

## Introduction

As of 2020, around four percent of school districts in the United States used year-round or balanced calendars. Additional districts were considering adopting a balanced calendar to address learning disruptions caused by the COVID-19 pandemic.<sup>1</sup> A Hanover Research (Hanover) member district has previously used balanced calendars at individual schools and is considering transitioning to a balanced calendar at a district level to maximize student achievement, engagement, and attendance. To support this effort, Hanover has prepared the following research brief exploring the impacts of balanced calendars and best practices for implementing a balanced calendar.

## Recommendations

- Use multiple strategies to solicit stakeholder feedback and input on balanced calendar proposals. Districts such as Hopewell City Public Schools combine surveys and public meetings to engage diverse stakeholders and build support for balanced calendars.
- Exercise caution when considering a multi-track year-round calendar. Research suggests that multi-track year-round calendars may exacerbate inequities in access to educational resources such as experienced teachers and in academic achievement.
- Identify funding opportunities to support the cost of a balanced calendar. Districts can use multiple state, federal, and local funding sources to address the increased costs of a balanced calendar.

## Key Findings

- **Research examining the impact of balanced calendars on student achievement is inconclusive.** Some studies reviewed in a 2019 literature review present positive effects, particularly for students from underserved backgrounds. However, a 2020 literature review concludes that the impact of balanced calendars on academic achievement is "neutral at best," with any positive impacts potentially outweighed by negative effects such as a reduction in property values and difficulty recruiting experienced teachers.
- **Single-track year-long calendars in which all students attend school simultaneously may be more beneficial than multi-track calendars in which students attend on staggered schedules.** A 2019 literature review finds

positive effects of single-track year-round calendars in some studies, while findings on multi-track year-round calendars are consistently negative. Differing outcomes may reflect the inequitable assignment of students to tracks with few experienced teachers in multi-track programs or the use of time during intersessions to provide enrichment and remediation in single-track programs.

- **Research provides stronger evidence for the effectiveness of calendar changes that increase the overall length of the school year.** For example, several studies examining highly effective charter schools in New York City find that extended learning time through a longer school day and year is a core element of these schools' success. A 2010 meta-analysis finds that although previous studies of extended learning time suffered from methodological limitations, the evidence suggests a modest positive effect on student achievement.
- **The impact of a balanced calendar depends on implementing general instructional best practices to maximize the effectiveness of instructional time.** Schools that transition to a balanced calendar also adopt instructional reforms such as data-driven instruction and professional development (e.g., in-service and division-wide) for teachers and benefit from strong and consistent principal leadership. Schools using increased instructional time as an improvement strategy maximize the effectiveness of instructional time by using additional time to improve teaching effectiveness and provide all students with a well-rounded curriculum while ensuring that all time is used efficiently to support key learning goals.
- **Additional costs may pose a challenge for districts seeking to balance the calendar or extend the school year.** Although balanced calendars carry both potential savings and potential cost increases, the Virginia Department of Education estimates that transitioning to a balanced calendar increases net instructional costs by around three percent per year as well as increased logistical costs associated with transportation and school food services. Increasing the length of the school year will further increase costs due to increased salaries and benefits.
- **Stakeholder engagement during the planning process is essential to the sustainable implementation of balanced calendar initiatives.** Support from teachers is essential to changing the calendar and staffing intersessions, particularly in districts with collective

bargaining. Districts also need support from families and community members who will be affected by changes in student schedules.

## Impacts of Balanced Calendars

The research presents inconclusive results on the impacts of a balanced calendar. A systematic review of the empirical literature published in 2019 examines studies of single-track year-round programs in which all students attend on the same calendar and multi-track programs in which students attend on rotating calendars so that one track is in an intersession while the others are in school. Schools typically adopt single-track year-round calendars as a strategy to reduce the impact of summer learning loss on academic achievement. In contrast, many schools adopt multi-track year-round calendars to address overcrowding rather than as a school improvement strategy.<sup>2</sup>

