Tiering: Sites of Opportunity for Differentiation

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Abstract

This paper provides a vision for addressing differentiated learning within the phases of lessons to approach students' needs in a classroom. Based on this approach to differentiation, a model for the phases of instruction for both direct and indirect methods of teaching is examined and the sites of opportunity for tiering within the model are identified. Finally, examples of how a tiered lesson plan would function, by taking instructional advantage of each of these sites of opportunity within a lesson, are provided. Implications for how lesson planning is taught within Faculties of Education are examined.

Key words:differentiation, tiering, phases of instruction

Introduction

For almosttwo decades, tiering has been part of the language of instruction for teachers, since its emergence in the literature about differentiation in 1995 (Tomlinson). There are many text and online sources about tiering to be found for teachers. The concept of tiering is embedded in the concept of differentiation and is generally presented as a method of differentiation that responds to students' interests, learning profiles, or readiness.

Tiering has a number of defining characteristics. It is a specific instructional approach that relies on assessing students by need, whether the need is defined by a students' readiness, interests, or learning profile; in tiered lessons, all students work toward understanding the same knowledge or toward developing the same skills; the approaches that are offered to students as methods of attaining the same knowledge or skills differ based on their current levels of related knowledge or skills; and the strategies they are offered to extend their knowledge or skills are designed to address needs at the appropriate level of challenge based on the teacher's assessment of needs. This is tiering based on students' readiness.

Tiering to meet these needs is, however, relatively easy for teachers to manage in the dynamics of a busy classroom environment if the tiering is done to address interests or learning profiles. By identifying options and allowing students to select from a range of choices, teachers can tier lessons for students' interests or learning styles. Tiering by readiness is a much more complex instructional task for the teacher. When tiering for readiness, the teacher must engage in a complex feedback loop of data acquired by monitoring the students' engagement in tasks, analyzing their successes and challenges, identifying areas where gaps in understanding exist, and planning to address those gaps by offering tiered experiences. This is not new information for teachers. What may be new is the acknowledgement that tiering in a busy classroom is very difficult because the instructional approaches offered to students to tier their learning are time consuming to plan, challenging to design, and heavily resource dependent. These three reasons may contribute to the underuse of tiering as an instructional strategy used by teachers to address students' learning needs based on their readiness levels.

Current literature about tiering explains a number of strategies for tiering lessons based on different levels of students' readiness. These include: variations in the levels of complexity of a task; variations in pacing of the work; changes in the amount of structure that is provided by the teacher or developed by the student, including identification of the steps the student must follow to complete the work; variations or choices in the forms of expression the student might use to learn or demonstrate their learning; and, differences in the levels of independence required for learning and assessment tasks.

Heacox (2009) and Adams and Pierce (2003, 2006) identify several characteristics that should apply to how teachers design tiered lessons.

Tiered lessons should support different work that guides students toward achievement of the learning goal, not just more or less work. All tiered work should be interesting and engaging for the students and tasks should be respectful of the students' time and academic energies. It should be fair in terms of the students' work expectations and the time needed to complete the required work. Tiered work tasks should require students to use the key concepts, skills, or ideas that are the focus of the learning, thereby aligning the tasks with the learning expectations or goals. Maintaining these characteristics within tiered learning contexts helps teachers to ensure that high standards are maintained for all students while supports for reaching those standards may vary.

Literature about tiering often models three levels for tiering based on students' readiness. These examples assume that students will, at least roughly, naturally group into levels that are working slightly below the intended learning level, at the intended learning level, or slightly above the intended learning level. Experienced teachers will recognize that classroom life is often not quite so tidy and predictable. However, tiering by two or three levels can be manageable, with effective planning, in a classroom context. More than three levels of tiering could become unwieldy for the teacher and taxing on the available time and resources. As a result of this observation, for the remainder of this paper, we accept the premise of three levels of tiering for readiness as a workable classroom approach while concomitantly recognizing its limitations. Also, it should be noted that tiering is not a stagnant assignment of students to certain groups. Rather, it is a dynamic and fluid effort to respond to changing needs as students develop and new information about their learning is acquired.

