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10

Aligning the Curriculum

Several different types of curriculum are at work in the school. When they are reasonably congruent with each other, student achievement is improved. This chapter reviews briefly the several types of curriculum and then explains how a comprehensive model for aligning these curricula can be planned and executed.

Types of Curricula

Seven types of curricula need the attention of the principal.

- *Recommended curriculum.* The *recommended* curriculum is that which is recommended by scholars and professional organizations. The best source for the recommendations of professional organizations is Kendall and Marzano (1997).
- *Written curriculum.* The *written* curriculum, as the term is used here, is the curriculum that appears in state and locally produced documents, such as state standards, district scope and sequence charts, district curriculum guides, teachers' planning documents, and curriculum units.

第十章

课 程 连 结

有许多不同类型的课程在学校里头发生作用，当他们能够合理地彼此连结，则将可以提升学生的学习成就。本章简要地回顾七种不同类型的课程，进而解释如何规划并执行一个连结这些不同课程的综合模式。

课程的类型

校长需要注意以下七种不同类型的课程：

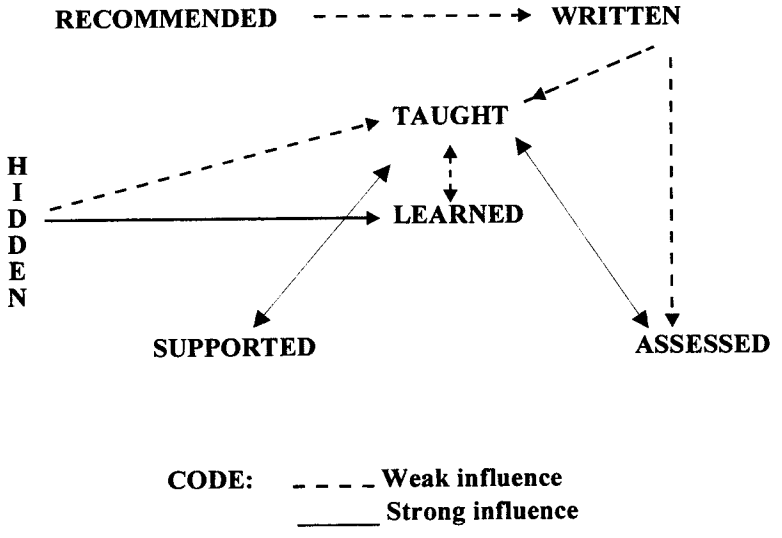
◆建议类课程(Recommended curriculum)。“建议类课程”是指由学者和专业组织所建议的课程。专业团体所提各项建议，可以参考 Kendall & Marzano (1997) 的著作。

◆书面类课程(Written curriculum)。“书面类课程”是指州政府和地方政府所颁发的文件，诸如州政府所颁定的课程标准，地方学区所规定的范围与顺序图表(scope and sequence charts)，地方学区所规定的课程指引(district curriculum guides)，教师的规划文件(teachers' planning documents)以及课程单元(curriculum unit)

- *Taught curriculum.* The *taught* curriculum is that which teachers actually deliver day by day.
- *Supported curriculum.* The *supported* curriculum includes those resources that support the curriculum—textbooks, software, and other media.
- *Assessed curriculum.* The *assessed* curriculum is that which appears in tests and performance measures: state tests, standardized tests, district tests, and teacher-made tests.
- *Learned curriculum.* The *learned* curriculum is the bottom-line curriculum—the curriculum that students actually learn.
- *Hidden curriculum.* This is the unintended curriculum. It defines what students learn from the physical environment, the policies, and the procedures of the school. Here is an example. Each week teachers in an elementary school devote 250 minutes to reading and 50 minutes to art. Students learn this lesson: "In this school, art is not considered very important."

Figure 10.1 shows the relationship of these curricula as they interact with each other. Notice that the research suggests there are varying patterns of influence among the several types. The recommended curriculum seems to have little influence on the written, although districts seem to be increasingly concerned with state standards, especially if they are accompanied by state tests. Also, the standards developed by the National Council of Teachers of Mathematics (1989) seem to have had a significant influence in the development of district mathematics guides.

