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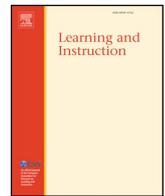
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# Transformative Dialogic Literature Teaching fosters adolescents' insight into human nature and motivation

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## ABSTRACT

This quasi-experimental study assessed the effects of the newly developed Transformative Dialogic Literature Teaching (TDLT) intervention on 15-year-old students' insight into human nature, eudaimonic reasons for reading, use of reading strategies, and motivation for literature education. Six TDLT units centered around short stories about "justice and injustice". Students were stimulated to engage in internal dialogues with stories and in external dialogues with peers about stories and reading experiences. TDLT students ( $n = 166$ ) were compared to students who received regular literature teaching (RLT) focused on analysis of literary texts ( $n = 166$ ). Analysis of quantitative and qualitative data indicated that TDLT fostered students' insight into human nature, eudaimonic reasons for reading, reported use of strategies to deal with difficulties in literary texts, and motivation for literature education, whereas RLT did not. Strategy use and one motivational factor mediated effects of TDLT to a small extent. Limitations and implications are discussed.

## 1. Introduction

What does it mean to be human? Who are we, and how do we relate to others? Questions such as these have always been – and probably will always be – essential for mankind. In view of fundamental social developments of the past decades, such as increased globalization and migration, it may be particularly important to reflect on how we position ourselves in relation to others in the world. Educational philosophers have argued that education may help young people to learn to reflect on mankind, on themselves and on others (e.g., Biesta, 2007; Nussbaum, 1997). Particular approaches to teaching and learning bring such reflection into practice, such as social and emotional learning (Elias et al., 1997), citizenship education (Derricott, 2014), and moral and character education (Nucci, Krettenauer, & Narváez, 2014).

In this paper, we suggest that the literature classroom pre-eminently offers a space of opportunity for adolescents to develop insight into themselves and others, or for short, into "human nature". Empirical studies have shown that reading fictional and literary texts – novels, stories, poems – may offer such insight to younger children, adolescents, and adult readers alike (e.g., Hakemulder, Fialho, & Bal, 2016; Koopman & Hakemulder, 2015; Lysaker, Tonge, Gauson, & Miller, 2011; Richardson & Eccles, 2007). During reading such texts, we are drawn into a simulated social world, in which we can safely experience situations that may either resemble or be very different from situations

in our own lives (Mar & Oatley, 2008). This experience is considered to be "transformative": it may change our insight into ourselves and into ourselves in relation to others (Fialho, 2018).

In a number of countries there appears to be considerable interest in fostering students' insight into human nature in the literature classroom. For example, the National Council of Teachers of English (2012) stated that students may become aware that "[...] literary texts are often relevant to their own lives [and offer] perspectives which may contrast and conflict with their own experiences" (p. 21). Curricular documents in Belgium suggest that students need to learn to "[...] put their reading experiences in a societal context" (Curriculum, 2017, n.p.). Small-scale qualitative studies suggest that literature teaching may successfully foster students' insight into human nature (e.g., Banks, 2009; Bender-Slack, 2002). Yet, only experimental and quasi-experimental studies may shed light on potential causal effects. In a systematic review study, Schrijvers, Janssen, Fialho, and Rijlaarsdam (2018) found thirteen experimental or quasi-experimental studies that focused on fostering students' insight into human nature via literature teaching. Similar findings were reported in a related review study on the role of school in students' identity development: here, too, the majority of the included studies used qualitative methods and reported on case studies (Verhoeven, Poorthuis, & Volman, 2018). Thus, there is a need for (quasi-)experimental research that may illuminate whether and how literature teaching might foster students' insight into human

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nature.

We therefore aim to investigate the effects of a newly designed intervention, called *Transformative Dialogic Literature Teaching* (TDLT), on 10th grade students' insight into human nature and the extent to which they consider developing this insight an important reason for reading. In addition, we aim to study whether this intervention would alleviate two prominent challenges in literature classrooms: students' limited use of reading strategies to comprehend literary texts, and their low motivation for literature education. Therefore, four constructs are central in this study: insight into human nature, reasons for reading, use of reading strategies, and motivation for literature education. In the next sections, we will introduce these constructs as well as the relations among them, before turning to the intervention framework and research questions.

## 2. Theoretical framework

### 2.1. Insight into human nature

Reading fictional and literary texts is assumed to affect readers' perceptions of self and others, or in our terms, their insight into "human nature". Empirical studies and theoretical explorations alike have provided examples of this insight, such as insight into previously unrecognized qualities or shortcomings of oneself (Miall & Kuiken, 1995), understandings of other individuals or groups of people (e.g., Hakemulder, 2000; Johnson, 2013), and insight into moral dilemmas that people may face (Nussbaum, 1990). Such insights are theorized to arise from simulated social experiences that readers live through when they read literary fiction, such as novels or short stories (Keen, 2007; Mar & Oatley, 2008; Nussbaum, 1995).

There is ample evidence that adult readers may develop insight into human nature as a result of literary reading (for overviews, see Koopman & Hakemulder, 2015; Hakemulder et al., 2016). In addition, some studies suggest that similar effects of reading may be found in adolescents. For instance, adolescents were found to construct their possible future selves when reading fiction (Richardson & Eccles, 2007), to compare their own lives to stories and to engage empathetically with characters (Charlton, Pette, & Burbaum, 2004), and to better understand experiences of others, which offered them new options for their own lives (Rothbauer, 2011). Moreover, adolescents developed insight into human nature when reading was school-based rather than a leisure activity (Schrijvers, Janssen, Fialho, & Rijlaarsdam, 2016; 2018).

As the abovementioned examples indicate, the field under scrutiny is confronted with conceptual and terminological multiplicities. As a central construct in this study, *insight into human nature* therefore inevitably functions as a multifaceted term. We conceptualize this construct based on the findings of a systematic review of literature classroom studies (Schrijvers et al., 2018), and on findings of studies on transformative reading (Fialho, 2012; 2018).

Schrijvers et al. (2018) found that relevant interventions in the literature classroom effectively fostered students' self-reported insight into themselves (e.g., Eva-Wood, 2004; Halász, 1991), their understanding of others existing in a story world, including empathy for characters (e.g., Eva-Wood, 2004; White, 1995), and their understanding of, views on, or intended behavior toward real-world others, including their ideas about moral decisions people have to make in their lives (e.g., Adler & Foster, 1997; Malo-Juvera, 2016, 2014; Stevahn, Johnson, Johnson, Green, & Laginski, 1997; Stevahn, Johnson, Johnson, & Real, 1996). Insight into human nature, thus, entails insight into oneself, into characters inhabiting the (fictional) story world, and into others in the real world.

Developing insight into human nature via literary reading has been conceptualized as a process of "transformative reading". In phenomenological studies, Fialho (2012; 2018) found that adult readers may experience *self-other insights*: they gained a deeper understanding of themselves and others in the real world. Six other experiences were

found to be involved, alongside these understandings: vividly imagining story setting and characters (*imagery*); recognizing aspects of self or others in characters (*identification*); enacting and embodying the experiences of a character (*experience-taking*); evaluating characters, positively or negatively (*character evaluations*); feeling sympathy and compassion for characters (*sympathy*); and being aware of striking words, phrases or sentences that build up the story world (*aesthetic awareness*). In this description of transformative reading, we recognize the trichotomy of the self, the story world, and the outer-textual world.

In short, we conceptualize "insight into human nature" as one of the potential outcomes of literary reading and literature teaching that encompasses self-other insights – including insight into moral decisions people make – as well as insights into characters and the story world they inhabit, as indicated by experiences such as imagery, empathy and sympathy for characters, and aesthetic awareness.

### 2.2. Reasons for reading

The second major construct in this study relates to the question of *why* we may read literature. Given that reading may result in insight into human nature, one might wonder whether the experience of developing this insight may be an important reason to read. In seeking an answer to this question, we adopted the construct *eudaimonic reasons for reading*, which refers to "greater insight, self-reflection, or contemplations of poignancy or meaningfulness (e.g., what makes life valuable)" (Oliver, 2008, p. 42; Oliver & Raney, 2011).<sup>2</sup> Whereas Oliver's work originated from entertainment and film studies, Koopman (2016) applied the construct to literary reading, suggesting that "eudaimonia [is about] acquiring a broadened or deepened perspective of what it means to be human" (p. 39; also see Nussbaum, 1997). As such, we consider eudaimonic reasons for reading a relevant construct in the present study.

To our knowledge, previous studies have not addressed the question whether literature education may affect adolescent students' eudaimonic reasons for reading. However, related constructs have previously been researched among this population. First, studies have focused on the role of experiencing pleasure and enjoyment in reading (e.g., Pitcher et al., 2007; Strommen & Mates, 2004), to which Oliver and Raney (2011) refer as *hedonic reasons*. Second, *story-driven reading*, that is, reading for plot, has been studied in adolescent readers (Miall & Kuiken, 1995; Van Schooten, 2005). Oliver and Raney (2011) found that eudaimonic and hedonic reasons for watching movies are not mutually exclusive: both reasons may co-exist. Whether this is also the case for adolescents' literary reading in the classroom, and how this relates to their tendency to read for plot (Miall & Kuiken, 1995), has yet to be illuminated.