The academic literature about tiering for readiness, interests or learning preferences (including learning styles and multiple intelligences) will provide a context for our proposal for examining when to tier as sites of opportunity within a lesson. This literature is consistently focused on the idea that teachers must know the learners and their needs to be able to tier effectively (Adams and Pierce, 2006; Tomlinson, 1995).

Literature Review

A vast amount of literature is available on the underlying principles of differentiated instruction and its key principles. These principles include: knowing the learner; responding to the needs of the learner; using choice; designing respectful learning tasks; using flexible groupings; and continual assessment and feedback for learners(Gregrory, Chapman 2013, Heacox, 2009, Levy,2006, Subban, 2006,Tomlinson, 1995,1999, 2006.)Tiering is presented as one of the many instructional strategies/ structures used in the planning and implementation of differentiated instruction. As previously stated, there are several resources that present examples of tiering based on readiness, interest, or learning preferences. (Adams and Pierce 2003; Armstrong, Haskins,2010; Kingmore, 2006; Pullen, Tuckwiller, and Konald, 2010;Tomlinson,1995, 1999; Tomlinson &McTighe, 2006). However, there is an absence in the literature about tiering regarding instruction for teachers on when or where to provide tiering in the lesson.

Adams and Pierce (2006) developed a model called the CIRCLE MAP (Creating an Integrated Response for Challenging Learners Equitably). It weaves together four elements: classroom management strategies; anchoring activities; differentiated instructional strategies; and, differentiated assessment.Tiering is mentioned as one of the strategies to respond to the needs of the learner in a challenging and respectful manner but there was no direction in this model as to where and when in the lesson this could be done.

In 2006 Tomlinson and McTighe collaborated to integrate Understanding by Design (UbD) and Differentiated Instruction (DI). In the original Wiggins and McTighe (2005) model, the focus was on planning backwards or backwards design. The template offers specific boxes to follow in different stages. In Stage1, designers are asked to specify the desired understandings and the essential questions that reflect the established learning goals, such as content standards.

These elements help clarify thecontent priorities and ensure that the big ideas and essential questions are prominent in a learning episode.These are then drawn into more specific knowledge and skills that students should be able to learn at the end of this lesson or unit. Stage 2 distinguishes between performance tasks and other information that will provide valid and reliable evidence of the desired learning. Stage 3 involves planning for purposeful learning activities and directed teaching to help students reach the desired achievements. On page 36 Figure 3.3 is an organizer that provides a framework for thinking about how and where differentiation could apply to the UbD framework. It suggests that Stage 1 should not be differentiated, Stage 2 may be differentiated and that Stage 3 should be differentiated.

However, for the purposes of lesson planning, these stages seem awkward and may be unlikely to help teachers identify sites of opportunity within the various phases of a lesson.Additionally, this staged approach misses some possible times in the lesson phases when teachers could tier parts of a lesson to support students' success.

Gregory and Chapman(2013) present a six-step planning model in which the first step involves examining the core standards and determining what should students know and be able to do. The steps to determine which assessments they will use to collect data and provide feedback to students guide teachers. This step is similar to the approach suggested in UbD literature. Essential questions are to be developed, posted and revisited in the classroom for the students to consider while working on the task. The second step is to determine the CONTENT, including knowledge, understandings and essential skills. The third step is ACTIVATE; the teachers are asked to determine what students know and what are the next steps. They are then to access prior knowledge and raise anticipation and excitement for the new topic. The fourth step is AQUIRE,in which the teacher decides what new knowledge and skills students need to learn and how they will acquire them to their level of understanding. The teacher decides whether the acquisition will take place in a whole group setting or small groups of students as well as which resources and materials will be used. The fifth step includes APPLY and ADJUST where teachers provide the opportunity for their students to practice and become actively engaged with the new learning in order to understand and retain it. In this step there is an emphasis on building opportunities for both academic and domain specific vocabulary and a variety of levels of thinking and complexity. At this step the teacher determines how the students will be grouped and what tasks will be assigned to challenge them at the appropriate level. This step emphasizes the importance of formative assessment and using this data to readjust the tasks to help the students gain success in their learning. The sixth step involves the summative assessment.