Figure 10.1 Types of Curricula



等。

◆施教类课程(Taught curriculum)。"施教类课程"是指教师日复一日实际传递的课程。

◆支持类课程(Supported curriculum)。"支持类课程"包括那些可以支持课程的资源,例如教科书、软体与其他媒体。

◆评量类课程(Assessed curriculum)。"评量类课程"是指出现于考试测验和表现测验当中的课程。例如州的测验、标准化的测验、地方学区的测验与教师自编的测验。

◆习得类课程(Learned curriculum)。"习得类课程"是指底线类课程(bottom-line curriculum),亦即学生真正学习的课程。

◆潜在类课程(Hidden curriculum)即非预期的课程(unintended curriculum)。这是指学生从学校环境、学校政策、学校教育过程当中所获得的学习。这里有一个实例,在一所小学中,教师每周花250分钟进行阅读教学与进行50分钟艺术教学,则学生学到的经验是:"在这所学校中,艺术不是最重要的学习项目。"

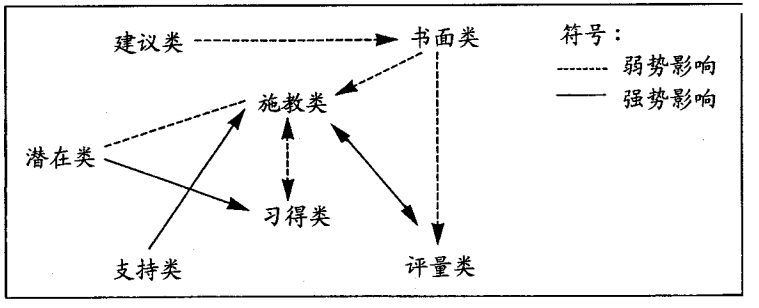


图 10.1 课程的类型

图10.1显示这些课程彼此交互作用的关系。值得留意的是,研究指出在这些许多课程类型当中,存在着许多不同的影响形态。"建议类课程"对"书面类课程"的影响似乎不大,不过,地方学区似乎愈来愈关心州政府所制定的标准,因为这些标准可能和州政府所进行的各项考

Figure 10.1 shows the relationship of these curricula as they interact with each other. Notice that the research suggests there are varying patterns of influence among the several types. The recommended curriculum seems to have little influence on the written, although districts seem to be increasingly concerned with state standards, especially if they are accompanied by state tests. Also, the standards developed by the National Council of Teachers of Mathematics (1989) seem to have had a significant influence in the development of district mathematics guides.

The written curriculum seems to have a moderate influence on the taught curriculum. Teachers report that they typically check the district guide early in the year, just to remind themselves what it includes. They are much more influenced by the assessed curriculum, especially if they are held accountable for students' results. Students are similarly sensitive to the assessed curriculum, as evidenced in the standard student question, "Is this going to be on the test?"

Teachers are perhaps most sensitive to the learned curriculum, making their decisions on the basis of students' needs, as they perceive them, and students' responses to the taught curriculum. Whereas conventional wisdom holds that teachers are textbook driven, the research suggests that the textbook is only one of several sources that the teacher consults in planning for instruction (see Brown, 1988).

And textbook series often do not match closely the written curriculum because they are developed for a nationwide mass market. A relationship often exists between the written and the assessed curricula. Typically, the assessment is an objective test that samples low-level learning.

The hidden curriculum has a strong influence on what students learn. Even though students are not always aware of the impact of the hidden curriculum, they experience it every day. For example, an old building with holes in the roof and graffiti on the walls very clearly conveys the message, "People here don't care about this school."

These gaps have led experts in the field to recommend alignment processes.

English (1992), the chief advocate of alignment, emphasizes the need for a close match between the curriculum and the test. He explains that alignment can be achieved through "frontloading" or "backloading." Frontloading means developing the curriculum first and then finding a test to match; backloading means developing (or locating) the test first and then developing a curriculum to match.