### 2.3. Use of reading strategies

Developing insight into human nature and considering it a reason to read literature may be hindered by the way adolescent students deal with such texts. Being relatively novice readers of literature, students' metacognitive awareness of applying reading strategies seems limited (Mokhtari & Reichard, 2002). For example, their responses may be confined to literal reiterations, character descriptions, or simple evaluations (for an overview of the literature, see the introduction by McCarthy & Goldman, 2019). Moreover, they may doubt their own abilities as readers (Levine & Horton, 2013).

As a remedy, students may have to learn literary reading strategies. Examples of such strategies are monitoring their reading process,

<sup>2</sup> Oliver (2008) and Oliver and Raney (2011) speak of "motives" to point to the potential functions of reading; here, we substitute the term "motives" for "reasons" to avoid confusion with motivation-related constructs that are introduced in subsequent sections of this paper.

thinking about what they read, actively considering questions that arise, and making connections between initial responses and literary devices such as flashbacks, focalization, psychological suspense, and motifs (e.g., [Eva-Wood, 2004](#); [Peskin, 1998](#)). Having such strategies at their disposal may help them to become aware of whether or not they comprehend what they read, to identify what causes potential difficulties (e.g., time gaps, metaphors), and how they may attempt to solve the comprehension problem (e.g., pausing to think, asking questions).

#### 2.4. Motivation for literature education

Another challenge in developing insight into human nature and eudaimonic reasons for reading is students' low motivation for literature education; they are often "resistant readers" ([Lenters, 2006](#); also see; [Bintz, 1993](#); [Stokmans, 2009](#); [Van Schooten, 2005](#)). Ample research has focused on reading motivation; yet, most of it addresses reading for informational purposes rather than literary reading, and includes younger children as participants (for overviews, see [Conradi, Jang, & McKenna, 2014](#); [Schiefele, Schaffner, Möller, & Wigfield, 2012](#); [Van Steensel, Van der Sande, Bramer, & Arends, 2016](#)). For adolescents, it has been suggested that a student-centered literature curriculum may contribute to their motivation for literary reading, compared to a teacher-centered curriculum ([Van Schooten, 2005](#); [Verboord, 2005](#)).

In the present study, we distinguish between "reading motivation" and "motivation for literature education". As we implement a relatively short literature classroom intervention, we do not expect it to influence reading motivation as such. Rather, we address the extent to which students feel motivated for literature education. Previous studies on short-term interventions were found to positively influence outcomes related to motivation, such as task interest ([Henschel, Meier, & Roick, 2016](#)), appreciation of literary texts ([Janssen, Braakma, & Couzijn, 2009](#)), and contributions to classroom talk ([Eva-Wood, 2004](#)). The common ground of these interventions and the one implemented in the present study is their student-centered nature: students' authentic responses to literary texts are central.

We adopt Self-Determination Theory (SDT; [Deci & Ryan, 1985](#); [2000](#)) as a lens through which we look at students' motivation for literature education. SDT is a motivation theory that does not focus specifically on (literary) reading, but may be applied to various domains. Yet, combined with other theories such as Expectancy Value Theory ([Wigfield & Eccles, 1992](#); [2000](#)), SDT has informed a number of reading-related studies (e.g., [De Naeghel, Van Keer, Vansteenkiste, & Rosseel, 2012](#); [Guthrie, Wigfield, Metsala, & Cox, 1999](#); [Wigfield & Guthrie, 1997](#)). SDT suggests that intrinsic motivation for any given domain may be increased if one's basic needs for competence, autonomy, and relatedness are sufficiently met. Thus, the theory suggests that the more students feel that these needs are met in the literature classroom, the more motivated they will be for literature education.

### 3. Context and intervention framework

The aim of the present study was to investigate whether literature teaching may contribute to students' insight into human nature and eudaimonic reasons for reading, and to explore which role the use of reading strategies and motivation for literature education might play. To this end, we developed an intervention within a particular context: literature education in 10th grade in the Netherlands. In this section, we introduce this context, as well as the design principles that build up the intervention framework.

#### 3.1. Context

This study took place in 10th grade classrooms in the higher general secondary education track in the Netherlands. This five-year track (grade 7–11) prepares for higher vocational education, but not for university. In the Netherlands, the current objectives for literature

education are threefold: students work toward 1) acquisition of literary-historical knowledge, 2) mastery of structural-analytical skills, and 3) reflection on their own literary reading experiences and development ([Dutch Institute for Curriculum Development, 2012](#)). Apart from these rather broadly formulated objectives, there is no central curriculum: there are no standardized tests or nationwide exams about literature teaching. This means that teachers have much curricular freedom to design their own literature teaching program.

Although the third global objective – reflection on one's literary reading experiences and development – can be considered a form of self-reflection, in this study we go beyond the self as a literary reader, but consider the self as a whole, in continued social interaction with others. As such, developing insight into human nature is not explicitly included in the objectives. Nonetheless, Dutch teachers regard fostering personal development an important objective of literature teaching ([Janssen, 1998](#); [Oberon, 2016](#)), and have suggested that literary reading may familiarize students with other worlds, contributes to moral development, and helps them to think about people's choices, about themselves, others and the world ([Curriculum.nu, 2018](#)).

#### 3.2. Design principles

The framework for the intervention consisted of a set of instructional design principles. These were identified in a systematic review of effective interventions ([Schrijvers et al., 2018](#)). The review suggested that students, to develop insight into human nature, must be aware of their inner responses to a literary text – their thoughts, ideas, experiences, questions – by engaging in *internal dialogues* with texts. These function as a prerequisite for *external dialogues*, in which students share their responses with their peers. In addition, reviewed interventions shed light on *text selection*. These design principles, thus, are key to stimulate students' insight into human nature and, by extension, their eudaimonic reasons for reading. Below, we elaborate on the principles and indicate how they are related to the other two constructs: use of reading strategies and/or motivation for literature education.

##### 3.2.1. Internal dialogues

According to [Bakhtin \(1984\)](#), fictional and literary texts inherently offer opportunities for dialogue: among characters, between the reader and the characters, or between the reader and the author (cf. [Oatley, 1999](#)). This point of view resonates with [Rosenblatt's \(1983\)](#) notion of transactional reading: meaning is not just "in the text" or "in the mind of the reader", but emerges in the transaction between the reader and the text. Rosenblatt suggested that students must be given freedom to deal with their own reactions and must be given opportunities for "an initial crystallization of a personal sense of the work" (1983, p. 69). In other words, students should be prompted to focus on their initial, highly personal reactions and responses to literary texts.

In their review study, found that students may be stimulated to do so via writing tasks that prompt them to activate previous personal experiences before reading a text ([White, 1995](#)), to notice and annotate responses during reading ([Eva-Wood, 2004](#)), and/or to reflect on responses directly after reading ([Malo-Juvera, 2014](#)). As [Fialho's \(2018\)](#) work suggests, it may be worthwhile to attend to experiences that are involved in the process of transformative reading, such as imagery, sympathy for characters, and aesthetic awareness.

Furthermore, we propose that applying reading strategies is part of the internal dialogue between the reader and the text. When aspects of a literary text are difficult to comprehend for students, being aware of those difficulties and asking oneself questions about them – for example, trying to comprehend what a character is thinking and why – belongs to the process of the internal dialogue: students then attempt to actively construct an interpretation of (parts of) the text ([Janssen et al., 2009](#)). If students learn to apply strategies for dealing with difficulties in literary reading as part of their internal dialogues with texts, this may increase the likelihood that they engage in meaningful external

dialogues, which in turn may affect their insight into human nature and eudaimonic reasons for reading.

From the perspective of Self-Determination Theory, we propose that engaging in internal dialogues may satisfy students' needs for autonomy, as they may interact with the text in their own way and learn to become aware of their authentic, personal responses to literary texts. This may offer them a sense of psychological freedom (deCharms, 1968; Deci & Ryan, 2000). Given the suggestion that using reading strategies is an integral part of internal dialogues, these dialogues may also satisfy students' need for competence: learning strategies may help them to perceive themselves as competent readers of literature, for they know what to do when a text is difficult to understand. Therefore, learning to engage in internal dialogues may contribute to students' motivation for literature teaching, which may in turn positively influence their insight into human nature and eudaimonic reasons for reading.

### 3.2.2. External dialogues

The importance of external dialogues in the classroom can be explained from two perspectives: a cognitive and a social constructivist perspective (Frijters, Ten Dam, & Rijlaarsdam, 2008). First, social interaction has been found to affect cognitive elaboration processes, because language functions such as explaining, reasoning, and asking questions stimulate thinking and the development of knowledge. Second, from a social constructivist perspective, learning is considered to be a "dialogue", or a way of collaborative meaning-making. Thus, learners who engage in external dialogues may be stimulated to take the perspective of others into account, engage in active learning, and develop their higher-order thinking skills (Renshaw, 2004; Salomon & Perkins, 1998).