Armstrong and Haskins (2010) focus on tiering and tiered lessons and provide more direction as to how to tier in the areas of content, process and product. However, they do not relate their directions to phases within a lesson.

In the models above, the focus is on when to differentiate but is not specifically focused on when teachers could use tiering to accomplish this differentiation.

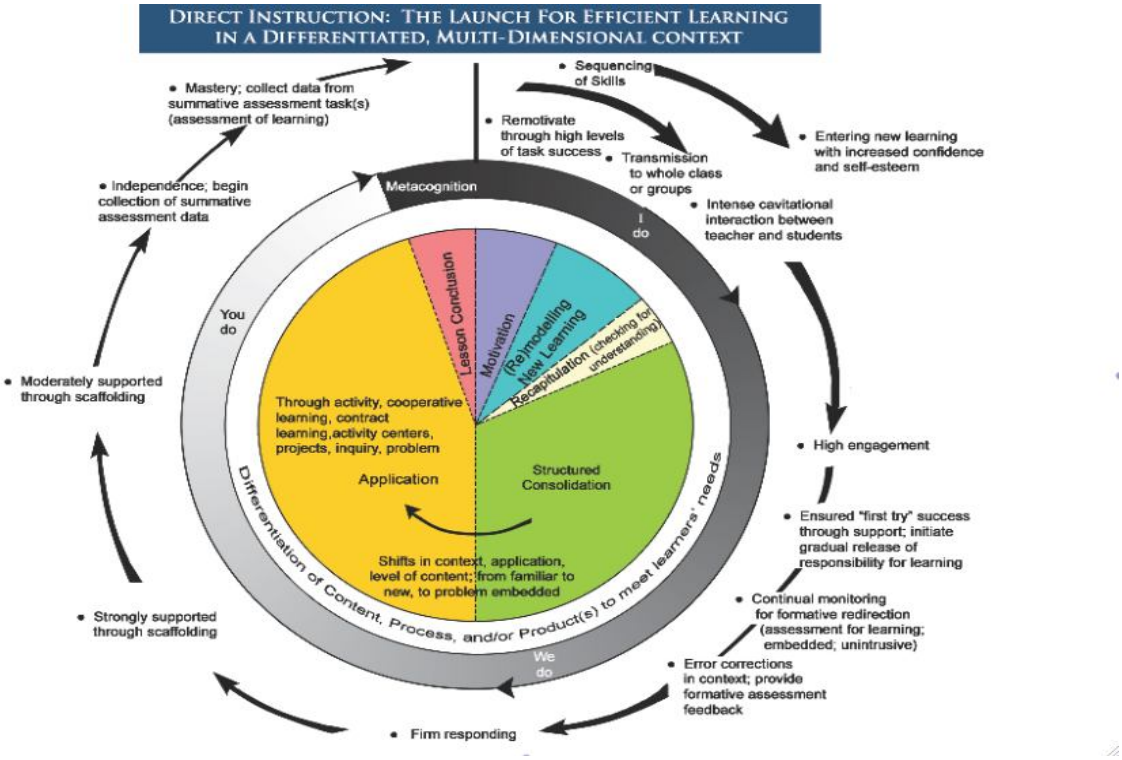
In our previous work (Maynes, Julien-Schultz, & Dunn, 2010; Maynes & Julien-Schultz, 2011) we have developed a model outlining the phases of instruction. In our undergraduate teacher education courses, this model is used to provide a conceptual framework to help teachers visualize the sequences of steps that should be included in their instruction (Maynes & Julien-Schultz, 2011; Maynes & Julien-Schultz, 2012). In this paper, we use this model to demonstrate the various opportunities for tiering within the phases of instruction. Our work with large groups of teachers in professional workshop settings has demonstrated the efficacy of this approach.

Phases of Instruction

An area of academic focus for the authors has been centered around producing a visual model for instruction that would help teacher candidates understand the differences between direct and indirect instruction (Maynes, Julien-Schultz& Dunn, 2010; Maynes & Julien-Schultz, 2011). This model describes the phases of instruction for direct instruction, where teacher modeling is an essential element of the instruction, and supports variations of the phases to accommodate the use of indirect instruction. In indirect instruction, the phases of instruction are similar but the teacher-modeling phase is replaced by new learning that is achieved by another source of learning engagement (e.g., activity centers, labs, trips, web quests, cooperative learning, etc.). Both direct and indirect instruction support the acquisition of new information which students need to acquire, then internalize as they consolidate and apply the new ideas or skills.