试有关。同样值得注意的是,"美国数学教师全国审议委员会"(the National Council of Teacher of Mathematics)(1989)所发展出来的标准,似乎对地方学区所发展的数学课程指引有着重要的影响。

"书面类课程"对"施教类课程"似乎有着中级程度的影响。许多教师指出,他们总是在学年度一开始就会去检视地方学区所制定的课程指引,以便提醒自己其中包含了哪些内容。他们受到"评量的课程"之影响较大,这是因为他们必须为学生的学习结果负起绩效责任。学生们经常提出类似"考试会不会考这个"的问题,可见学生们对"评量类课程"也相当敏感。

教师或许对"习得类课程"最为敏感,显示教师会依据他们所觉知的学生需求、学生对"施教类课程"之反应等为依据而进行课程决定。大家都了解教师多半都是照着教科书进行教学的,但是,研究却建议教科书只是在进行教学规划时可供参考的许多资源之一而已(参阅Brown,1988)。

而且教科用书系列通常并未与"书面类课程"密切地配合,因为教科用书是以全国大众市场为着眼发展而成的。通常"书面类课程"与"评量类课程"也存在着某种关系。不过,这样的评量多半是针对低层次学习加以取样而进行的客观测验。

"潜在类课程"对于学生的学习则有着强而有力的影响。尽管学生通常不知道潜在课程的影响,学生却每天都经验到潜在课程的影响。举例而言,一幢屋顶有破洞、墙壁有污渍斑点的老旧建筑,就传递了"这里的人并不关心这所学校"的信息。

这些课程之间的落差,已经引导此一领域的学者专家开始提出有关课程连结的建议。课程连结的主要倡导者 English (1992)强调,课程与测验之间必须紧密加以连结配合。他解释此种连结可以经由"前置"(frontloading)与"后置"(backloading)等方式来达成连结。"前置"是指先发展课程之后,再寻求一份可以配合的测验;"后置"则是指先发展(或指出)测验之后,再发展可以配合的课程。

I recommend a more comprehensive approach that involves the alignment of all seven curricula. The alignment process is best carried out at the school level. Even though a district or regional approach might be more efficient, the school-based process results in a greater sense of ownership and serves to educate the teachers about the details of the new curriculum guide.

Aligning the Recommended and the Written Curricula

Aligning the recommended and the written curricula is primarily the responsibility of the task force assigned to develop the curriculum in a given subject area. However, the principal can play a role, as explained below.

The extent to which the recommended curriculum should determine the written curriculum varies from subject to subject. Some professional standards, such as those in mathematics, seem to be well formulated and widely approved; they thus can provide a useful guide for the written curriculum. On the other hand, the standards for English language arts (National Council of Teachers of English and International Reading Association, 1996) have been widely criticized for being too vague and excessively concerned with process; they therefore seem less useful to local developers.

Principals can play an active role in this alignment. If they are members of task forces, they can require the task force to analyze professional and state standards and determine which ones should be used in the district guide. If they are not represented on the task force, they can examine the products to assess whether the recommended curriculum has been given sufficient attention.

Aligning the Written, the Supported, and the Assessed Curricula

The principal should play an active role in working with teachers to align the written, the supported, and the assessed curricula. Because these three types are closely related, the alignment can be accomplished in one project. The following process has worked well with several school systems.

我提出一个更为完整的方式，以包括所有七种课程的连结，此种连结的历程，最好是在学校层次加以完成。尽管以一个地方学区或区域的方式来进行连结可能会更有效率，但是以学校本位的历程来进行连结，可以让教师获得所有权的隶属感，而且能让教师对新课程指引的细节有更深层而细腻的认识。

连结“建议类课程”与“书面类课程”

连结“建议类课程”与“书面类课程”是校内负责发展某一科目领域的工作小组之主要责任，然而，校长可以扮演如下的角色。

“建议类课程”影响“书面类课程”之大小，乃是依科目之不同而异。有些标准，诸如数学科的标准，似乎发展得相当良好，而且也被广泛地接受，因此，他们可以为“书面类课程”提供有用的指引。相反，英语科的标准（National Council of Teachers of English and International Reading Association，1996）就是因为太过于模糊，而且只是关心过程，以致遭受广泛的批评，因此他们似乎对地方的课程发展者帮助不大。

