

Differentiated Instruction as the Operational Layer of Special Education: A Component-by-Component Application of Tomlinson's Model

¹Dr. Swathi Mulinti, ²Dr. V. Madhupama

¹Sr. Assistant Professor, Department of English, Faculty of Science and Technology (IcfaiTech), ICFAI Foundation for Higher Education, Hyderabad, India

²Assistant Professor, Department of English, Faculty of Science and Technology (IcfaiTech), ICFAI Foundation for Higher Education, Hyderabad

HOW TO CITE:

Swathi Mulinti, V. Madhupama, (2026). Differentiated Instruction as the Operational Layer of Special Education: A Component-by-Component Application of Tomlinson's Model. International Journal of Special Education, 41(15s), 1273-1279

COPYRIGHT STATEMENT:

Copyright: © 2026 Authors.
Open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

ABSTRACT:

The individualised education plan specifies what a learner with a disability is entitled to receive, but it cannot specify how a teacher should construct Tuesday morning's lesson so that the entitlement is met alongside the needs of every other learner in the room. This gap between plan and practice is where special education most often fails in inclusive settings. This paper argues that Tomlinson's model of differentiated instruction supplies precisely the missing layer, and works through its components systematically to show how. We treat DI in three parts: the four elements a teacher modifies (content, process, product, and learning environment), the three learner characteristics to which modification responds (readiness, interest, and learning profile), and the principles that govern the whole (quality curriculum, ongoing assessment, flexible grouping, respectful tasks, and teaching up). Each is examined for what it contributes to provision for learners with disabilities and for how it interacts with the statutory apparatus of identification and individualised planning. We then address the evidence base honestly, noting that syntheses of differentiation research report modest and implementation-dependent effects, and identify four misapplications that recur specifically in special education settings — accommodation drift, permanent grouping, product substitution, and profile fixation — together with the safeguards Tomlinson's own formulation already contains against each. The paper concludes that DI's value in special education lies not in adding a further framework but in operationalising commitments the field already holds.

Keywords: differentiated instruction, Carol Ann Tomlinson, special education, inclusive education, individualised education plan, formative assessment, flexible grouping, readiness, learning profile, respectful tasks

Introduction

Special education is organised around a document. Whatever the jurisdiction and whatever it is called, an individualised plan records what has been identified, what the learner

is entitled to, what goals have been set, and who is accountable for them. The apparatus that produces this document is elaborate, procedurally protected, and — for good historical reasons — legally enforceable.

What the document does not do is teach. It specifies outcomes and entitlements; it does not specify the design of a lesson. A teacher holding a plan that requires extended time, simplified text, and a functional communication goal still faces the ordinary problem of constructing an hour of instruction for a class of twenty-eight, of whom four hold plans, several more are of concern, and all are entitled to learn something. The plan is a statement of obligation. The lesson is where the obligation is either met or quietly not met. This gap is where inclusive provision most commonly breaks down, and it is not primarily a gap in commitment or in resources. It is a gap in the method. The question of how a single teacher plans instruction that is genuinely responsive to substantial variation within one classroom is a distinct problem with its own literature, and the most fully developed answer to it is Tomlinson's model of differentiated instruction (Tomlinson, 1999, 2014; Tomlinson & Imbeau, 2010). This paper does not propose a new framework. It argues that DI already functions as the operational layer between the individualised plan and daily instruction, and works through its components one at a time to make the correspondence explicit. Our aims are deliberately modest: to set out what each DI component contributes to special education, to be honest about what the evidence supports, and to identify the misapplications that recur when DI is imported into special education settings without its governing principles.

Foundations of the Model

Differentiated instruction begins from an empirical premise and a normative one. The empirical premise is that any classroom contains substantial variation in what learners already know, what engages them, and how they most efficiently work, and that instruction pitched at a notional average will be badly matched for most of the room. The normative premise is that this variation is the ordinary condition of teaching rather than an obstacle to it, and that responding to it is part of what teaching is (Tomlinson, 2014).