The phases of instruction model is shown in Figure 1.

Figure 1 Phases of Instruction



The following paragraphs explain each phase of this model in greater detail.

Motivation

Effective instruction starts with providing students with a reason to learn. This phase is called *motivation.* During the motivational phase, students' prior learning is activated and they are given a connection between what they have learned and what they are about to learn. Motivation creates a context and the conditions for the upcoming learning. This is also an opportunity for the teacher to collect data about what students already know about the topic (diagnostic assessment; assessment *for* learning) in order to adapt upcoming instruction to reflect current knowledge. This phase of instruction starts the instruction loop where the teacher is constantly adapting the new learning opportunities to what students now know or can do.

Motivation should be relatively brief, active, and provide an interesting experience. It may include the presentation of a phenomenon that creates cognitive dissonance, a sense that something does not fit the students' existing knowledge or schema for the topic, thereby giving them a reason to investigate further.

Modeling the New Learning

Once students are motivated to learn, the teacher, taking the role of expert learner, models the new learning. Showing, telling, and questioning are key strategies for effective modeling. Modeling should be done in an energetic, interactive, learning-style-sensitive manner. Effective modeling should be done through cavitational modeling (Maynes& Scott, 2011). Because a great deal of energy and intensity is 'released' during this modeling approach, the researchers titled this approach "cavitation", in reference to the energy, heat, and action caused by a volcanic eruption, or the churning of water caused by the action of a boat propeller.Modeling should be seen to include opportunities for re-modeling, for students who may require this additional support. Such re-modeling could occur during consolidation and/or application.

Consolidation

Following the modeling phase, the teacher should consolidate learning through closely scaffolded opportunities for practice (Fisher and Frey, 2010;Vygotsky, 1962). During consolidation, the teacher ensures that the learning is practised in familiar contexts, with the benefit of detailed and specific feedback that guides improvement to ensure success. Consolidation is complete once students can provide firm responses that demonstrate that they have learned what was modeled.

Feedback during the consolidation phase of instruction should have several essential characteristics. Feedback on learning progress should: be based on pre-stated/ identified assessment criteria; provide examples of ways to improve; be detailed; be specific; be timely to support ongoing progress; be focused on providing support for improvement (rather than on penalty for errors); and allow time for students to improve before more complex applications are required. At this phase of instruction, exemplars help to guide students' efforts.

Application

Once students' efforts during consolidation are successful, teachers challenge students' understanding by providing opportunities for application. The purpose of application is to ensure that students have a sufficiently strong understanding of the new learning to be able to transfer the new knowledge, skills, and attitudes/values to new contexts. Application approaches are effectively developed through indirect instruction, allowing students to experience choice or engage in activities designed to challenge them at their level of readiness, and make personal meaning from learning experiences. Indirect instruction approaches include, but are not limited to, strategies such as cooperative learning, inquiry, research projects, experiments, activity centers, tours, guided observation, and web quests.

It is important to understand that indirect instruction may stand alone as a single day's lesson in a particular subject area. That is, teachers may start to address an expectation through direct instruction, using modeling, and consolidate the new learning with scaffolded practice on one day, and start the next day's lesson on the same topic through indirect instruction to apply the previous day's learning (application phase). Complex learning, leading to deep understanding, may be applied over several days.

Lesson Conclusion

The purpose of the lesson conclusion is to provide an opportunity for students to develop metacognitive awareness of what they have learned. During this phase, teachers review the lesson's main concepts and attach language to each idea. The language assists students' retrieval of the new learning in future contexts. Teachers need to set aside a specific allotment of time at the end of each lesson to review what they have taught and encourage students' awareness of their expanding abilities.