**Figure 1: Comparison of Calendar Options**

Calendar	Days in Term	Days in Intersession	Summer
<b>Single-Track Options</b>			
<b>Traditional</b>	45-90	3 days to 3 months	3 months
<b>45-10</b>	45	4	5 weeks
<b>45-15</b>	45	15	5 weeks
<b>60-20</b>	60	20	5 weeks
<b>90-30</b>	90	30	4 weeks
<b>Multi-Track Options</b>			
<b>45-15</b>	45	15	5 weeks
<b>Orchard Plan</b>	60	3 15-day breaks and one 20-day break	3 weeks
<b>60-20</b>	60	20	5 weeks
<b>Concept 6</b>	80-85	40	4-5 weeks
<b>90-30</b>	90	30	4 weeks

*Southern Regional Education Board<sup>3</sup>*

The review finds mixed effects of single-track year-round calendars. Some studies find modest positive effects of single-track year-round calendars, while others find no significant effects. Notably, two studies reviewed find positive effects of year-round calendars for specific student populations. An analysis of elementary and middle schools in North Carolina finds positive effects of a single-track year-round calendar for low-achieving students with no significant effects for high-achieving students. Another study examining schools in Virginia finds that a single-track year-round calendar improves achievement for Black students, Hispanic students, and students from low-income families. However, a third study finds a negative effect of year-round schools on achievement for students from low-income families and a mixed effect on students from racial or ethnic minority groups. The authors suggest that the positive effects of single-track year-round calendars may reflect the use of intersessions to provide remediation and enrichment activities.<sup>4</sup> Schools using balanced calendars can leverage

the opportunity to conduct remedial programs more frequently as intersessions are built in throughout the academic year.<sup>5</sup>

A 2012 report prepared for the legislature of Virginia cites these studies and recommends that schools with high populations of students that benefit from year-round schools consider balanced calendars as a school improvement strategy. The report notes that all Virginia school districts that operated with a balanced calendar used intersessions to provide enrichment and remediation to students identified as needing additional support through assessments or teacher referrals. Districts often design intersessions with appealing themes to maximize student engagement and require or heavily encourage referred students to participate.<sup>6</sup>

The 2012 Virginia report also notes that school districts that have improved achievement with balanced calendars also implement general instructional best practices such as those listed in Figure 2. Likewise, a 2018 brief advocating for year-round calendars suggests that schools with positive results from year-round calendars leverage the calendar to facilitate enrichment and remediation as well as adopt instructional reforms to improve achievement concurrently with the balanced calendar.<sup>7</sup>

**Figure 2: Instructional Best Practices Associated with Strong Achievement Outcomes in Year-Round Schools**

Best Practice	Impacts on Performance
<b>Strong and stable leadership by principals</b>	<ul style="list-style-type: none"> <li>• Serve as instructional leaders of school</li> <li>• Develop overall instructional strategy of school</li> </ul>
<b>Data-driven assessment of student strengths and weaknesses</b>	<ul style="list-style-type: none"> <li>• Assess students' competence in core areas of the curriculum</li> <li>• Identify areas of strengths and weaknesses at the individual, class, and grade levels</li> <li>• Allow teachers to adjust approach to instruction, or reteach material not understood the first time</li> </ul>
<b>Effective teaching staff</b>	<ul style="list-style-type: none"> <li>• Receive relevant skills through appropriate professional development</li> <li>• Continually work to address personal and student weaknesses</li> </ul>

*Source: Virginia Joint Legislative Audit Commission<sup>8</sup>*

In contrast, the 2019 literature review finds consistently negative effects of multi-track year-round calendars on equity in academic outcomes. One study finds that students of color, students from low-income families, and English learners were disproportionately assigned to calendar tracks with more inexperienced teachers in schools with multi-track year-round calendars.<sup>9</sup> Multi-track year-round calendars also pose logistical challenges, including the need for teachers to share classrooms, additional burdens on

administrators and support staff, and challenges scheduling professional development and extracurricular activities.<sup>10</sup>

Another literature review published in 2019 confirms that the effects of year-round calendars appear to vary by track type. This review exclusively examines studies of schools with single-track year-round calendars published between 2001 and 2016. The review finds that average scores on achievement tests in English language arts and math are higher in schools with single-track year-round calendars than in schools with traditional calendars, with the magnitude of the effect similar to that caused by summer learning loss. However, the review does not find any statistically significant difference in the percent of students earning proficient scores on achievement tests or any improvement in equity across student groups for schools with year-round calendars.<sup>11</sup>

A 2020 literature review examines a wider range of studies and concludes that the impact of year-round schools on academic achievement is "neutral at best." The study finds that the reduction in learning loss during summer is made up for by learning loss during each intersession so that the total amount of learning is equivalent in a year-round and traditional calendar with the same number of instructional days.<sup>12</sup> The author acknowledges that schools can reduce learning loss by offering remediation and enrichment during intersessions but notes that schools with a traditional calendar can offer similar activities during the summer break.<sup>13</sup> The study also finds negative effects from the logistical challenges of implementing year-round schools, summarized in Figure 3. These effects may outweigh the direct effects of year-round calendars on academic achievement.