Two theoretical commitments underpin the model. The first is Vygotskian: learning proceeds

most efficiently when tasks sit slightly beyond current independent capacity, which entails that a single task cannot be optimally pitched for learners at different points of development (Vygotsky, 1978). The second concerns assessment: adjustment must be driven by continuous evidence of current understanding rather than by prior judgement, which places formative assessment at the centre of the model rather than at its periphery (Black & Wiliam, 1998; Tomlinson & Moon, 2013).

Both commitments matter for special education. The first supplies the rationale for why a learner with a disability should not simply receive the same task with more support, if that task is misplaced relative to their current development. The second supplies the discipline that prevents a diagnostic category from standing in for knowledge of what the learner can currently do — a substitution to which special education is structurally prone, since the category is documented and durable while current performance is neither.

What the Teacher Modifies: The Four Elements

Content

Content is what learners are to know, understand, and be able to do, together with the materials through which they access it. Tomlinson's position is that differentiation of content operates principally on access rather than on substance: the essential understandings should remain constant across the class, while the routes to them vary (Tomlinson, 2014).

For special education this distinction carries the weight of the whole enterprise. Varying access — providing text at different readability levels, audio alternatives, pre-taught vocabulary, graphic organisers that expose structure — preserves the learner's entitlement to the curriculum. Varying substance, by contrast, quietly removes it. The practical test is whether the essential understanding stated for the unit is the same for every learner in the room. Where a learner's plan specifies alternative curricular goals, this is a decision made through statutory process and recorded as such; where it is a teacher's

improvisation in response to perceived difficulty, it is curriculum narrowing under another name.

Process

Process is how learners make sense of content: the activities, groupings, scaffolds, pacing, and degrees of structure through which understanding is built. It is the element with the widest latitude and the one that most directly absorbs the demands of an individualised plan. Most accommodations recorded in plans are process modifications: extended time, chunked instructions, reduced item counts, adult support, movement breaks, alternative response modes during practice. Recognising them as process differentiation rather than as a separate category of provision has a practical consequence — it makes them designable in advance for the class rather than administered individually in the moment. A teacher who builds three levels of scaffolding into a task sequence has met several plans simultaneously and has done so without singling anybody out.

Product

Product is how learners demonstrate what they have come to know. Differentiating product means varying the form of demonstration while holding constant the understanding being demonstrated and the standard applied to it (Tomlinson & Moon, 2013). This is the element most often mishandled in special education, and the error has a consistent shape. A learner who struggles to write is permitted to present orally — appropriate, if the target is historical reasoning and writing is merely the vehicle. The same substitution is inappropriate if the target is written composition, in which case the accommodation has removed the assessed construct rather than the barrier to it. The governing question is whether the modified product still evidences the intended learning. Where it does not, what has been provided is relief rather than access, and the distinction should be recorded so that the learner's progress in the substituted domain is not silently abandoned.

Learning environment

The fourth element covers the physical and affective conditions of the classroom: seating and movement, noise and light, routine and predictability, and the norms governing how difference is treated among learners.

For many learners with disabilities this element is not peripheral but primary. Predictable routine and explicit transition signals materially alter the accessibility of a lesson for autistic learners; sensory conditions determine whether attention is available at all for learners with sensory processing differences; and the classroom's affective norms determine whether a learner will use an accommodation that has been provided. The last point deserves emphasis, since it is frequently overlooked in plan review: an accommodation the learner declines because using it marks them out has not been delivered, however faithfully it has been offered.

What the Teacher Responds To: Three Learner Characteristics

Readiness

Readiness is current proximity to a specific learning goal — not ability, and explicitly not a fixed property of the learner. Tomlinson is unambiguous that readiness is content-specific and temporary, and that treating it otherwise converts differentiation into tracking (Tomlinson, 2014).

The distinction is essential in special education, where a durable categorical label sits alongside constantly varying current performance and readily displaces it. A learner identified with an intellectual disability has a readiness position for this week's fractions objective that must be assessed, not inferred from the identification. The practical safeguard is that readiness statements should always name the content and the date: not 'working below level' but 'not yet secure in equivalence of halves and quarters, as of this week's task'.