In the literature classroom, such exploratory dialogic activities – talking about texts, themes, and reading experiences – may foster insight into human nature (e.g., Adler & Foster, 1997; Eva-Wood, 2004; Malo-Juvera, 2014; White, 1995), which simultaneously may become a more important reason for student to read. External dialogues may take place in small peer groups or in whole-class situation, or in a combination where the latter follows the former. Such a build-up creates multiple layers of sharing responses and interpretations. In contrast, if reading and responding would remain an individual activity, readers would only explore their own reading experiences and their own thoughts about themes addressed in literature.

From the perspective of SDT, we propose that external dialogues may satisfy students' needs for autonomy, competence and relatedness alike. First, in exploratory dialogic activities with their peers, students ideally experience autonomy in which responses they bring to the table. This does not imply that dialogic tasks are completely open: one may experience autonomy satisfaction even when they follow the request of someone else (in this case, the teacher who asks students to do something; see Soenens et al., 2007). That said, the teacher should mostly function as a guide to support students in their responses, rather than controlling the discourse in the classroom (Applebee, Langer, Nystrand, & Gamoran, 2003; Schrijvers et al., 2018). Second, build-ups from internal dialogues to external dialogues may satisfy students' needs for competence: asking questions, providing explanations to others, and engaging in collaborative reasoning may help them to get a better grip on a text and the theme it addresses. Finally, social interaction with peers is assumed to satisfy students' need to feel connected to others and to be member of a group. In contrast with reading and responding individually, thus, external dialogues in the literature classroom may contribute to the satisfaction of the need for relatedness.

### 3.2.3. Thematical selection of texts

Finally, the review by Schrijvers et al. (2018) indicated that insight into human nature may be fostered when fictional texts that are read are thematically relevant for an intervention aim, such as texts addressing social relations or moral dilemmas. Malo-Juvera (2014), for instance, used young adult literary texts in which sexual harassment

was a central theme, to affect students' attitudes toward such behavior. To all thematically relevant literary texts, students may learn to apply reading strategies. From the SDT perspective, text choice is often related to autonomy satisfaction, in particular in studies with younger children who read for informational purposes (e.g., CORI; Wigfield, Mason-Singh, Ho, & Guthrie, 2014). In terms of fostering insight into human nature, the research literature is ambiguous. Case studies suggest that this insight may be fostered by adolescents' self-selected reading (e.g., Ivey & Johnston, 2015; Richardson & Eccles, 2007; Rothbauer, 2011); on the other hand, in the review study that informs the text selection principle, similar results were found while students were hardly offered any freedom of choice (Schrijvers et al., 2018).

### 3.3. Summary, aims, and research questions

To summarize, the intervention designed for this study comprised the following elements:

1. Students read literary texts that address a social-moral theme;
2. Students are guided toward engaging in external dialogues with their peers about literature and their reading experiences (satisfying their needs for autonomy, competence, and relatedness);
3. Students are guided toward attending to their authentic responses in internal dialogues with texts (satisfying their needs for autonomy), to prepare for external dialogues;
  - In internal dialogues, students learn to focus on experiences related to transformative reading (e.g., imagery, sympathy);
  - In internal dialogues, students learn to apply reading strategies that facilitate their comprehension (satisfying their need for competence).

We named the intervention Transformative Dialogic Literature Teaching (or TDLT). Our primary aim was to test whether TDLT fosters students' insight into human nature and their eudaimonic reasons for reading. As an additional aim, we investigated whether TDLT would alleviate prominent challenges in the literature classroom, by fostering students' strategy use when reading literary texts and by satisfying their basic needs for motivation for literature education. As a consequence, a third objective emerges: we aimed to explore whether strategy use and motivation would mediate a potential effect of the intervention on insight into human nature and eudaimonic reasons for reading. Therefore, our research questions are:

1. Does TDLT have a positive effect on students' insight into human nature (i.e., comprising self-other insights as well as related experiences such as empathy for characters, imagery, and aesthetic awareness)?
2. Does TDLT have a positive effect on students' eudaimonic reasons for reading?
3. Does TDLT have a positive effect on students' use of reading strategies?
4. Does TDLT have a positive effect on the satisfaction of students' needs for competence, autonomy and relatedness, indicating their motivation for literature education?

Provided that these questions are answered in the positive, we explore an additional question to shed further light on the relations among the variables:

5. Do strategy use, competence, autonomy and relatedness function as mediators of the effect of TDLT on students' insight into human nature and eudaimonic reasons for reading?

**Table 1**  
Operationalization of internal and external dialogues; unit phases ordered by number (1, 2, ...).

Unit	Internal dialogue	External dialogues
1	1 Implicit	2 Learning-by-observation: video of peers talking about story 1 3 Explicit instruction 4 Practice
2	2 Implicit	1 Apply to theme: talk about 'justice and injustice' 3 Apply to theme and story 2: talk about injustice in story, opinion about story, and support with literary devices
3	1 Preparation: write response to moral statement relevant to story 3 2 Explicit instruction 3 Learning-by-observation: teacher thinks aloud, annotates part of story 3 4 Apply to rest of story 3: annotate responses, reflect on prominent responses	5 Apply to story 3: small-group talk, deepen prominent responses 6 Apply in class: share experiences, teacher-led
4	1 Apply to part of story 4: annotate responses, reflect on prominent responses 3 Apply to part of story 4: write story end as response 5 Apply end of story 4: annotate responses	2 Apply to part of story 4: imagine characters' position, small-group talk about (un)just story ends 4 Apply to written response: share feedback on story ends in pairs 6 Apply in class: teacher-led talk about (in)justice in original and written story ends
5	1 Recall previous internal dialogues	2 Apply to stories 2–4: compare reading experiences, justice and injustice, formulate life lesson in small groups 3 Apply in classroom: share life lessons, teacher-led talk
6	1 Apply to story 5: annotate responses 3 Apply to story 6 (homework): annotate responses, write dialogue with imaginary peer	2 Apply to story 5: speed dates in pairs about character; responses and literary devices; injustice

Note. For an overview of all phases in each unit, see Supplement 3b.

## 4. Method

### 4.1. Research design

We implemented a quasi-experimental design with a pretest, posttest and delayed posttest. Six classes were assigned to TDLT and six to a control condition. TDLT teachers scheduled its six learning units in six weeks, in the Fall semester of 2017. The control condition also lasted for six weeks. It involved regular literature teaching (RLT) or “business as usual”, focused on identifying literary devices by analyzing literary texts; for a description, see Supplement 1.

### 4.2. Participants

Ten Dutch teachers from five schools volunteered to participate in the study (see Supplement 2). Three of them were involved in designing TDLT (Schrijvers, Janssen, Fialho, & Rijlaardam, 2019), and were therefore assigned to the TDLT condition. The remaining teachers signed up for either TDLT or RLT. To avoid contamination of conditions, teachers were involved in one of both conditions. Six teachers taught a TDLT class; four taught either one or two RLT classes. All TDLT teachers were female, who had on average 18.7 years of teaching experience ( $SD = 12.3$ ). Five RLT classes were taught by females; one by a male teacher. Their experience ( $M = 13.3$  years;  $SD = 5.6$ ) did not differ significantly from TDLT teachers.

In both conditions, 166 students in Grade 10 participated ( $N = 332$ ). No significant differences between conditions were found in students' gender (53.6% females in TDLT, 45.2% in RLT), average age (15.5 years old in both), and average grade for Dutch language and literature (6.6 out of 10 for both). In addition, we assessed students' Familiarity with fiction and Trait empathy using questionnaires (see Supplement 2); no significant differences between conditions were found. Students' parents received an informed consent letter and could object to their child's participation. None of them withheld their consent.

### 4.3. Intervention

TDLT consisted of one preparatory and five reading-and-dialogue

units. In total, it included about 300 min of classroom work; teachers scheduled the units in 50- or 60-minute lessons. In addition, students completed homework assignments that required in total about 30 min. TDLT centered around the theme of “justice and injustice”. In the second unit, after preparing a homework assignment about it, students explored this theme together; subsequently, it was addressed via the reading materials in all other units.

As reading materials, we selected narrative texts of a particular genre, that is, the literary short story. The choice for short stories rather than a novel or play allowed us to offer students a variety of texts, and to organize dialogic activities prior to as well as after reading, in a single unit. We selected short stories written in Dutch by acclaimed Dutch and Flemish literary authors who are represented by renowned publishers of literary fiction in the Netherlands and Belgium. We included canonical as well as more recently published short stories. All stories were connected to the central theme of justice and injustice (see Supplement 3a). For example, in the short story *Blood* by Gerard Reve, a boy is physically abused by his guardian; he causes the guardian to take a deadly fall by unscrewing the ladder to the attic where he is hiding. This short story evokes personal, social, and moral questions about what is right and just in such a situation. Students may wonder, for example: was this self-defense or murder, and can either be justified? What else could the boy have done? Do we judge him and/or pity him? Was his guardian a family member or a relative stranger, and does that matter? Can we interpret why the boy might have done this (e.g., focalization may play a role, as there is no direct access to the boy's thoughts and feelings), and can we put ourselves in his position?