**Figure 3: Negative Effects of Year-Round Schools**

### Teacher Recruitment

- Schools with year-round calendars face challenges recruiting and retaining experienced teachers. These challenges appear to be more severe in schools principally serving low-income and minority populations.

### Maternal Employment

- Year-round calendars create a child care challenge for parents, resulting in a reduction in employment rates for mothers of school-age children.

### Property Values

- Property values are slightly lower in areas zoned to year-round schools, likely reflecting families' willingness to pay more for housing to avoid a year-round calendar

Source: Annenberg Institute at Brown University<sup>14</sup>

Empirical research on non-academic outcomes of balanced calendars, such as attendance and student engagement, is limited. Anecdotal evidence suggests that students experience benefits to engagement and social-emotional wellbeing in schools with balanced calendars. For example, students and parents at Corinth School District in Mississippi report that the district's balanced calendar reduces burnout and allows students to receive immediate remediation during intersessions rather than waiting for summer school.<sup>15</sup> Corinth School District also uses intersessions to provide students with wraparound services.<sup>16</sup> The executive director of the National Association for Year-Round Education, an advocacy organization focused on supporting balanced calendar initiatives, claims that student and teacher attendance improves when schools adopt a balanced calendar.<sup>17</sup>

## Research on Extending the School Year

Research on calendar reforms that extend the overall length of the school year presents stronger evidence of effectiveness than research examining balanced calendars with the same number of instructional days. A 2010 meta-analysis examines 15 empirical studies of the impacts of extending either the school day or the school year published between 1985 and 2009. The authors note that most studies used weak research designs that were insufficient to establish causation but conclude that the overall evidence suggests a modest positive effect of extended time on student achievement.<sup>18</sup>

More recent research continues to find positive overall effects of increased instructional time. For example, a study that uses data from charter schools in New York City to identify determinants of school effectiveness finds that schools that increase instructional time by 25 percent over the average significantly increase student achievement in math when controlling for other inputs found to improve student achievement. Combining increased instructional time with high-dosage tutoring, high expectations, frequent feedback from teachers to students, and data-driven instruction, increases math and ELA achievement more than implementing any one policy individually.<sup>19</sup>

Another study examining data from New York City charter schools finds that both a longer school day and a longer school year improve student achievement. However, the independent effect of a longer school day is not statistically significant after controlling for other school characteristics; the effect of a longer school year after controlling for other characteristics is the strongest of the characteristics studied. The authors note that the lack of a significant independent effect of longer school days may be due to the small number of schools that increase the length of the school day without also increasing the length of the year.<sup>20</sup>

Ensuring that additional learning time is used effectively is crucial to the success of initiatives to improve achievement

by increasing instructional time.<sup>21</sup> Schools implementing extended learning time (ELT) as an improvement strategy typically combine increased instructional time with other improvement initiatives such as targeted interventions and capacity-building for teachers.<sup>22</sup> Research examining schools that have improved achievement by increasing learning time identifies eight key practices to improve student achievement, summarized in Figure 4.<sup>23</sup>

**Figure 4: Key Practices for Increasing Instructional Time to Support Student Achievement**

#### Optimize Time for Student Learning

- Ensure that time is used effectively and that the maximum possible percent of the school day is devoted to instruction
- Ensure that additional time is used to focus on essential learning goals
- Schedule intervention classes, review sessions, or tutoring to match instruction to individual student needs

#### Use Time to Help Students Thrive in School and Beyond

- Support a school culture with high expectations for collaboration and student achievement
- Ensure that students have access to a broad range of courses and extracurricular activities

#### Dedicate Time to Improve Teacher Effectiveness

- Provide dedicated time for collaborative teacher professional development
- Provide dedicated time to collect, analyze, and act on student data.