Interest

Interest concerns what engages a learner's attention and motivation. It is the least clinical of

the three characteristics and, for learners with a long history of academic failure, frequently the most powerful lever available. Where a learner has experienced sustained difficulty in a domain, interest-based entry points can restore willingness to attempt tasks in it — a precondition for any instruction to work at all.

Interest differentiation is also the element least likely to cause harm through misapplication, since it modifies context rather than expectation. Its principal risk is that interest-based activity substitutes for instruction rather than carrying it, which the target-constancy requirement noted above already guards against.

Learning profile

Learning profile covers preferred modes of working — individual or collaborative, structured

or open, analytic or holistic — together with the cultural and linguistic context the learner brings.

Two cautions are warranted. First, learning profile in Tomlinson's usage is not a claim about fixed cognitive style, and it should not be conflated with learning-styles theories, for which the evidence does not support instructional matching (Pashler et al., 2008). Second, profile is the DI characteristic most vulnerable to hardening into a fixed attribution, particularly where a learner already carries a diagnostic label with which the attribution can fuse. Profile information should inform the range of options offered, not determine which option a named learner receives.

Table 1 summarises the correspondence between DI components and special education function.

Table 1 - DI components and their function in special education provision

DI component	What it modifies	Special education function	What must be held constant
Content	Access routes to essential understandings	Preserves curricular entitlement while removing access barriers	The essential understandings themselves
Process	Activities, scaffolds, pacing, grouping	Absorbs most plan accommodations into class-wide design	The cognitive demand of the learning
Product	Mode of demonstration	Removes construct-irrelevant barriers to assessment	The construct being assessed and the standard applied
Learning environment	Physical, sensory, and affective conditions	Determines whether provision is usable and used	Equal membership and non-marking of difference
Readiness	Task difficulty relative to current position	Prevents categorical label substituting for current performance	Content-specificity and dated evidence
Interest	Context and entry point	Restores engagement after sustained failure	The instructional target
Learning profile	Range of working modes offered	Widens options without attributing style	Availability of all options to all learners

The Governing Principles

Tomlinson treats a set of principles as non-negotiable, and the argument of this paper depends on them, because it is their absence

rather than the absence of the components that produces the misapplications discussed below.

Quality curriculum requires that differentiation operate on instruction that is worth

differentiating; varied routes to trivial content are of no value, and the requirement bears particularly on learners with disabilities, whose curricular diet has historically been thinner. Ongoing assessment requires that every adjustment be traceable to recent evidence of current understanding rather than to prior judgement. Flexible grouping requires that groups dissolve and reform as the assessed purpose changes, and is the single most important structural safeguard the model contains. Respectful tasks requires that every learner's work be of comparable interest, importance, and cognitive demand, differing in route rather than in worth. Teaching up requires that tasks be designed at high expectation with scaffolding added, rather than designed low and enriched — an inversion with substantial consequences for learners whose plans might otherwise anchor expectation downward.

What the Evidence Supports

A paper recommending DI should be candid about its empirical record, which is more modest than its advocacy suggests. Deunk and colleagues (2018), reviewing differentiation practices in primary education, reported small average effects that varied considerably with the specific practice examined and with implementation fidelity.

Smale-Jacobse and colleagues (2019), reviewing secondary settings, reached a broadly similar conclusion and noted persistent difficulty in establishing that differentiation had in fact occurred as described.

Two observations follow. First, the components with the strongest independent evidence are those DI shares with better-established literatures — formative assessment (Black & Wiliam, 1998) and appropriately pitched task difficulty — which suggests that DI's contribution is organisational rather than the introduction of novel effective ingredients. Second, the implementation-dependence of the findings is itself informative: differentiation appears to work when its governing principles are maintained and to do little when the components are enacted without them. This is consistent with the argument advanced here, and it is the reason the following section is devoted to failure modes rather than to further elaboration of technique.

Four Misapplications in Special Education Settings

Table 2 sets out four patterns that recur when DI is imported into special education without its principles, together with the safeguard Tomlinson's formulation already provides.