The primary aim of TDLT was for students to learn to express, orally and in writing, a) the responses that stories evoked in them, b) which new insights into themselves, others and social life these stories offered them, and c) which literary devices evoked these responses and insights. To achieve these aims, students were taught strategies for both internal and external dialogues. Table 1 presents an overview of the teaching and learning activities in each unit. In the preparatory unit strategies for external dialogues were introduced. Students observed and evaluated videos of peers talking about a story, received explicit instruction about the strategy – which was summarized on a “first aid card” they used throughout TDLT – and applied the strategy in a small-group dialogue about famous quotes about literature and reading (e.g.,

“A good book has no ending”, R.D. Cumming).

In all subsequent reading-and-dialogue units, external dialogues were applied in combination with internal dialogues; together, they formed the two-step basic structure that was central in TDLT (see Table 1). Internal dialogues remained implicit in unit 1 and 2, were explicitly introduced in unit 3. Teachers modeled an internal dialogue by thinking aloud while reading a fragment of a story and explained to the students how they could “listen to their inner voice”. Students then applied internal dialogues during reading in units 3 to 6. The “first aid card” also included strategies for dealing with difficulties during reading that the teacher introduced in unit 3, for example, writing down question marks, pausing to think, and asking for help. Moreover, from unit 3 onwards, internal and external dialogues focused on transformative reading experiences: students considered, for example, experiences of imagery and sympathy (see Supplement 3b for full TDLT overview). The activities in the units were miscellaneous, short, and high-paced to keep students engaged and motivated. Students were stimulated to monitor their progress by working with a rubric (see Supplement 3c).

Teachers were given guidelines for providing students with feedback and guiding their dialogic processes, such as prompts and questions for stimulating dialogues in a student group (e.g., “What else does this story make you think about?”; “Could someone have another opinion?”; “I hear you are struggling with this. Let's talk about how to solve that issue”).

#### 4.4. Instruments

We mostly used existing, validated questionnaires to measure indicators of insight into human nature (e.g., empathy for characters, moral competence) as well as students' reasons for reading, their use of reading strategies, and their motivation for literature education. The Transformative Reading Experiences Questionnaire (TREQ) was an exception: it was newly developed based on Fialho's (2018) work on transformative reading (see section 2.1). In Table 2, we report internal consistency, scoring scales, and references for all instruments (for example items, translation and adaptation, see Supplement 4). Based on

insufficient internal consistency values (Cronbach's alpha), three scales were removed from the data: the Diversity attitudes and Social justice attitudes scales from the Civic Attitudes and Skills Questionnaire, and the Story-driven reading scale from the Literary Response Questionnaire.

As the TREQ was a newly developed instrument, we first performed exploratory factor analysis (EFA) with Oblimin rotation, followed by confirmatory factor analysis (CFA), both in R (for a full description, see Supplement 5a). In CFA, as fit indices we used RMSEA (< .06), TLI (> .95), and CFI (> .95; see West, Taylor, & Wu, 2012). Results indicated that the questionnaire measures six scales: Self-other insights, Imagery, Experience-taking, Character Evaluation, Sympathy, and Aesthetic Awareness. The TREQ Identification scale was removed from the data. Subsequently, we calculated intercorrelations (see Supplement 5b), from which we concluded that the TREQ measured distinguishable but interrelated indicators of insight into human nature. Upon further inspection of intercorrelations, we concluded that Empathy for characters could validly be included as an indicator of insight into human nature. In contrast, we could not assume that Moral competence contributed to measuring insight into human nature (i.e., very few correlations with other indicators, and no apparent sensitivity to intervention effects; see observed means and standard deviations in Supplement 5c). We excluded Moral competence data from subsequent analyses.

Correlations between Eudaimonic reasons for reading and indicators of insight into human nature were moderate to high. In contrast, Hedonic reasons for reading did not correlate with most of the other variables. These findings are in line with our theoretical framework, as well as with Oliver and Raney's (2011) finding that eudaimonic and hedonic motivations are separate constructs.

Strategy use appeared to function as a separate construct, but was moderately related to Self-other insights and Eudaimonic reasons for reading – in line with the theoretical framework – as well as with Aesthetic awareness. Theoretically, the latter can be explained because both scales measure the extent to which elements in stories stand out to students, either because they perceive them as difficulties that need to be dealt with, or as aesthetic qualities that are striking to them.

Finally, the convergent validity of the motivation construct (i.e., its

**Table 2**  
Variables and quantitative effect measures: Subscales, number of items, and internal consistency.

Construct	Instrument	Variable (subscale)	Items	Cronbach's $\alpha$		
				T1	T2	T3
Insight into human nature	Transformative Reading Experiences Questionnaire (newly developed) <sup>a</sup>	Self-other insights	9	.91	.90	.88
		Imagery	3	.82	.77	.75
		Experience-taking	4	.78	.79	.88
		Character evaluation	3	.80	.78	.79
		Sympathy for characters	3	.87	.81	.78
		Aesthetic awareness	3	.79	.79	.77
	Identification <sup>†</sup>	4	Low factor loadings; see Supplement 5a			
	Literary Response Questionnaire (Miall & Kuiken, 1995) <sup>a</sup>	Empathy for characters	7	.77	.83	.84
	Civic Attitudes and Skills Questionnaire (Moely, Mercer, Ilustre, Miron, & McFarland, 2002) <sup>a</sup>	Diversity attitudes <sup>†</sup>	5	.63	.66	–
		Social justice attitudes <sup>†</sup>	8	.62	.59	–
	Moral Competence Test (Lind, 2016) <sup>b</sup>	Two moral dilemma scenarios; indicate agreement with decision made in scenarios; evaluate acceptability of six pro and six contra arguments for the decisions <sup>†</sup>	26	No intercorrelations with other scales; see Supplement 5b		
Reasons for reading	Literary Response Questionnaire (see-above) <sup>a</sup>	Story-driven reading <sup>†</sup>	8	.72	.67	.56
		Eudaimonic reasons	6	.89	.88	.86
		Hedonic reasons	6	.75	.68	.73
Strategy use	Metacognitive Awareness of Reading Strategies Inventory (based on Mokhtari & Reichard, 2002) <sup>a</sup>	No subscales	10	.76	.77	–
Motivation for literature education	Basic Need Satisfaction Scale (based on Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010) <sup>a</sup>	Autonomy	6	.87	.71	–
		Competence	5	.76	.83	–
		Relatedness	8	.72	.78	–

Note. <sup>a</sup> 5-point scales; <sup>b</sup> 7- and 9-point scales; <sup>c</sup> 7-point scales. <sup>†</sup> Excluded.

indicators were moderately related), as well as the divergent validity of the indicators was supported (i.e., Competence, Autonomy and Relatedness can be mutually distinguished). Correlations with Strategy use were significant, but correlations with indicators of insight into human nature and reasons for reading were diffuse. As some were found (i.e., .33 for Competence and Self-other insights at T2) and scales seemed sensitive to intervention effects, we decided to perform subsequent analyses on the motivation data.

All questionnaires measured insight into human nature as a “general” effect of reading short stories, as the example items indicate. To see if indicators of insight into human nature also came about in students’ direct responses to a particular short story, we analyzed their final TDLT task (see Supplement 3b, Unit 6). In RLT, teachers administered this writing task at the end of the control period. Students selected a short from four options and wrote a dialogue with an imaginary peer in response to it. The dialogue started with: “What part of the story really stood out to you?” Students completed this task individually; they did not actually talk to a peer.

#### 4.5. Procedures

Pretests (T1) were administered one week prior to the start of the lessons, posttests (T2) maximum one week after intervention or control lessons had finished, and delayed posttests (T3) approximately four months after the posttest. We randomized the order of questionnaire items included at two or more measurement occasions. Questionnaires were administered on paper during regular hours of Dutch class, by the first author or a trained research assistant. The teachers collected the written dialogues from their students. The data were entered into SPSS.24 or Atlas.ti files by research assistants.

#### 4.6. Implementation fidelity measures

Implementation fidelity is important to examine the extent to which teachers implemented an intervention as intended, and to assess whether implementation differences might influence the study’s outcomes (O’Donnell, 2008). We measured implementation fidelity via teacher logs and time on task observations. Teachers were asked to complete an online log after each TDLT unit. They indicated whether each phase in the unit was completed, partly completed, or not completed. They then indicated whether phases had been feasible to teach, proceeded orderly, and was clear, interesting and engaging for students (5-point scales; see Supplement 6 for details). We conducted time on task observations twice in each TDLT class. As indicated in Supplement 6, six students were randomly selected for observation. Via a time sampling strategy, their behavior was observed and coded as “on task” (working on given tasks, doing what was requested) or “off task” (e.g., looking at cell phones, irrelevant talk, being disruptive).

#### 4.7. Data analysis

##### 4.7.1. Outlier analysis

To assess whether the quantitative data were normally distributed, we created a P-P plot for each dependent variable at each measurement occasion. Very few violations of a normal distribution were found: only Experience-taking at T3 and Autonomy at M1, plots indicated a slight kurtosis. We inferred that the data were, overall, normally distributed. We performed additional checks to ensure linearity and homoscedasticity. We used regression analyses to create scatter plots of students’ scores on all variables (T1 on T2; and T2 on T3 if applicable), with Condition as a factor; thereby, we plotted standardized residuals against predicted values. The plots showed no signs of non-linearity or heteroscedasticity.