Tiering for Readiness: Sites of Opportunity

Based on this model for envisioning the phases of instruction in either direct or indirect instruction lessons, three sites of opportunity can be identified for tiering based on each student's readiness as determined by their displayed ability with new concepts or new skills. Teachers could choose to tier learning opportunities at either the consolidation, or the application phases of the lesson. As well, at the end of the application phase, once students have demonstrated the expected level of comfort with the new learning, teachers can provide tiered assessment opportunities. This model then identifies three sites of opportunity for tiering in any lesson: consolidation, application, and assessment. Tiering can also be provided during the new learning phase if the instruction is being approached indirectly. We will focus below on providing examples of tiering in lessons where the teacher is providing the new learning through modeling.

For example, if the lesson was focused on teaching students new vocabulary words, once the meanings of new words were modeled for students, the consolidation phase of instruction could ask students to sort the words and match them to their meanings in different ways. Each matching strategy is designed to provide different levels of support for every student to achieve success and learn the meanings of the words. At the first level if tiering (tier1), students could be given an envelope of the words and their definitions including pictures and be asked to match the words with the augmented definitions. At the second level of tiering (tier 2), the students could be given the words and their definitions and asked to match them. At the third level of tiering (tier 3), the students could be given a site passage and the word list and asked to replace other words, or phrases, in the sight text with new words that they have just learned. Each student is ultimately acquiring the new learning, but doing so with different levels of support.

As the application level of the lesson starts, teachers may regroup students based on observations of their success with the consolidation activity. During application, the new tiers might undertake additional practice in more complex contexts to solidify their understanding of the new vocabulary. For example, the students working at tier 1 might complete a cloze exercise where they place the correct vocabulary word in the correct sentence. Students in the tier 2 group might create sentences using each word, and the tier 3 group might develop a paragraph using any 10 of fifteen selected vocabulary words.

Each application task provides a respectful, legitimate academic task that provides appropriate opportunities to use key concepts developed in the new learning phase of the lesson. Formative feedback (assessment *as* learning) is given to students throughout the consolidation and application tasks.

As the teacher moves the group of students toward the end of application, students will be given an opportunity to display their new learning for summative purposes (perhaps in subsequent time periods). While all learning will not be assigned a mark, all learning should include at least observed assessment so that the teacher has a solid basis of information on which to base new learning in subsequent lessons (e.g., formative assessment). With a tiered application phase, the teacher may decide that it is too early to assess some students summatively. More practice may be required before some students are ready to demonstrate their learning, so the assessments applied in the same time block may be different to respond to students' current learning needs.

However, if the teacher decides to apply summative assessment to all three tiers of this lesson, it may proceed like this. Tier 1 students may have another matching activity to do but only the vocabulary words and their definitions are provided. Tier 2 may have a paragraph to write using some of the vocabulary words they have newly learned, and tier three may analyze a paragraph that is designed to suit the new vocabulary but without using the new words; these students might be asked to rewrite the paragraph to apply some of the new vocabulary. It should be evident to teachers that the tiered tasks are gradually sloping toward the highest tier as the phases of instruction progress. That is, students who did a tier 1 task for consolidation may be ready to do a tier 2 task as they apply new learning. Similarly, a tier 2 task completed during consolidation may provide the level of readiness needed by the students to allow them to complete a tier 3 task during application. These decisions should always be based on the evidence of readiness that is collected by the teacher as students progress through each stage of the phases of instruction.

It is worthy of note here that classroom observations of teachers (Maynes,Julien-Schultz& Dunn, 2010) have shown that teachers often provide very little consolidation and application time and experience for students, often rushing from modeling the new learning to assessing it. By considering tiering within the sites of opportunity shown in the phases of instruction diagram, teachers can be sure that they identify times and develop different types of practice to ensure the success of each student as they approach the summative assessment of new learning.

It would support teachers' thinking about the sites of opportunity for tiering if they had a planning template that allowed them to visualize the possibilities within the phases of instruction. In the following section, some samples of tiered lessons using the three sites of opportunity identified in the phases of instruction in a modeled new learning lesson are provided.