Table 2 Recurring misapplications and their safeguards

Misapplication	What it looks like	Why it occurs	Safeguard within the model
Accommodation drift	Support provided for access becomes reduction of demand	Access and difficulty are conflated in planning	Respectful tasks; teaching up
Permanent grouping	The same learners work together across units and terms	Grouping is timetabled or handed over rather than reassessed	Flexible grouping; ongoing assessment
Product substitution	Alternative demonstration removes the assessed construct	Barrier and construct are not distinguished	Constant standards across varied products
Profile fixation	A learning-profile description fuses with the diagnostic label	Profile is recorded once and never revisited	Profile informs options offered, not allocation

The common structure of all four is worth naming. In each case a differentiation decision that was meant to be provisional and evidence-driven has become durable and evidence-free, and in each case the safeguard Tomlinson specifies is one that forces periodic re-evidencing. This suggests that the practical work of implementing DI in special education settings is less a matter of training teachers in technique than of building re-evidencing into the structures — planning formats, review cycles, handover protocols — within which teachers work.

Conditions for Implementation

Three conditions distinguish settings where DI functions from those where it is nominally adopted. The first is assessment infrastructure: differentiation driven by evidence requires that evidence be routinely generated and immediately usable, which is a matter of task design and record-keeping rather than of additional testing. The second is structural flexibility: a timetable that fixes groups, or a support-staff deployment that permanently attaches an adult to a named learner, has settled the grouping question before any teacher deliberates it. The third is collaborative planning time between class teachers and specialist staff, since the translation of plan goals into class-wide design is the specific task this paper describes and it cannot be done by either party alone.

Limitations

This paper is conceptual and offers a framework for application rather than evidence of effect. Its central proposal — that DI functions as the operational layer between individualised plans and daily instruction — is a claim about the

organisation of practice and would be tested most directly by examining whether plan goals in fact appear in class-wide lesson design in settings claiming to differentiate. The evidence reviewed above indicates that this cannot be assumed. The account also treats special education generically across disability categories and jurisdictions; the balance among the four elements will differ substantially for, say, a learner with a specific learning disability and a learner with profound and multiple learning difficulties, and that variation is not developed here.

Conclusion

Differentiated instruction is often presented to special educators as an additional framework to accommodate alongside those they already hold. We have argued that this misdescribes its role. DI adds no commitments the field does not already have; what it adds is a method for enacting them at the level of the lesson, where individualised plans by their nature cannot reach.

Its four elements provide the vocabulary in which plan accommodations can be designed into class-wide instruction rather than administered individually. Its three learner characteristics provide a discipline for keeping current performance in view when a durable diagnostic label is available to displace it. And its governing principles — flexible grouping, ongoing assessment, respectful tasks, teaching up — are precisely the safeguards against the failures to which special education provision is most prone. The evidence indicates that differentiation delivers little when those principles are dropped, which is not an argument against the model but a description of what implementing it requires.

References

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74.
- Broderick, A., Mehta-Parekh, H., & Reid, D. K. (2005). Differentiating instruction for disabled students in inclusive classrooms. *Theory Into Practice*, 44(3), 194–202.
- Deunk, M. I., Smale-Jacobse, A. E., de Boer, H., Doolaard, S., & Bosker, R. J. (2018). Effective differentiation practices: A systematic review and meta-analysis of studies on the cognitive effects of differentiation practices in primary education. *Educational Research Review*, 24, 31–54.

-
- Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal*, 37(5), 813–828.
- Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. *American Secondary Education*, 32(3), 34–62.
- Norwich, B. (2008). Dilemmas of difference, inclusion and disability: International perspectives and future directions. Routledge.
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3), 105–119.
- Smale-Jacobse, A. E., Meijer, A., Helms-Lorenz, M., & Maulana, R. (2019). Differentiated instruction in secondary education: A systematic review of research evidence. *Frontiers in Psychology*, 10, 2366.
- Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Association for Supervision and Curriculum Development.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Association for Supervision and Curriculum Development.
- Tomlinson, C. A., & Imbeau, M. B. (2010). *Leading and managing a differentiated classroom*. Association for Supervision and Curriculum Development.
- Tomlinson, C. A., & Moon, T. R. (2013). *Assessment and student success in a differentiated classroom*. Association for Supervision and Curriculum Development.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.