在此种课程连结的过程中，校长可以扮演主动的角色。如果他是课程发展工作小组的成员之一，他可以要求该工作小组去分析专业的标准与州政府所制订的标准，进而决定在地方学区的课程指引应该使用哪个标准。如果他不是工作小组的成员之一，他可以检查工作小组的成果，并且评鉴“建议类课程”是否已经获得足够的关注。

将“书面类课程”、“支持类课程”与“评量类课程”加以连结

校长应该扮演主动的角色，和教师一起工作，以便连结“书面类课程”、“支技类课程”与“评量类课程”。因为这三类课程都是密切相关的，因此可以一并完成。下列的过程在许多学校系统都运作得十分良好。

1. *Plan the project.* Appoint a curriculum alignment committee (or use an existing committee) to oversee and coordinate the project. Train the committee in the alignment process as it involves these three types of curriculum. The alignment committee should then train the grade-level teams, who will carry out the alignment tasks for their grade.

2. *Focus the curriculum.* The grade-level teams should carefully analyze the new district curriculum to focus the alignment process on the *mastery objectives.* As the term is used here, the mastery objectives are those that meet one or more of the following criteria:

- Will likely be tested or assessed
- Require explicit teaching

- Are best learned when they are carefully planned
- Are essential for all students to master

These mastery objectives are different from what I have termed *continuing development objects,* those outcomes that should be nurtured on every suitable occasion, not taught in a specific grade level. Here is an example to show the difference:

- *Mastery:* Define *metaphor.*
- *Continuing development:* Enjoy poetry.

Mastery objectives should be aligned with tests and texts; organic outcomes need not be.

The complete set of mastery objectives should be stored in a computerized database, organized by grade level and then by areas within that subject.

3. *Check to be sure that the district curriculum embodies the state standards.* The state standards will surely be reflected in state tests; they also provide useful guidelines for local developers.

1．规划。指定一个课程连结委员会(Curriculum Alignment Committee)，或者一个现有的委员会，以综合、疏理并协调该方案。在进行此三种课程的连结过程中，要对该课程连结委员会成员进行训练。然后该课程连结委员会再训练每一年级层次的工作小组，以进行该年级的课程连结之任务。

2．课程聚焦(Focus the curriculum)。年级层次的工作小组，应该仔细分析新的地方学区课程内容，以使课程连结历程的焦点集中于主要精熟的目标(mastery objectives)，此处所用的主要精熟的目标，是指符合下列一个或多个规范的目标。

◆未来可能被用来测验或评量的；
◆需要进行直接教学的；
◆在仔细的规划下，可以学得最好的；
◆对所有学生而言，既基本且重要，而且必须加以精熟的。

这些精熟的目标，不同于我所说的“继续发展的事项”(continuing development objects)，此一用语是指那些经由每一个合适的机会而加强的事项，而非在某一特定年级层次所要教导的内容。这里有一个实例可以显示其间的差异：

◆主要精熟的目标：界定隐喻。
◆继续发展的事项：喜欢诗作。

主要精熟的目标，应该与测验及教科用书内容加以连结，而继续发展的事项则不一定必要如此。这些精熟的目标必须以电脑档案储存，储存时可以年级和领域作为检索的依据。

3．检视并确定地方学区课程是否具体包含州政府所制订之标准。州政府所制订的标准一定得反映在其制订的测验中，他们也可以提供

3. *Check to be sure that the district curriculum embodies the state standards.* The state standards will surely be reflected in state tests; they also provide useful guidelines for local developers.

4. *Analyze the tests.* Using a printout of the mastery objectives for their grade level, the teams should then indicate on an appropriate form which of the mastery objectives are likely to be tested. An example of the form that can be used in this process is shown in Table 10.1. In determining which of the mastery objectives are likely to be tested, the team should analyze state tests, district tests, and standardized tests. They need not analyze teacher-made tests because the assumption is that teachers will test what they have taught. In analyzing those tests, the team can use descriptions of test content and tests previously given and no longer considered confidential.