Example Tiered Lesson Plans Differentiated at Three Sites of Opportunity

The samples that are provided in this section identify a grade, learning goal or expectation, a pre-assessment of the learners, stated in ways that make the need for tiering evident, and a strategy for modeling the new learning in each lesson. Following this part of each sample, methods of tiering the consolidation, the application, and the assessment are shown. Four samples are provided to demonstrate the validity of tiering at all grade levels, all subject areas, and in both elementary and secondary school contexts.

Sample 1 Tiering Based on Readiness in Grade 1 Language

Grade: 1

Learning Goal:

The students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learning; and to use their imaginations.

Pre-Assessment of Learners:

(Describe your diagnostic assessment)

- most of the students are at the emergent stage of writing in this group
- two students continue to work on letter recognition
- four students are able to write simple sentences and combine sentences to show the beginning, middle, and end of a story they have created.

(Model) **New Learning:**

On the chart stand, show students how to select words from different sets (they will be in sets of nouns, adjectives, verbs, adverbs, and connecting words but these terms will not be used with students). Have students take turns selecting words and making sentences or improving on each other's sentences by adding adjectives or adverbs.

Consolidation of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
On a cookie sheet, using metallic letters, students will work in partners to try to form and say words.	Students will work to form four sentences using the various words provided in an envelope.	Students will write four sentences about a single topic as assigned by the teacher (to reflect a theme or current focus in the classroom).

Application of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
Students will complete a worksheet that contains pictures and partially completed words, some missing beginning and some missing ending sounds. They will work to add the missing letters corresponding to each picture to complete all of the words (e.g., _ail +pail; orca_ =cat).	Students will work in groups to read and sort into order, sentence strips that tell a familiar nursery rhyme they can sign (e.g., Old MacDonald had a farm).	Students will select a picture from a limited set in a file and must write a story with at least three sentences which give the story a beginning, middle, and an end.

Assessment in Tiers:

Tier 1	Tier 2	Tier 3
Formative; assessment *as* learning; observation and anecdotal notes only.	Formative; assessment *as* learning; observation and anecdotal notes only.	Summative; assessment *of* learning; a summative mark may be given to the story.

In this example, the teacher has determined that students working in tiers 1 and 2 are not yet ready for summative assessment so it is deferred, while the tier 3 group of students is being assessed for summative purposes at the end of this lesson. If the tiering is working as it is intended to, the students working at tier 2 today, should be ready for summative assessment of this learning very soon, with the students now working in tier 1 on these learning goals being ready for summative assessment very soon after that.

Sample 2 Tiering Based on Readiness for Grade 4 Social Studies

Learning Goal: The student will be expected to demonstrate an understanding of the physical landscape of Canada.

Pre-Assessment of Learners:

- Students have already developed some understanding of concepts from earlier sections of the unit such as: understanding of the concept of exploration; demonstrating an understanding of the stories of various explorers of land, ocean, space, and ideas; demonstrating an understanding of factors that motivate exploration; and, demonstrating an understanding of the impact of exploration over time.
- Students differ in their ability to summarize researched materials independently.

(Model) **New Learning:**

All students will be assigned to examine the various physical features of Canada by selecting their focus (e.g., island and Bays, Lakes, Mountains, Rivers, National Parks and Landscapes) from a draw box. Students will be shown the site http://geography.howstuffworks.com/canada/physical-features-of-canada.htmand how to navigate it to examine information about the data they are to collect.

Consolidation of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
Students will be guided in their research with specific directions to record the location of the features they have researched on a blank map of Canada and record specific details of their research on a graphic organizer that is provided.	Students will be guided in their research with specific directions to record the location of the features they have researched on a blank map of Canada. They will develop a graphic organizer to record the information they find.	Students will be guided in their research with specific directions to record the location of the features they have researched on a blank map of Canada. They will be guided to look at a minimum of one additional web site to extend their information about their research and select a graphic organizer from http://www.google.ca/search?q=graphic+organizers&client=safari&rls=en&tbm=isch&tbo=u&source=univ&sa=X&ei=ucVWUqv-EO7KyQG67oDAAg&ved=0CEcQsAQ&biw=1187&bih=484&dpr=1to record their findings.