Next, we analyzed the assumption of homoscedasticity for both conditions separately, using Levene’s test. For four variables, unequal variances were found: for Imagery (at T2 and T3), Experience-taking (at

T1, T2 and T3), Aesthetic awareness (at T2 only), and Autonomy (at T2 only). In all cases, variance was larger in the control condition; however, the variance ratios were between 1.1 and 1.7. Relatively small differences between variances may have been statistically different in Levene’s test due to the large sample sizes (see Field, 2013, p. 194–195).

Finally, in the regression analyses, we also applied casewise diagnostics to detect potential outliers. Cases deviating more than 3 SD from the regression line were considered outliers. Across variables and measurement occasions, we identified 23 outliers (6.9% of total *N*, varying from 0.3 to 1.2% per variable). For each variable, we created a filter variable for outlier exclusion.

##### 4.7.2. Quantitative analysis of intervention effects

Self-other insights, Imagery, Experience-taking, Evaluation of characters, Sympathy for characters, Aesthetic awareness, Empathy, and Eudaimonic and Hedonic reasons for reading were all measured on three occasions and were therefore analyzed using mixed models repeated measures analysis in SPSS. As variables were measured on different scales (i.e., 5-points and 7-points scales, respectively), we used standardized variables (*z*-scores) to ease the interpretation of the analyses. We specified Student ID as subject variable for correlated random effects and Time as repeated variable for correlated residuals within random effects. Due to the hierarchical structure of the data, we also tested models with Class as random factor. As its inclusion did not significantly improve model fit, we excluded Class from the models to optimize statistical power.

Each variable was analyzed separately, for which we used a step-up model building strategy (West, Welch, & Galecki, 2007). All analyses began with a basic intercept-only model (Model 1). In this model, the intercept (mean level) of the dependent variable was estimated, as well as the random effects (i.e., estimations of variance) of Time and the individual errors (i.e., residuals). In subsequent models, we added fixed effects of Time, to test whether change over time occurred regardless of condition (Model 2), of Condition, to check whether condition had an overall effect on the dependent variable over time (Model 3), and of the interaction of Time\*Condition, to examine whether change over time differed between conditions (Model 4).

Strategy use, Autonomy, Competence, and Relatedness were measured at T1 and T2 only; therefore, we applied linear mixed models analysis with Student ID as the subject variable for correlated random effects. Again, we started with a basic intercept-only model (Model 1), that was built up by adding Pretest as fixed effect, to test the extent to which pretest scores explained posttest scores (Model 2), adding Condition as fixed effect, to test whether average posttest scores differed between conditions (Model 3), and adding a Pretest\*Condition interaction effect, to test if effects of condition on posttest scores depended on pretest scores (Model 4). Again, effect sizes were calculated based on the data as observed. Note that a main effect of condition (Model 3) is the most favorable outcome, in contrast with repeated measures analyses in which Model 4 is the most favorable one (indicating an effect of condition over time).

For all dependent variables, we evaluated the model building strategy by comparing the  $-2 \log$  likelihood values of the extended model and the previous model, using a  $\chi^2$  test (Model 2 vs. Model 1, Model 3 vs. Model 2, Model 4 vs. Model 3). If the outcome was statistically significant, we concluded that the extended model fit the data significantly better than the previous model. If not, we did not continue the analyses.

Effect sizes (Cohen’s *d*) were calculated based on estimated means and standard errors of both conditions at T2 and, if applicable, T3. We used Wilson’s (2019) online effect size calculator for means and standard errors. For interpretation, we followed Calin-Jageman and Cumming (2018), who noted that in educational research the average effect size is  $d = 0.4$  and suggested to consider effect sizes of 0.2, 0.4 and 0.6 as small, medium and large effects. This domain-specific interpretation somewhat deviates from the widely used standard in

**Table 3**  
Model comparisons for repeated measures mixed models (RM) and linear mixed models (LM) analysis.

Variable	Analysis	Model	-2LL	N <sub>pars</sub>	Comparison			
					Models	χ <sup>2</sup>	df	p
Self-other insights	RM	1 Intercept-only	2218.51	4				
		2 Time	2138.67	6	2 vs 1	79.85	1	<.001
		3 Condition	2132.46	7	3 vs 2	6.19	1	.013
		4 Interaction	2097.21	9	4 vs 3	35.26	1	<.001
Imagery	RM	1 Intercept-only	2154.21	4				
		2 Time	2143.37	6	2 vs 1	10.84	1	.001
		3 Condition	2137.12	7	3 vs 2	6.25	1	.012
		4 Interaction	2122.54	9	4 vs 3	14.58	1	<.001
Experience-taking	RM	1 Intercept-only	2291.22	4				
		2 Time	2246.31	6	2 vs 1	44.91	1	<.001
		3 Condition	2240.06	7	3 vs 2	6.25	1	.012
		4 Interaction	2231.97	9	4 vs 3	8.08	1	.004
Character evaluation	RM	1 Intercept-only	2225.41	4				
		2 Time	2214.69	6	2 vs 1	10.72	1	.001
		3 Condition	2211.71	7	3 vs 2	2.98	1	.084
		4 Interaction	2210.43	9	4 vs 3	1.29	1	.257
Sympathy for characters	RM	1 Intercept-only	2081.79	4				
		2 Time	2075.97	6	2 vs 1	5.82	1	.016
		3 Condition	2074.21	7	3 vs 2	1.76	1	.185
		4 Interaction	2067.81	9	4 vs 3	6.41	1	.011
Aesthetic awareness	RM	1 Intercept-only	2250.42	4				
		2 Time	2138.73	6	2 vs 1	111.69	1	<.001
		3 Condition	2132.33	7	3 vs 2	6.40	1	.011
		4 Interaction	2092.15	9	4 vs 3	20.18	1	<.001
Empathy for characters	RM	1 Intercept-only	2212.39	4				
		2 Time	2202.73	6	2 vs 1	9.66	1	.002
		3 Condition	2202.65	7	3 vs 2	0.08	1	.775
		4 Interaction	2202.59	9	4 vs 3	0.06	1	.802
Eudaimonic reasons for reading	RM	1 Intercept-only	2111.52	4				
		2 Time	2090.01	6	2 vs 1	21.51	1	<.001
		3 Condition	2083.13	7	3 vs 2	6.89	1	.009
		4 Interaction	2056.06	9	4 vs 3	27.06	1	<.001
Hedonic reasons for reading	RM	1 Intercept-only	2259.79	4				
		2 Time	2226.57	6	2 vs 1	33.23	1	<.001
		3 Condition	2226.08	7	3 vs 2	0.49	1	.484
		4 Interaction	2222.31	9	4 vs 3	3.73	1	.054
Strategy use	LM	1 Intercept-only	689.59	3				
		2 Pretest	555.89	4	2 vs 1	133.71	1	<.001
		3 Condition	542.97	5	3 vs 2	12.91	1	<.001
		4 Interaction	542.35	6	4 vs 3	0.62	1	.430
Autonomy	LM	1 Intercept-only	674.16	3				
		2 Pretest	642.36	4	2 vs 1	31.80	1	<.001
		3 Condition	580.29	5	3 vs 2	62.07	1	<.001
		4 Interaction	579.91	6	4 vs 3	0.38	1	.537
Competence	LM	1 Intercept-only	686.45	3				
		2 Pretest	588.78	4	2 vs 1	97.70	1	<.001
		3 Condition	573.55	5	3 vs 2	15.23	1	<.001
		4 Interaction	573.55	6	4 vs 3	0.001	1	.975
Relatedness	LM	1 Intercept-only	669.87	3				
		2 Pretest	576.87	4	2-vs-1	93.00	1	<.001
		3 Condition	542.69	5	3 vs 2	34.19	1	<.001
		4 Interaction	542.10	6	4 vs 3	.58	1	.445

psychological research, in which 0.5 is considered a medium effect and 0.8 a large effect.

4.7.3. Qualitative analysis of intervention effects

Students' written dialogues were assumed to contain indicators of insight into human nature and/or other transformative reading experiences. However, the total response rate was rather low (69%): not all TDLT students handed in their task and only four out of six control classes completed the task due to scheduling issues. Group sample size was therefore unequal. We checked for significant differences on relevant variables between TDLT (*n* = 134) and RLT (*n* = 94) subgroups. The groups did not differ in gender ( $\chi^2 = 2.74, p = .10$ ), Familiarity with fiction and Trait empathy (Wilk's  $\Lambda = .997, p = .91$ ), pretest scores on dependent variables (Wilk's  $\Lambda = .975, p = .83$ ), and pretest scores on mediating variables (Wilk's  $\Lambda = .990, p = .75$ ). We inferred

that the data were admissible for analysis.