5. *Analyze the texts.* The final step is to determine where the mastery objectives are explained in the text. The team should check the table of contents and the index of the texts used, noting the page numbers where the topic is treated. The team should enter page numbers only if the topic is treated in sufficient depth. Textbooks often treat topics so superficially that the text is of little value to teachers and students.

6. *Evaluate the results.* The alignment committee should review all the work of the teams, noting any problems that need correcting and producing a complete set for the entire school. This complete set will be useful for the principal and supervisors.

TABLE 10.1 Alignment Form

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Subject: English language arts **Grade: 9**

Mastery Objectives	*Tested*	*Text: English 9*
Define, identify metaphor	x	pp. 123-126
Listen critically		
Write personal narrative	x	pp. 16-17
Hold interview		p. 14

7. *Use the results.* Simply completing the alignment charts has little value. The results should be used to accomplish two tasks. First, as noted briefly below and explained more fully in Chapters 12 and 13, teachers

有用的指引,以作为地方的课程发展者参考之用。

4. 分析测验内容(analyze the tests)。利用一份该年级层次的主要精熟的目标清单,该工作小组应该可以在适当的表格上,指出可能被当作测验题目的主要精熟目标。表 10.1 列出了在此历程所可能运用的表格实例。在决定哪些主要精熟的目标可能被用来当作测验题目的过程中,该工作小组应该分析州制订的测验内容、地方学区制订的测验内容以及标准化的测验内容。他们不必分析教师自行编制的测验,其假定是教师将会测验他们已经教导的内容。总之,在分析这些测验的内容时,该工作小组可以充分运用那些有关测验内容的详细说明,以及先前已经考过而且不再是机密的考古题库等,作为参考资料。

表 10.1 课程连结的表格实例

科目:英语科	九年级	
主要精熟的目标	是否测验	课文:英语第九课
界定、指出隐喻	X	第 123 至 126 页
批判地倾听		
写下个人的叙述	X	第 16 至 17 页
进行访谈		第 14 页

5. 分析课文(Analyze the texts)。最后的一个步骤,是要确定主要精熟的目标是否呈现在课文中。此一工作小组,应该检视所使用的教科书的内容目次表,注意所处理的主题之页码。该小组应该将课文主题处理深度适宜之处的页码加以登录注记。因为通常教科书都只是肤浅地处理一些主题,因此对教师与学生的参考价值不高。

6. 评鉴结果(Evaluate the results)。课程连结委员会应该检视所有小组的工作,注意任何需要修正的问题,并且将这些检视的结果作成一套完整的资料。对校长与督学而言,这一套资料非常有用。

7. 运用结果(Use the results)。如果光是完成课程连结的图表,其价值不高,还应该运用此一结果完成两项任务。首先,如同底下简要描

7. *Use the results.* Simply completing the alignment charts has little value. The results should be used to accomplish two tasks. First, as noted briefly below and explained more fully in Chapters 12 and 13, teachers should use the list of mastery objectives to develop yearly and unit plans that ensure adequate treatment of all the mastery objectives. Mastery objectives that are tested should receive the highest priority in planning for learning; continuing development objectives likely to be tested would have a second priority. Second, the team should institute plans to fill in the gaps in the textbook. They can order supplementary materials or write their own materials.

Aligning the Written and the Taught Curricula

The alignment charts described above can be very useful in aligning the written and the taught. Next to aligning the taught and the learned, this is probably the most important alignment of all. Even the most conscientious teachers will need help in ensuring that they are effectively delivering the written curriculum. As explained more fully in Chapters 12 and 13, the principal should help teachers develop yearly calendars and unit plans. In developing such plans, the teacher should systematically check off the mastery objectives as they are scheduled in the yearly calendar and included in the unit. When the principal reviews these plans, he or she should check to ensure that all mastery objectives are in fact included.