Application of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
Students will meet as a group with the teacher and use reports from each Tier 1 researcher to add information and symbols to their maps for Canada as each researcher explains what they discovered.	Students will meet at a center and share their research and support each other as they develop details on their individual maps of Canada as each researcher explains what he/she found out.	Students will meet as a group and build a single larger map of Canada that incorporates all of the data they found in their research.

Assessment in Tiers:

Tier 1	Tier 2	Tier 3
PerformanceTask- Completed map and completed graphic organizer will be assessed.	Performance Task- Completed map and completed graphic organizer will be assessed. Graphic organizer that was designed by the student will be assessed for its adequacy for the research task.	Performance Task- Students will be assessed for their ability to display and explain their completed map to other students in the class.

In this example, the new learning is achieved through indirect instruction and students are tiered for consolidation, application, and assessment based on their readiness to engage in multi-faceted research with differing levels of independence.

Sample 3 Tiering Based on Readiness in Grade 7 Mathematics

Learning Goal: Create a table of values, using a linear relation, and graph the table of values (limited to discrete elements).

Pre-Assessment of Learners:

- A pretest was completed before this unit; it was evident from pretest results that many students have some prior knowledge of graphing skills and may need a reminder about the style and standards that apply to effective graphing; it was also apparent that three students have very little recall of any previous learning about graphing.
- Some students are very sophisticated users of the Internet and may be able to do some graphing of discreet elements using student-friendly software.
- Recent lessons have focused on bar graphing; we are now ready to examine line graphs.

(Model) **New Learning:**

A SMARTboard will be used to demonstrate the construction of line graphs and to introduce double line graphs to show correlations in discrete data sets.

Consolidation of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
Students will graph discrete data onto pre-constructed graphs. They will answer questions to identify through colour, the various features of a line graph (e.g., colour the title of the x axis red).	Students will develop appropriate x and y-axis scales, titles, intervals, etc. and graph a single set of discrete data. They will write concluding statements about ideas demonstrated in the graphed data.	Students will develop x and y axis scales, titles, intervals, etc. and graph two sets of discrete data. They will interpret trends and intersections in the data.

Application of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
Students will work on the SMARTboard with the teacher to develop a line graph using software provided on http://www.onlinecharttool.com/graph?selected_graph=line	Students will work independently on the computer to develop a line graph using software provided on http://www.onlinecharttool.com/graph?selected_graph=line using data provided by the teacher.	Students will work independently on the computer to develop a line graph using software provided on http://www.onlinecharttool.com/graph?selected_graph=line using data they have collected.

Assessment in Tiers:

Tier 1	Tier 2	Tier 3
Summative: Assessment *of* Learning Students will answer questions about the messages in sample line graph presentations.	Summative: Assessment *of* Learning Students will create and interpret the meaning of several sample line graphs, where data is given.	Summative: Assessment *of* Learning Students will create and interpret the meaning of several sample line graphs, with both single and double data sets, which they have developed for data they have collected.

In this sample of tiering based on readiness, students are all meeting the stated learning goal, but at different levels of cognitive sophistication based on observations of their readiness. The teacher may revisit the learning goal in later lessons and support tier 1 and tier 2 groups to become more independent and sophisticated in their understanding of this concept.

Sample 4 Tiering for Readiness in Grade 11 Mathematics (Workplace Math)

Learning Goal: Calculate the interest rate of borrowing for a purchase over different periods of time.

Pre-Assessment of Learners:

- Students have prior knowledge in calculating the interest of borrowing to purchase.
- An **exit card** was given two days ago as a diagnostic to see if they could calculate the interest of borrowing to buy a new computer at a cost of $1000 at 22% for 3 years. It was determined that certain students still have difficulty with the calculation over time.

(Model) **New Learning:**

Calculating interest will be reviewed this time using the purchase of a sound system costing $200 on a credit card with an interest rate of 29% per month. How much would it cost after 1 year, 2 or 3 years?

Consolidation of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
This group will be asked to calculate the interest of borrowing to buy a new car at a cost of $20000 over 5 years at a rate of 3%.	This group will be asked to calculate the interest of borrowing to buy a new car at the cost of $20 000 over 3 years, 5 years, 7 years at the rate of 2.9%, 5%, and 6%.	This group will be asked to calculate the cost of borrowing to buy a house of $100 000 with a down payment of $10 000 over 10 years, 15 years and 25 years at a rate of 5.6% and calculate the monthly payment for each time period.