Students' written dialogues consisted on average of 267 words (*SD* = 121); for two examples of dialogues, see Supplement 7a. Dialogues were split into segments: whenever a new topic was addressed, we distinguished a new segment. In total, we distinguished 1686 segments. Segments were coded for relevant response types (e.g., emerging indicators of insight into human nature and transformative reading experiences as measured by the TREQ; see Supplement 7b). Each segment could contain multiple response types and could thus be assigned multiple codes. A second independent researcher coded 100 segments (6% of the data). Agreement was acceptable:  $\kappa = .72$  (see Supplement 7c for calculations). We compared for both conditions the number of student dialogues in which a response type occurred at least once, using chi-square analyses, and how often each response type occurred overall, using *t*-tests. Further, we analyzed numbers of words

and segments, as indicators of extensiveness of students' responses.

#### 4.7.4. Analysis of strategy use and motivation as mediators

We tested at T2 whether strategy use and indicators of motivation for literature lessons mediated effects of condition on two dependent variables, i.e., Self-other insights (as the most important indicator of insight into human nature) and Eudaimonic reasons for reading. After having established the direct effect of condition on the dependent variable, as well as the effect of condition on the proposed mediating variables, we explored the indirect effect of the proposed mediators on the dependent variable (Baron & Kenny, 1986; Kenny, 2018). For establishing the direct and indirect effects, we used the PROCESS macro for SPSS (Hayes, 2015), in which we specified both dependent variables in two separate mediation analyses. Condition was included as the independent variable and Autonomy, Competence, Relatedness, and Strategy use as parallel mediators. Pretest scores of the dependent variable and proposed mediators were added as statistical controls.

## 5. Results

### 5.1. Implementation fidelity

TDLT was, overall, well-implemented (see Supplement 6). According to teachers' logs, 77.6% of the TDLT phases was completed as planned; 14.4% was partly completed, and 8% was not completed. Teachers indicated that phases were feasible to teach ( $M = 4.1$ ,  $SD = .7$ ), proceeded orderly ( $M = 3.9$ ,  $SD = .8$ ), were clear for students ( $M = 4.0$ ,  $SD = .7$ ), and were interesting and engaging for students ( $M = 3.7$ ,  $SD = .8$ ). Lesson observations indicated that students were on task 85.2% of the time, which was above the standard of 80% that has been suggested in studies on effective teaching (e.g., Muijs & Reynolds, 2010).

RLT teachers' logs showed that oral skills were sometimes used, for example, when sharing answers in small groups or the classroom. However, they mainly focused on literary devices and argumentative skills. For instance, students were asked to support their opinions about short stories, to analyze the arguments used in literary reviews, or to discuss in pairs or in class the focalization and motifs in a short story. There was no attention for elements that are key in TDLT, such as transformative reading experiences or internal dialogues.

### 5.2. Effects on insight into human nature and reasons for reading

#### 5.2.1. Questionnaire results

Table 3 presents model comparisons for all dependent variables. For best-fit models as indicated by  $\chi^2$  test results, Table 4 presents the significance of the parameters (i.e., the fixed effects), the standardized parameter estimates, and effect sizes.

For the two most important dependent variables in this study, Self-other insights and Eudaimonic reasons for reading, we found significant Time\*Condition interaction effects, indicating that the intervention affected change over time (see Fig. 1 for standardized estimated mean scores). At T2, effects were large for Self-other insights ( $d = .60$ ) and medium to large for Eudaimonic reasons for reading ( $d = .51$ ). At T3, these effects were small ( $d = .23$  for Self-other insights) to medium ( $d = .34$  for Eudaimonic reasons for reading). TDLT, thus, appeared to enhance students' self-other insights, a key indicator of their insight into human nature; in addition, they considered gaining this insight a more important reason for reading literature than students in RLT.

Furthermore, the intervention positively affected dependent variables that are associated with insight into human nature, that is, Imagery, Experience-taking, Sympathy for characters, and Aesthetic awareness (see section 2.1). As Table 4 indicates, these effects were small to medium both at T2 and T3, except for Aesthetic awareness for which directly after the intervention a large effect ( $d = .61$ ) was found. As a result of TDLT, thus, students became more aware of aesthetic

qualities (e.g., style and language) of literary short stories that grasped their attention.

On one transformative reading component, Character evaluations, we did not find an effect. Participating either in TDLT or RLT, thus, did not affect the extent to which students constructed evaluations of characters when reading stories. Likewise, we found no effects on Empathy for characters or on Hedonic reasons for reading.

#### 5.2.2. Written dialogue results

TDLT students wrote more extensive dialogues,  $M = 295$  words,  $SD = 134$ , than RLT students,  $M = 227$ ,  $SD = 87$  ( $t(225) = 4.58$ ,  $p < .001$ ). No differences were found for number of segments (TDLT  $M = 7.1$ ,  $SD = 3.3$ ; control  $M = 7.8$ ,  $SD = 3.4$ ). Students in both conditions thus addressed equal numbers of topics, but TDLT students did so more elaborately. Descriptive-evaluative statements, such as reiterations of story events, simple evaluations, or expressions of incomprehension without attempts to solve it, occurred most frequently (see Table 5). We provide two examples:

“Who is the main character in your story?”

I suspect it is the warden.

What do you know about him?

That he chased after someone.

Who did he chase, then?

That main character is called Lyuba, I think.

Who is the author of your story?

That's Annelies Verbeke.”

In this segment, a student in the TDLT condition rather superficially described basic characteristics of the story. The following example, written by an RLT student, is characterized by simple evaluations:

“What did you like about the story?”

It had suspense.

Was it difficult to read for you?

Yes.

Would you recommend the story?

No, you?

No, I thought it was boring.

Me too. I don't like short stories.”

As Table 4 shows, such descriptive-evaluative responses were dominant in both conditions, but occurred significantly less often in TDLT than in RLT.

In contrast, two response types that are closely related to insight into human nature occurred significantly more often in TDLT. First, TDLT students showed more reasoning to understand and interpret characters' acts, thoughts, feelings and motives (see Table 5), as this example illustrates:

“What else did you notice about the story?”

That the boy is very quiet and that everything happens somewhat vaguely around him, he's there, but not with his mind.

I also noticed that, yes, he also didn't seem to be very happy.

He's really only in his thoughts, I think, because he doesn't say anything and simply lets everything happen.

Yes, he doesn't respond to anything, he's only thinking.

Why would he say so little and only think?

**Table 4**  
Parameter estimates and effect sizes under best-fit interaction models (RM) and condition models (LM).

Variable	Analysis (model)	Parameter (fixed effects)	Parameter significance	Estimates (standardized)		Cohen's <i>d</i>	
				$\beta$	SE	T2	T3
Self-other insights	RM (4)	Time	<.001	.265	.069		
		Condition	.010	.219	.111		
		Time*Condition	<.001	.346	.099	.60	.23
Imagery	RM (4)	Time	.011	.147	.073		
		Condition	.003	.337	.112		
		Time*Condition	.001	.045	.106	.40	.35
Experience-taking	RM (4)	Time	<.001	.275	.080		
		Condition	.012	.384	.112		
		Time*Condition	.017	.143	.116	.25	.40
Sympathy for characters	RM (4)	Time	.117	.016	.066		
		Condition	.056	.208	.113		
		Time*Condition	.041	.007	.095	.21	.21
Aesthetic awareness	RM (4)	Time	<.001	.113	.069		
		Condition	.009	.255	.109		
		Time*Condition	<.001	.314	.101	.61	.27
Eudaimonic reasons for reading	RM (4)	Time	<.001	.065	.065		
		Condition	.007	.325	.111		
		Time*Condition	<.001	.154	.094	.51	.34
Strategy use	LM (3)	Pretest	<.001	.632	.046		
		Condition	<.001	.337	.093	.44	-
Autonomy	LM (3)	Pretest	<.001	.348	.052		
		Condition	<.001	.846	.101	1.01	-
Competence	LM (3)	Pretest	<.001	.545	.051		
		Condition	<.001	.389	.098	.48	-
Relatedness	LM (3)	Pretest	<.001	.507	.047		
		Condition	<.001	.571	.094	.72	-

Note. Only those variables are included for which the interaction model (RM) or condition model (LM) significantly fit the data best.

I think he might be like that, as a person, or he has been through something that made him the way he is now.”

Second, TDLT students more often showed moral reasoning confined to the story world (see Table 5). For instance, a TDLT student explored whether he considered the behavior of a character as right or wrong:

“The end really struck me. What about you?  
Yes, me too. It's not just. [referring to a father who slaps his son]  
Oh? I thought it was quite fair.  
Ooh, why then?”