Aligning the Hidden and the Learned Curricula

Because the hidden curriculum has such an impact on student learning, it deserves special study by the principal and teachers. The principal may therefore wish to lead a special task force to make a systematic analysis. Here are the main factors that seem to constitute the hidden curriculum:

- *Time allocation.* For example, are health and physical education allocated sufficient time to change the behavior of children and youth?
- *Space allocation.* How much space is allocated for teacher conferring and planning?

述的内容，以及第十二章及第十三章所描述的内容，教师应该运用主要精熟目标的清单，编拟年度计划与单元计划，以确保所有主要精熟的目标皆能加以适当的处理。必须测验的主要精熟目标，应该列为最优先学习的对象；可能会测验的继续发展的目标，则是第二优先的项目。其次，此一小组应该拟订计划，以弥补教科书不足之处，他们可以订购补充教材，或编写他们自己的教材。

连结“书面类课程”与“施教类课程”

上述课程连结图表，在连结“书面类课程”与“施教类课程”时，非常有用。接下来则是连结“施教类课程”与“习得类课程”，这或许是课程连结当中最重要的一部分。即使最谨慎的教师，也需要协助以确定他们是否有效地传递了“书面类课程”。如同在本书第十二章与第十三章所作更进一步的解释，校长应该协助教师拟订年度计划与单元计划。在拟订此种计划的过程当中，教师应该有系统地检查年度计划与单元计划当中所包含的主要精熟的目标。当校长重新检视这些计划时，校长应该检查并确定实际上已经包括了所有主要精熟的目标。

连结“潜在类课程”与“习得类课程”

由于“潜在类课程”对于学生的学习有着深远的影响与冲击，因此，校长与教师应对此加以特别研究。校长可能希望带领一个特别的工作小组，以便进行系统的分析。以下可能是构成潜在课程的主要因素。

◆时间的分配(Time allocation)。举例而言，健康教育与体育是否分配到足够的时间，以改变儿童与青少年的行为？

◆空间的分配(Space allocation)。有多少空间分配给教师进行会

Aligning the Hidden and the Learned Curricula

- *Space allocation.* How much space is allocated for teacher conferring and planning?
- *Use of discretionary funds.* Who decides? How are such funds expended?
- *Student discipline.* Do suspensions seem to reflect an ethnic bias?
- *Physical appearance.* Does the appearance of facilities suggest that those in the building care for the school? Are walls decorated with student artwork?
- *Student activities program.* Does this program reflect and respond to student talent diversity?
- *Communication.* Are most of the messages over the public address system of a positive nature? How often are student voices heard?
- *Power.* Do teachers have power in the decision-making process? Do students have any real power over the factors that matter?

When the analysis of the hidden curriculum has been completed, the principal and the teachers should identify those hidden messages that do not reflect what they want students to learn—and then work together to alter discrepant elements. For example, if the principal and teachers believe in the importance of students' artistic creativity but discover that the hidden curriculum reveals no traces of creativity, they might want to change the hidden curriculum by decorating the corridors with student artwork.

Aligning the Taught and the Learned Curricula

The final and perhaps most important type of alignment involves the taught and the learned curriculum. Whereas teachers mistakenly assume that students learn all that they are taught, the evidence is otherwise. As Doyle (1986) points out in his review of the research, for much of classroom time

议与规划？

◆经费的运用(Use of discretionary funds)。谁决定？这些经费是如何使用的？

◆学生的纪律(Student discipline)。勒令停学是否反映了种族的偏见？

◆物理外观(Physical appearance)。学校设施的物理外观是否反映了学校成员对学校的关心程度？墙上是否布置着学生的艺术作品？

◆学生活动方案(Student activities program)。此一方案是否反映并回应学生不同能力的差异？

◆沟通(Communication)。学校所传播的大多数信息是否都具有积极的意义？学生的声音被听到的几率是多少？

◆权力(Power)。教师在作决定的过程中是否拥有权力？学生在重要事务的决定上是否拥有任何权力？

当校长与教师已经完成潜在课程的分析时，则可以明确指出有哪些并非他们要求学生学习的潜在信息，进而一起努力以改变这些造成差异的因素。举例而言，如果校长与教师们相信学生艺术创作能力的重要性，但是却发现没有任何迹象显示其重视艺术创作的潜在课程，则校长和教师就可以试着在走廊上布置学生的艺术作品，而借以改变此项潜在课程。