Application of New Learning in Tiers:

Tier 1	Tier 2	Tier 3
The same problem will be provided but this time they will need to provide the monthly payments.	The same problem but this time they will need to compare the monthly payments over the 3,5, and 7 years and determine which option is best.	The same problem will be discussed by changing the interest rate to 7% with no down payment and this time they will need to determine which option is best.

Assessment in Tiers:

Tier 1	Tier 2	Tier 3
In their respective groups, students will be demonstrating assessment *as* learning, whereby students will be able to provide feedback to each other based on exemplars and anchor charts provided.		

In this sample, we have shown tiering by readiness in the consolidation and application phases of the lesson but have shown that the assessment may be a flexible site of opportunity.

In this case, the students regroup to share their learning and assessment continues to be formative assessment *as* learning. The teacher then has the option at a later time to assess in tiers once further learning in the unit is completed.

Conclusions

The model presented in this paper to show the phases of instruction, and the template used to demonstrate how to see the phases of instruction as sites of opportunity for tiering based on students' readiness, have been the focus of this paper.

We have reviewed that tiering can be based on interests and learning preferences and shown several examples of tiering in response to students' readiness. As well, we contend that basing tiering on interests and learning preferences is a relatively easy professional task. By building in choice to the approaches offered to students, they can select those options which most appeal to them. However, considerably more complex planning is required from the teacher when they choose to base a lesson on readiness and use tiering to address readiness needs. Planning a lesson based on students' readiness levels demands more of the teacher's cognitive energy, more time, and more resources, than planning for tiering based on interests or learning preferences.

However, planning for tiering based on a student's readiness is an essential skill for teachers. To address students' learning needs we must be ever mindful of their readiness to address increasingly independent levels of learning with increasingly sophisticated levels of engagement with skills and concepts. To support students to successful engagement, we must provide the engagement in ways that are based on a current pre-assessment of related learning.

We must also be aware of the need to maintain flexibility in the groupings of students so that all students have challenging opportunities to demonstrate their learning. Students should never have a sense that they are always assigned to a pre-identified tier, without cause. The teacher must use current, related diagnostic assessment data to determine how tiers will be used on a daily basis.

Discussion

Although tiering is not a new instructional approach and has been a theme in instructional literature for close to two decades, it may not be implemented in classrooms to the extent that it could. This may be the case because teachers have lacked a clear understanding of how and when tiering for readiness should be done in their classrooms.

Without a sense of the dynamic and ongoing nature of assessment data to inform classroom instruction, and of strategies for collecting current assessment data in an economical and efficient way, it is difficult to tier lessons based on the teacher's assessments of students' readiness. Teachers develop their understanding of learners through ongoing, informal assessments as well as through formal approaches. We need to have confidence as a profession in the validity of our own observations and our ongoing conversations with students as they engage learning tasks. These observations and conversations are sources of pre-assessment data that can help us determine the best ways to support students' learning based on their readiness to engage the task at various levels of sophistication and independence. Once we have the data that informs our instruction, we are ready to offer various approaches for engaging the topic that suit the needs of different learners.

This paper has provided four examples of lesson plans that differentiate instruction (DI) at the consolidation and application phases of a lesson, as well as examples of how to tier assessment (DA) at the end of a lesson. We believe that seeing these sites of opportunity within the sequence of phases of instruction will support teachers' efforts to tier lessons to ensure success at different levels of readiness in their classrooms. These samples show three sites of opportunity for tiering and three levels of tiering for each site of opportunity. However, we recognize that the teacher might choose to start using tiering during one phase of instruction and perhaps, based on pre-assessment data, provide two tiers within the classroom group. This effort to start using tiering and to see the ongoing, cyclical relationship between collecting assessment data and responding to that data, because it helps us know the learner, should be celebrated. We are confident that teachers who do this will then be ready to extend their use of this strategy for differentiation even further once they see their students experience the successes that will result from their first efforts at tiering.

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