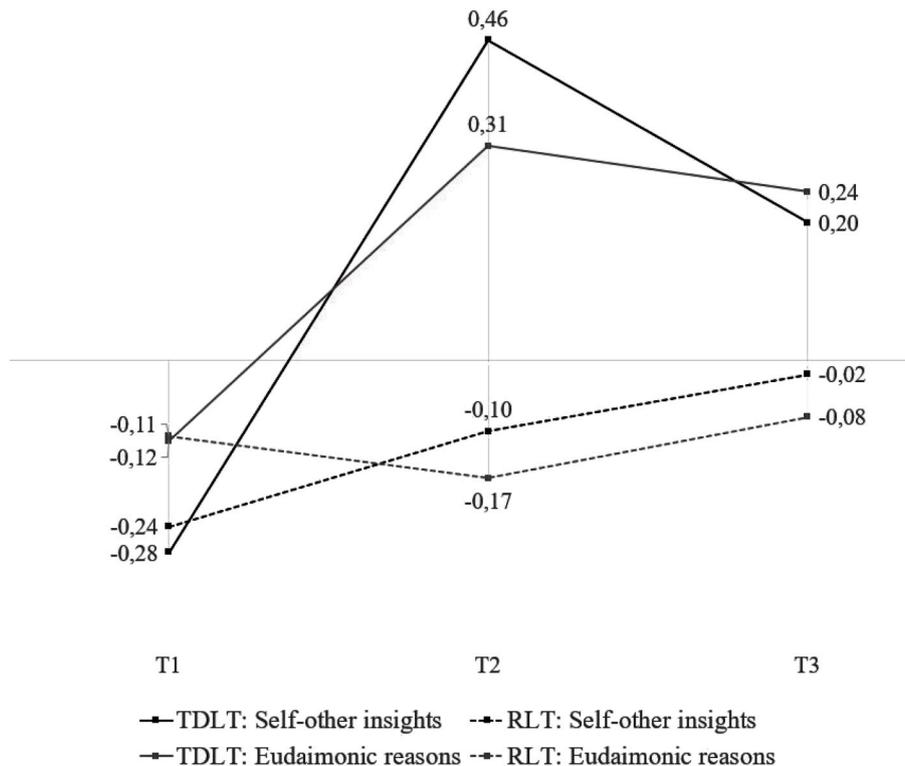


Fig. 1. Standardized estimated mean scores for Self-other insights and Eudaimonic reasons for reading, for TDLT and RLT, at T1, T2 and T3.

**Table 5**  
Response types in imaginary written dialogues.

Response type	% of student dialogues where response occurs at least once		$\chi^2$ -value (p-value)	M occurrences of response type per dialogue		t-value (p-value)
	TDLT	RLT		TDLT	RLT	
Descriptive evaluative statements	79.1	92.6	7.69 (.006)	2.60	4.61	1.70 (.000)
Reasoning						
Evaluative	65.7	34.0	22.17 (.000)	1.14	0.38	6.46 (.000)
To understand and interpret characters	58.2	40.4	6.99 (.008)	1.04	0.68	2.45 (.015)
To understand and interpret story events	30.6	8.5	15.97 (.000)	0.38	0.12	3.76 (.000)
Moral: story world	31.3	10.6	13.45 (.000)	0.43	0.13	4.15 (.000)
Moral: beyond story world	12.7	11.7	n.s.	0.16	0.12	n.s.
Hypothetical	11.9	14.9	n.s.	0.13	0.19	n.s.
Transformative reading components						
Character evaluation	51.5	37.2	4.53 (.033)	0.80	0.59	n.s.
Aesthetic-awareness	17.9	6.4	6.43 (.011)	0.19	0.06	2.88 (.009)
Imagery	9.0	2.1	4.47 (.035)	0.10	0.02	2.45 (.015)
Sympathy	31.3	21.3	n.s.	0.37	0.28	n.s.
Experience-taking	16.4	8.5	n.s.	0.20	0.10	n.s.
Referentiality						
Self-references	25.4	26.6	n.s.	0.40	0.41	n.s.
Real-world	13.4	8.5	n.s.	0.15	0.09	n.s.
Content-irrelevant						
Other	35.8	45.7	n.s.	0.40	0.70	2.72 (.007)
Unclear	1.5	1.1	n.s.	0.01	0.01	n.s.

Well, the boy should just know that such things aren't allowed, so he deserved it.

He only made a joke.

Yes, I think that's disrespectful.

So, therefore it's okay to slap your child?

Well, okay, it could have gone differently.

Yes, the father shouldn't slap his child because of this.

Why do you think that?

You wouldn't slap your child for a joke he made days ago, right?

Yes, but the father wanted to make clear he doesn't allow that behavior.

Come off it, that's the wrong way to raise his child."

Interestingly, as Table 5 indicates, significantly more TDLT students wrote at least one Character evaluation in their dialogue, compared to students in RLT. However, such an effect on Character evaluation was not observed in the TREQ data. We will return to this matter in the Discussion (6.1).

In addition, we found significantly more responses pointing to Aesthetic awareness and Imagery in the written dialogues of TDLT students' than in those of RLT students. Finally, Reasoning to substantiate evaluations, and Reasoning to understand and interpret story events occurred significantly more often in TDLT than in RLT, which suggests that TDLT not only had positive effects on students' insight into human nature and related transformative reading experiences, but also on the depth of their evaluative and interpretative responses to short stories.

### 5.3. The role of strategy use and motivation

We first investigated the effects of TDLT on students' Strategy use, Autonomy, Competence, and Relatedness. For all these dependent variables, main effects of condition were found (see Table 3). As Table 4 indicates, the intervention had medium effects on students' self-reported Strategy use ( $d = .44$ ) and on the satisfaction of their need for Competence ( $d = .48$ ). We found large effects on the extent to which their needs for Autonomy ( $d = 1.01$ ) and Relatedness ( $d = .72$ ) were

satisfied. Non-significant interaction models indicated that these effects did not depend on pretest scores.

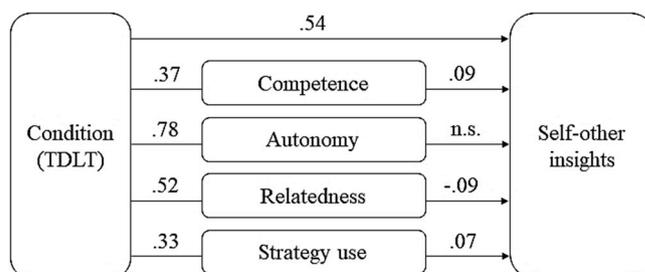
The mediation model for Self-other insights explained 56% of the variance in students' scores ( $R^2 = .56, F = 29.97, p < .001$ ). Consistent with the findings reported above, the mediation model showed a direct effect of Condition on Self-other insights (standardized  $\beta = .54, p < .001$ ), as well as effects of Condition on the proposed mediating variables (see Fig. 2 for standardized  $\beta$ 's). In addition, we found small indirect effects of Competence (standardized  $\beta = .09, 95\% \text{ CI } [.03, .16]$ ), Relatedness (standardized  $\beta = -.09, 95\% \text{ CI } [-.18, -.02]$ ), and Strategy use (standardized  $\beta = .07, 95\% \text{ CI } [.02, .14]$ ) on Self-other insights.

The mediation model for Eudaimonic reasons for reading explained 59% of the variance in students' scores ( $R^2 = .59, F = 34.40, p < .001$ ). It showed a direct effect of Condition on Eudaimonic reasons for reading (standardized  $\beta = .47, p < .001$ ), as well as on the proposed mediators (see Fig. 3 for standardized  $\beta$ 's). In this model, Competence (standardized  $\beta = .05, 95\% \text{ CI } [.03, .11]$ ) and Strategy use (standardized  $\beta = .05, 95\% \text{ CI } [.02, .12]$ ) had small indirect effects on Eudaimonic reasons for reading.

## 6. Discussion

### 6.1. Comparing TDLT to "business as usual"

In this study, we compared the effects of Transformative Dialogic Literature Teaching (TDLT) on 10th grade students' insight into human nature to a "business as usual" approach (RLT) that mainly focused on



**Fig. 2.** Mediation model for Self-other insights, with direct and indirect effects. Displayed standardized  $\beta$ 's are significant at the  $< .001$  level.

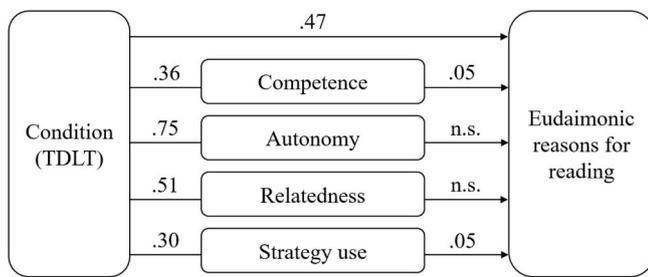


Fig. 3. Mediation model for Eudaimonic reasons for reading, with direct and indirect effects. Displayed standardized  $\beta$ 's are significant at the  $< .001$  level.

learning to identify literary devices in analyzing short stories. Our first research question was answered in the positive: analysis of students' questionnaire as well as writing task data indicated that TDLT fostered insight into human nature, which included insight into themselves, fictional others, and real-world others.

As our most important finding, TDLT had a large effect on Self-other insights, the first factor identified in the TREQ data. Moreover, the intervention positively affected factors that were found to precede self-other insights in adult readers (Fialho, 2018), such as the extent to which readers picture story worlds and characters in their minds, feel sympathy for characters, and perceive aesthetic elements in stories as striking. Qualitative data from written dialogues in response to a particular short story largely supported these findings. For example, more TDLT students than RLT students showed reasoning to understand characters in short stories or to work towards moral considerations of story situations and character behavior.

