-ability teaching and the curriculum content.

So how do we make sense of the outcomes of studies, many of which leave essential variables uncontrolled and have other methodological shortcomings? In the case of the review which we carried out on the effects of ability grouping for the SOEID to inform an inquiry into the organisation and management of classes in primary and secondary schools, we applied the concept of 'best evidence synthesis' (Slavin, 1986). In best evidence synthesis, criteria are identified for good quality research, yielding the best evidence in a particular field. Research studies are then compared against these criteria and the reviewer places more emphasis on the findings of those studies which match, than on those which fall short in some way. This approach enabled us to sift through the research evidence and use what was most reliable.

Many of the studies, particularly those conducted some years ago, measured and compared achievements of pupils in ability-based and mixed-ability groups (usually in maths or, for young children, reading). These studies tell only part of the story however. Some more recent research based on classroom observation and/ or interview is particularly important in showing what other effects different groupings have on pupils, on teachers and on interactions in the classroom. For instance, observations in some secondary schools showed that, whilst teachers claimed to be providing differentiated experiences for pupils in mixed-ability classes, observation showed that this was no more than pupils working individually on the same worksheets at their own pace.

#### ***Findings from primary school studies***

Forming classes either for a certain subject or for all subjects on the basis of ability (setting and streaming) in primary schools is only possible in large schools and thus not widely relevant to the Scottish context. However it is worth noting that whilst the research shows no overall effect of this on pupil achievement, there are many disadvantages of the practice, particularly for the low-achieving children. In low sets or streams there was more disruptive behaviour, more off-task talk, and little peer interaction of the kind that supports learning and which was found in the high-stream classes.

Within-class ability grouping is, by contrast, widespread in primary classrooms. Almost all of the research on this has focused on performance in mathematics and great care has to be taken in generalising from this to other subjects. Mathematics is well known for the great range in achievement across an age group (equivalent to seven years at the end of the primary school) and for its hierarchical structure, each step being dependent on understanding the previous one. This means that teaching inputs have

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to be at different levels to suit pupils across a wide range of achievement. Thus the case for ability grouping in maths may be stronger than in, say, social subjects, where teaching can provide the same inputs for pupils of different abilities. Research studies meeting the criteria of quality consistently showed pupils of all abilities benefiting from within-class ability grouping in terms of achievement in mathematics.

However evidence gathered by observing and talking to pupils and teachers shows that there are potential disadvantages to ability grouping. Children know when they are in low or high ability groups and so may feel stigmatised and de-motivated. Low ability pupils lack the skills to work unsupervised and tend to interrupt each other. Teachers often have lower expectations of pupils who achieve less well and provide them with less stimulation than higher achieving pupils. Thus within-class ability grouping can introduce some of the detrimental social effects of streaming, albeit with a less strong impact. The message emerging is that it is of benefit for pupils to learn in mixed-ability groups, even if at times they are separated into ability groups.

#### ***Findings from secondary school studies***

By contrast with the primary schools, within-class grouping is less common – or certainly has been much less researched – than setting or streaming. The many studies of streaming (where pupils remain in ability-based classes for all subjects) show no advantages for pupils' achievement, for any levels of ability. At the same time the research shows clearly that there were disadvantages: reinforced social-class divisions, increased likelihood of delinquent behaviour in the later school years, lowered teacher expectations of the less able, bias and inconsistency in allocating pupils to ability groups, anxiety for pupils in the top streams struggling to keep up with the pace of the class. Setting (where pupils are in ability classes for certain subjects only) might reduce the severity of these disadvantages but there was little consistent evidence of advantages in terms of achievement.

A common theme in the conclusions from the studies was that what goes on in classrooms seems likely to have more impact on achievement than how pupils are grouped. Differences in classroom materials and learning activities often explained differences in achievement. For example, in a study where pupils in the high-ability group were found to benefit over similar pupils in mixed-ability classes, the difference was ascribed to the former using classroom materials (in maths) which took them far beyond what was expected for their age or grade. It is inevitable that the grouping influences what goes on in the classroom; these are not independent variables and the research has not sorted out the effects of these two aspects.

Moreover there are both advantages and disadvantages of mixed ability grouping. Mixed-ability classes are hard to manage; there is evidence that teachers aim lessons at the middle of the ability range, sometimes, indeed, treating mixed-ability groups as though they were low-ability streams. Research showed that even teachers with substantial experience of working with mixed-ability classes frequently use whole-class teaching methods which are inappropriate to mixed-ability groupings. Also, as noted earlier, when some teachers considered themselves to be individualising work, observation of their lessons did not bear this out.

The challenge is to find some way of catering for pupils' individual needs. The research provides no support for separating pupils according to ability as a solution to this problem. Indeed, it shows that, for many, ability grouping reduces both their motivation and the quality of the education they receive. On the other hand, mixed-ability teaching which denies the differences between high- and low-ability pupils is not the answer. There are surely alternatives which enable the content, pace and support of classroom work to be adjusted to suit individual needs. We should find and study them urgently.

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