Source: National Center on Time and Learning<sup>24</sup>

## Implementing a Balanced Calendar

Balanced calendars create both costs and potential savings compared to a traditional calendar. The California Department of Education suggests that year-round schools require additional funding to transition to a new calendar and ongoing operational costs such as additional administrative staff and additional utilities, maintenance, and transportation. However, year-round schools may reduce absenteeism, vandalism to school facilities, and materials costs. In addition, a multi-track year-round calendar can reduce capital costs for new facilities construction to support increased enrollment.<sup>25</sup> The Virginia Department of Education estimates that transitioning to a year-round calendar without increasing the total number of instructional days will increase instructional costs by around three percent.<sup>26</sup> This estimate primarily reflects the cost of stipends for staff working during intersessions and does not include potential costs for transportation and food services, which the districts studied were unable to estimate.<sup>27</sup>

Calendar reforms that increase the total number of instructional days will increase net costs due to increased salaries and benefits. Schools may also need to pay for infrastructure upgrades such as installing air conditioning. A cost analysis prepared by Montgomery County Public Schools in Maryland estimates the cost of an additional 30 instructional days at between \$840,000 and \$1 million per

elementary school.<sup>28</sup> Districts that provide enrichment and remediation during intersessions need to pay stipends for teachers working during intersessions.<sup>29</sup> Some schools charge intersession fees to finance a portion of the cost of instruction during intersessions. For example, schools in Virginia reported fees ranging from \$25.00 to \$100.00 for intersession enrichment courses in 2012, with fees reduced to \$5.00 for families eligible for free or reduced-price lunch. These schools could not charge fees for remediation courses due to state laws against charging tuition for required remediation.<sup>30</sup>

Although most districts relied primarily on local funding, Virginia schools also reported using federal Title I, School Improvement Grant, and American Recovery and Reinvestment Act funding to support balanced calendars. The report did not clarify how districts using temporary federal funding planned to support balanced calendars after the expiration of these grant programs. Several districts reported reverting to traditional calendars due to budget cuts. In particular, district leaders at Hampton City Public Schools and Fairfax County Public Schools reported that the academic benefits of year-round schools did not justify the costs.<sup>31</sup> The 2012 report to the Virginia legislature notes that state funding was available to support balanced calendars, although most districts did not report taking advantage of these funding opportunities.<sup>32</sup> Since the 2012 report was published, Virginia has established a competitive grant program for districts seeking to adopt a balanced calendar or extend the school year.<sup>33</sup> Chesterfield County Public Schools and Hopewell City Public Schools, profiled later in this brief, both used funding from this grant program to support the implementation of balanced calendars.

The Washington legislature is currently considering a similar program to fund balanced-calendar pilot programs at districts with total enrollments below 10,000 students and high percentages of students receiving free or reduced-price lunches.<sup>34</sup> The most recent version of this bill would provide funding for up to 20 districts to adopt a balanced calendar for the 2022-2023 school year, with additional funding for districts to increase the length of the school year by at least five days and to provide re-engagement activities during summer breaks.<sup>35</sup> As of November 2021, 18 school districts and one charter school in Washington were considering adopting a balanced calendar.<sup>36</sup>

In addition to cost considerations, districts should consider the potential impacts of a balanced calendar on stakeholders, such as teachers, families, and community members, and they should engage these stakeholders in planning the transition to a balanced calendar. Stakeholder support is essential to the success of balanced calendar initiatives. Moreover, teacher buy-in is required for schools to implement calendar changes, particularly in districts with collective bargaining. Districts will also need to engage family and community members to address childcare needs

during intersessions and secure board support for calendar changes.<sup>37</sup>

### Case Study – Chesterfield County Public Schools

Chesterfield County Public Schools in Virginia recently transitioned to a balanced calendar to improve outcomes at schools with high portions of students from low-income families. The district began the transition process with a planning year. District staff used the planning year to review the available secondary literature on year-round schools, conduct site visits to districts with established year-round schools, and survey stakeholder perceptions of a potential calendar change.<sup>38</sup>