连结“施教类课程”与“习得类课程”

最后，而且可能是最重要的，就是连结“施教类课程”与“习得类课程”。当教师错误地假定学生学到了教师教导的全部内容，但是证据却往往显示与事实不符，就如同 Doyle(1986)在其研究概览中，指出学生在教室中的大部分时间，要不是明显地心不在焉，便是假装认真工作，

students are either obviously off-task or feigning on-task behavior, only dimly aware of what the teacher is trying to teach.

This issue is so important that the principal and the teachers should discuss it in a faculty meeting or special workshop that would answer four questions: What is the taught/learned gap, and why is it important? What student factors cause it? What can teachers do to reduce the gap? What next steps should we take?

Nature and Importance of the Gap

The session should begin with an open dialog about the gap at their school. A simple definition should be helpful: "Students do not learn all that teachers teach. We call that the taught/learned gap." A brief discussion of its importance can follow.

Student Factors

The next part of the discussion is to examine the student factors that cause the taught/learned gap. Both the research and this author's experience indicate that the following elements are crucial.

First, students have limited attention spans. They have other agendas. The teacher may be doing his or her best to teach the parts of the amoeba, but student minds are on the weekend activities. All that television watching has conditioned them to expect one-minute messages. The physical environment may cause inattention. If the room is too warm, students will find it difficult to focus on a complex task.

Students may also lack knowledge and cognitive development. They are doing the best they can, but what they are hearing does not make sense. The terms are too difficult; the new knowledge is overwhelming. Students also may have special needs that are not being addressed. Even though they may not have obvious disabilities, they may have learning problems that interfere with their learning.

Peer pressure may also interfere with the learning process. This factor has a negative impact especially on economically disadvantaged minority students. They may want to learn, but a few powerful peers can establish norms that devalue learning.

学生只是模模糊糊地知觉到教师企图进行教学的内容。

这个议题是如此的重要，因此，校长与教师应该在教职员会议当中进行讨论，或在特定的工作坊当中进行讨论，以便回答下列四个问题："施教类"与"习得类"之间的差距是什么，为什么重要？何种学生因素导致如此？教师能做什么以减少此种差距？接下来我们要采取哪些步骤？

差距的本质与重要性

这一个段落，应该以学校内有关该差距的开放对话作为开端。一个简单的定义将会有帮助："学生未学到教师所教的全部内容，我们称之为'施教类'与'习得类'课程之间的差距。"接下来便可进行有关此项重要性的简要讨论。

学生的因素

下面部分的讨论，旨在检示导致"施教类"与"习得类"之间差距的学生因素。别人的研究与作者亲身的经验皆指出下面的因素是很重要的。

首先，学生注意力集中的幅度有限，他们有其他关注的议题。教师可能尽其最大的能力来教导阿米巴变形虫的构造，但是学生心中却关注周末的活动。看太多电视的结果，已经使得学生受到制约，而只期待一分钟的信息。物理环境也可能导致分心，如果房间太过于暖和，则学生将很难专心于复杂的功课。

学生也可能缺乏知识，认知发展准备度亦不佳。他们可能已经尽其最大能力，但是他们所听到的对他们而言，却是没有意义的。有些术语可能太难了，新的知识可能是他们无法招架而难以接受的。学生可能有特殊的需要，却没有获得足够的重视。尽管他们并没有明显的学习障碍，他们却可能有着许多会干扰他们学习的问题。

同伴的压力，也可能介入了学习的过程。此种因素有一种消极的

Peer pressure may also interfere with the learning process. This factor has a negative impact especially on economically disadvantaged minority students. They may want to learn, but a few powerful peers can establish norms that devalue learning.