After reviewing survey data and other initiatives that could impact scheduling, Chesterfield County Public Schools decided to begin implementing a balanced calendar for the 2018-2019 school year at one school, Bellwood Elementary School, with strong support from staff and community members.<sup>39</sup> Leaders at two other schools, Falling Creek Elementary School and Falling Creek Middle School, decided to postpone the transition to a balanced calendar. These schools' staff and community members expressed concerns about combining a calendar change with other changes, including redistricting and changing start times, impacting these schools.<sup>40</sup> District leaders anticipated that implementing a balanced calendar at Bellwood Elementary School would provide valuable experience to support the expansion of a balanced calendar to other schools in the same feeder pattern.<sup>41</sup> Chesterfield County Public Schools expanded the balanced calendar initiative to Falling Creek Elementary School for the 2021-2022 school year.<sup>42</sup>

Bellwood Elementary School's calendar uses a 45-15 model that provides nine-week instructional blocks with three-week intersessions in October, January, April, and July. Bellwood Elementary uses intersessions to provide additional support to students with academic challenges. Figure 5 summarizes programming provided during intersessions.<sup>43</sup>

**Figure 5: Bellwood Elementary School Intersession Program Summary**

<b>Students</b>	Maximum of 150 per intersession
<b>Staff</b>	12 general education teachers, one special education teacher, two instructional aides
<b>Student to Adult Ratio</b>	12:1
<b>Programming</b>	<ul style="list-style-type: none"> <li>Week 1: Academic remediation and enrichment at Bellwood Elementary</li> <li>Week 2: Enrichment camps at Bellwood Elementary</li> </ul>

<ul style="list-style-type: none"> <li>Week 3: Childcare provided by a partner YMCA</li> </ul>
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Source: Chesterfield County Public Schools<sup>44</sup>

Chesterfield County Public Schools estimates the additional cost of transitioning to a year-round calendar at Bellwood Elementary School as \$123,022, largely reflecting the cost of staffing for the intersessions. Figure 6 presents a detailed cost breakdown of Bellwood Elementary School's year-round calendar. The district plans to finance additional costs through a state grant and Title I funding.<sup>45</sup> In 2021, Chesterfield County Public Schools received a state grant of \$473,600 to support year-round schools at Bellwood and Falling Creek Elementary Schools.

**Figure 6: Bellwood Elementary Year-Round School Cost Breakdown**

<b>Administrative Costs</b>	
Associate Principal to 12-month contract	\$7,761
Registrar to 12-month contract	\$3,814
<b>Administrative Total</b>	<b>\$11,575</b>
<b>Intercession Staffing</b>	
13 Teachers	\$84,033
2 Instructional Aides	\$7,680
FICA	\$7,016
<b>Total Estimated Intercession Staffing</b>	<b>\$98,729</b>
<b>Intercession Transportation</b>	
Bus Routes	\$6,758
Field Trips	\$3,960
<b>Total Estimated Intercession Transportation</b>	<b>\$10,718</b>
Estimated Adder for ExEd bus Per Intercession if required	\$2,000
<b>Total Estimated Intercession Costs</b>	<b>\$123,022</b>

Source: Chesterfield County Public Schools<sup>46</sup>

### Case Study – Hopewell City Public Schools

Hopewell City Public Schools (HCPS), also located in Virginia, provides an additional example of a school district with a strong stakeholder engagement process to support the implementation of a balanced calendar. The district began considering a balanced calendar in response to Virginia's state grant program for balanced calendar initiatives. During the 2017-2018 school year, HCPS received a state planning grant of \$50,000, which district leaders used to develop a balanced calendar proposal.<sup>47</sup> The district commissioned a group of teachers and school leaders led by an elementary school principal to begin researching a balanced calendar, drawing heavily on the Virginia legislature's balanced calendar report and a survey of district stakeholders. This group also researched alternatives to a balanced calendar, such as extending the school day and revising summer programming. The internal research group concluded that a

balanced calendar would be the best strategy to improve achievement for HCPS' student population.<sup>48</sup>

To identify the most effective balanced calendar model, the research group examined schools with similar demographic profiles to HCPS that had already implemented balanced calendars.<sup>49</sup> HCPS decided to adopt a single-track year-round calendar with a 45-15 program to prioritize student achievement and reduce summer learning loss.<sup>50</sup> After determining what model to adopt, HCPS began engaging a broader range of stakeholders through a series of community meetings in September of 2018. In March of 2019, HCPS held a site visit to Bellwood Elementary School to enable board members to observe a balanced calendar in practice and hosted a question-and-answer session with the former Superintendent of Chesterfield County Public Schools, who had since become the Virginia Superintendent of Public Instruction. The Superintendent recommended that HCPS secure buy-in from at least 60 percent of the community before districtwide implementation of the balanced calendar.<sup>51</sup> A final survey finds that 97 percent of teachers and 80 percent of school and district administrators supported implementing the balanced calendar. Community members and employers participating in focus groups also supported a balanced calendar and interest in further engaging in discussions around the district's calendar.<sup>52</sup> However, a survey of families finds lower levels of support, with 33 percent of respondents disagreeing with the district's balanced calendar proposal and 35.5 percent identifying as neutral. Support for the proposal was lower among respondents who reported a low level of understanding of the balanced calendar, suggesting that additional communication by HCPS could increase support.<sup>53</sup>

These survey results supported HCPS in the final decision to implement the balanced calendar. Districtwide implementation was initially planned for the 2020-2021 school year before being delayed to the 2021-2022 school year in response to the disruption caused by the COVID-19 pandemic.<sup>54</sup>

Following the decision to adopt a balanced calendar, HCPS partnered with a team of doctoral students in the Department of Educational Leadership at Virginia Commonwealth University to provide research and technical support to implement the balanced calendar. The goal of this partnership was to develop a sustainable implementation model that would gain consensus support from stakeholders and be financially viable after the expiration of state grant funding.<sup>55</sup> The team drew on stakeholder surveys, a review of HCPS' internal documents, and focus groups to provide HCPS with recommendations for ensuring the sustainability of the balanced calendar initiative, listed in Figure 7.<sup>56</sup>

**Figure 7: Recommendations for Sustainable Balanced Calendar Implementation at HCPS**



Source: Department of Educational Leadership at Virginia Commonwealth University<sup>57</sup>

HCPS emphasizes intersession programming as part of its strategy to reduce summer learning loss.<sup>58</sup> Students can enroll in a variety of enrichment or remediation courses during intersessions in which the duration of each course is one or two weeks long.<sup>59</sup> Participation in intersession courses is optional for students, and students can also participate in extracurricular activities such as field studies or internships.<sup>60</sup> HCPS supports intersession courses by reallocating professional development days in all teachers' existing calendars to designing and teaching an intersession course. HCPS also offers stipends to teachers who teach courses beyond the one required course. Teachers can design courses based on personal skills and interests, which provides an additional incentive to teach during intersessions and ensures that courses are engaging for students.<sup>61</sup> Intersession courses support HCPS' deeper learning framework, emphasizing cross-curricular learning and higher-order thinking skills.<sup>62</sup>

HCPS plans to continue monitoring the implementation of its balanced calendar initiative to understand the impacts of a balanced calendar on student outcomes. Program evaluations will monitor progress toward the goals listed in Figure 8 on the following page.<sup>63</sup> HCPS also plans to evaluate student learning artifacts using rubrics aligned to the district's deeper learning framework.<sup>64</sup>

**Figure 8: HCPS Balanced Calendar Goals**

Decrease the failure rate on Virginia Standards of Learning tests in all tested content areas by 10% each year of the program

Decrease the rate of chronic absenteeism (defined by the Virginia Department of Education as the percentage of students who are absent more than 10% of school days) by 10% in each year of the program

Increase division level VDOE School Climate Survey averages by 10% in academic engagement, emotional engagement, and behavioral engagement.

Source: Department of Educational Leadership at Virginia Commonwealth University<sup>65</sup>

## Caveat

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## Endnotes

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<sup>6</sup> "Review of Year-Round Schools: Report to the Governor and General Assembly of Virginia." Virginia Joint Legislative Audit Commission, November 28, 2012. p. 10. <http://jlarc.virginia.gov/pdfs/reports/Rpt430.pdf>

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<sup>8</sup> Chart taken verbatim from: "Review of Year-Round Schools: Report to the Governor and General Assembly of Virginia," Op. cit., p. 27.

<sup>9</sup> Finnie et al., Op. cit.

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