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Teacher-Facilitating Factors

In an atmosphere of inquiry, with teachers discussing their experience, the faculty should next analyze what seems to work. This discussion should have a positive tone so that teachers do not feel they are being blamed. These productive factors are the ones that will probably be identified:

1. Clarify the objective.
2. Help students find meaning and purpose in learning the objective.
3. Encourage students to ask questions.
4. Use learning strategies that require a high level of student activity.
5. Use frequent quizzing to monitor learning and maintain high alertness.
6. Observe for verbal and nonverbal signs of off-task behavior.
7. Use monitoring data to adjust instruction.

The workshop should end with a discussion of what can be done to determine how much of a gap exists and what can be done to reduce it. The following process should be useful.

1. Teachers pair off or work in collegial teams.
2. Teacher A plans a lesson with the help of Teacher B; they also prepare a comprehensive quiz based on that lesson.
3. Teacher A implements the lesson, while Teacher B observes both student and teacher behavior.
4. Teacher A administers the quiz at the end of the lesson.
5. They meet to discuss the results.
6. They then switch roles.

负面影响，特别是对经济不利的少数族群学生而言，更是如此。他们可能想要学习，但是，却有许多强而有影响力的同伴，可能形成贬抑学习的风气。

教师的因素

我们应该让教师有机会聚在一起，在一种探究的气氛当中分享他们的经验。接下来，教师同仁应该要认真分析哪些教学方法会发生积极的效用。这样的讨论，应该在一种积极的气氛之下进行，才不会让教师觉得窘困。以下所述的就是具有正面效果的教学。

1．厘清目标；
2．协助学生从学习目标中，理解学习的意义与目的；
3．鼓励学生提问题；
4．运用要求高度参与学生活动的学习策略；
5．经常利用平时考来监控学生的学习与维持其高度警觉；
6．观察学生的语言与非语言的分心行为；
7．利用监控资料，以调整教学。

举办教师工作坊时，应该以进行有关可以做什么，以确认所存在的差距有多大，以及应该采取什么作法来缩短此一差距等等的讨论作为结尾。下列的历程，应该是相当有用的。

1．教师进行配对分组，或以团队小组方式进行工作。
2．甲教师经由乙教师的协助，共同规划一堂课，同时他们也为这一课而共同规划一项综合的平时测验考试。
3．甲教师上这堂课，而由乙教师同时观察学生与教师双方的行为。
4．甲教师在这堂课结束时，执行该项平时测验考试。
5．他们一起开会讨论这堂课的情形。
6．然后甲乙两位教师互换角色，重新来过。

References

Brown, D. S. (1988). Twelve middle-school teachers' planning. *Elementary School Journal, 89,* 69-87.

Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 392-431). New York: Macmillan.

English, F. W. (1992). *Deciding what to teach and test: Developing, aligning, and auditing the curriculum.* Newbury Park, CA: Corwin.

Kendall, J. S., & Marzano, R. J. (1997). *Content knowledge* (2nd ed.). Aurora, CO: Midcontinent Regional Educational Laboratory.

National Council of Teachers of English and International Reading Association. (1996). *Standards for the English language arts.* Urbana, IL: National Council of Teachers of English.

National Council of Teachers of Mathematics. (1989). *Curriculum and evaluation standards for school mathematics.* Reston, VA: Author.

参考文献

Brown, D. S. (1988). Twelve middle-school teachers' planning. *Elementary School Journal, 89,* 69－87.

Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock (Ed.), *Hand-book of research on teaching* (3rd ed., pp. 392－431). New York: Macmillan.

English, F. W. (1992). *Deciding what to teach and test: Developing, aligning, and auditing the curriculum.* Newbury Park, CA: Corwin.

Kendall, J. S., & Marzano, R. J. (1997). *Content knowledge* (2nd ed.). Aurora, CO: Midcontinent Regional Educational Laboratory.

National Council of Teachers of English and International Reading Association. (1996). *Standards for the English language arts.* Urbana, IL: National Council of Teachers of English.

National Council of Teachers of Mathematics. (1989). *Curriculum and evaluation standards for school mathematics.* Reston, VA: Author.