This first finding adds to previous research into the effects of literature teaching on particular aspects of insight into human nature. Those studies, for example, fostered students' understandings of fictional characters (White, 1995) and their attitudes toward behavior of real-world others (Malo-Juvera, 2014). The present study has a broader scope, as we included multiple indicators of insight into human nature. We thus considered insight into human nature on a holistic level. We suggest that doing so is warranted, because from a conceptual point of view, it is difficult to distinguish between self and others and between fictional and real-world others (Mar & Oatley, 2008; Zahavi, 2014). Moreover, whereas previous studies oftentimes used either qualitative (White, 1995) or quantitative data (Malo-Juvera, 2014; for an overview, see; Schrijvers et al., 2018), we have investigated the construct of "insight into human nature" in a mixed-methods approach, which may have facilitated a more nuanced, multiperspectivist understanding of the construct.

Our second research question was answered in the positive as well: TDLT had a medium to large effect on students' eudaimonic reasons for reading. TDLT students more strongly agreed to read for meaningful insights into human conditions than RLT students. This did not mean that reading for pleasure and enjoyment decreased: for Hedonic reasons, no difference between conditions was found. Thus, both types of reasons appeared to co-exist. This finding adds to Oliver and Raney's (2011) work on reasons to watch movies, by expanding their conclusion to another narrative medium and a younger research population. In addition, we have shown that adolescents seem to benefit from instructional guidance to develop eudaimonic reasons for reading, for TDLT appeared to guide them toward recognizing and endorsing that they may read short literary stories "to search for and ponder life's meaning, truths, and purposes" (Oliver & Raney, 2011, p. 985).

The effects of TDLT on indicators of insight into human nature and on eudaimonic reasons for reading sustained up until four months after TDLT, although T3 effects were smaller than those at T2. As Fig. 1 illustrates, even though RLT students appeared to gain some Self-other insights, this increase is negligible compared to the growth of the TDLT students. Thus, the focus on identifying literary devices by analyzing

short stories in RLT did not seem to foster insight into human nature nearly as much as TDLT did.

These findings do not imply that identifying literary devices had no value. On the contrary: TDLT students also identified literary devices, as a means to reflect on their reading experiences and insights into themselves, story characters, and real-world others. This is illustrated by a dialogue excerpt of a TDLT student referring to "psychological suspense" to reason about a character's thoughts and feelings, resulting in insight into "why a character does something":

"Did you also think this story had much suspense? Because I noticed some sort of suspense, but I'm not sure how.

I think you mean psychological suspense, because you really feel along with the thoughts and emotions of the protagonist. You notice he gets different feelings about the man who is executed, and that it confuses him.

Yeah, that's what I meant. Because of that, I really get a sense of knowing why a character does something. If I wouldn't have known the protagonist's thoughts, I wouldn't have understood why he is so kind to the convicted man."

With this excerpt, we shortly return to interpreting the qualitative data, for it also exemplifies the extensiveness of some of the TDLT students' dialogues. We found that those more elaborate dialogues contained significantly less descriptive-evaluative statements (e.g., "Who is the main character?", "I thought the story was boring") than the dialogues of RLT students. Such trivial descriptive-evaluative statements, thus, did not seem to function as "fillers" in TDLT students' more extensive dialogues. We suggest that this indicates that TDLT students' explorations of social-moral story themes were more in-depth than those of RLT students.

## 6.2. Strategy use and motivation in TDLT

Our third and fourth research questions were answered positively as well: TDLT had a medium effect on strategy use, and medium to large effects on indicators of motivation for literature education. TDLT thus appeared to offer students strategies for actively attempting to comprehend literary texts and to satisfy their needs for autonomy, competence and relatedness. As such, the intervention appeared to alleviate prominent challenges faced by students and their teachers in the literature classroom. These findings are in line with previous studies that found positive effects of reader-oriented approaches on student engagement in literature classrooms (e.g., Eva-Wood, 2004; Henschel et al., 2016; Levine & Horton, 2013). In the present study, the effect on autonomy was particularly large, even though – apart from the written dialogue task – they were offered little freedom of choice in their reading materials. This suggests that, for this group of students, experiencing autonomy may largely depend on the instructional approach taken in the classroom: being given the opportunity to explore their authentic responses and feeling free to express these in class may be a crucial factor in students' motivation for literature education.

Subsequently, we explored if strategy use and motivational factors mediated the effects of TDLT on Self-other insights and Eudaimonic reasons for reading. From the magnitude of the indirect effects, we concluded that these variables played a minor role compared to the direct effects of condition (see standardized  $\beta$ 's in Figs. 2 and 3). Although TDLT had a large effect on Autonomy, it did not function as a mediator on either of both dependent variables. Our fifth research question, thus, was only partly answered in the positive.

Competence and Strategy use both explained the effect of TDLT on Self-other insights and Eudaimonic reasons for reading to a small extent. Thus, the more students' need for competence was satisfied and the more they reported to use reading strategies that were expected to facilitate their comprehension of short literary stories, the higher their posttest scores on Self-other insights and Eudaimonic reasons for

reading. This suggests we should be responsive to students' self-perceived competence in reading, dialoguing with and talking about short stories in the literature classroom. In TDLT, this was operationalized by explicit strategy instruction about internal and external dialogues, by using support tools such as displaying reading strategies on a "first aid card", and by working with a rubric (see Supplement 3c) to monitor progress when moving toward new and challenging ways of interacting with and about literary texts.

TDLT largely satisfied students' need for Autonomy, but it did not function as a statistically significant mediator on Self-other insights and Eudaimonic reasons for reading. As Kenny (2018) points out, this may be due to a power issue: if the effect of the dependent variable on the proposed mediator is large, a larger sample size would be needed to achieve equivalent power in testing the path from the mediator to the outcome variable. As Figs. 2 and 3 show, the path from condition to Autonomy was large compared to Competence, Relatedness and Strategy Use; perhaps, with a larger sample size we might have detected a significant path from Autonomy as a mediator to the dependent variables.

Intriguingly, Relatedness had a negative mediating effect on Self-other insights (see Fig. 2). TDLT students felt more strongly than RLT students that their need for relatedness was satisfied, but this effect slightly diminished their scores on Self-other insights. Perhaps, a stronger sense of being related to others somewhat decreased students' focus on themselves in evaluating the TREQ items of this factor. To further explore this idea, we performed additional mediation analyses, for which we split Self-other insights into two dependent variables: one containing the items about self-insights (Cronbach's  $\alpha = .85$  at T2) and one containing the items about insights into others (Cronbach's  $\alpha = .82$  at T2). Indeed, Relatedness functioned as a negative mediator on the items about self-insights (standardized  $\beta = -.09$ ); its mediating effect on items about insights into others was no longer significant. Thus, these additional explorations supported the idea that a stronger sense of relatedness to their peers slightly devaluated the extent to which students gained insights into themselves. Nevertheless, we should bear in mind that this effect was small and that TDLT students in any case scored higher on Self-other insights than RLT students.

### 6.3. Limitations and implications for future studies

#### 6.3.1. Research design

In this study, conditions were taught by different groups of teachers. Thereby, we avoided contamination of conditions, but the absence of random assignment to conditions may have posed a threat to validity. However, no significant differences in age and years of teaching experience were found between both groups of teachers. Their beliefs related to TDLT topics may have been different as well; we did not include their beliefs as a variable in the study, because we purposefully involved "regular" teachers in the RLT condition. However, to avoid such validity threats altogether, future studies may implement a switching replications design (Shadish, Cook, & Campbell, 2002).

Moreover, within the TDLT condition, three teachers were already involved in designing TDLT, whereas three others were not. Selection bias, thus, may have posed another threat to validity: students of teachers who were already familiar with the approach may have scored significantly higher than students of the teachers who were new to TDLT. However, additional explorative *t*-tests on dependent variables at T2 and T3 indicated that such an effect did not occur.

In two schools, some teachers were involved in TDLT whereas others participated RLT. These schools may have been at risk of contamination of conditions. However, in our view, it is unlikely that students from different classes have exchanged learning materials from their literature lessons or have talked extensively about their experiences in these lessons. Although we acknowledge that teachers may have exchanged their experiences, TDLT and RLT teachers' logs indicated that their lessons were substantially different in terms of

content (e.g., no focus on insight into human nature and transformative reading experiences in RLT) and instructional approach (e.g., no internal dialogues and only few external dialogues – without strategy instruction – in RLT). In short, we observed no contamination of conditions as a threat to validity.

#### 6.3.2. Instruments

Although most instruments showed sufficient reliability as well as convergent and divergent validity, data of some instruments were removed as there were reasons for concern. For example, the scales of the Civic Attitudes and Skills Questionnaire showed insufficient internal consistency, possibly because this instrument contains a relatively large number of negatively formulated items. In addition, the Moral Competence Test showed hardly any correlations with other instruments. Perhaps, the short scenarios in the test that referred directly to the real world have been too deviant from the items in the TREQ, LRQ and Motivations for Reading Scale, which all referred to story reading.

Moreover, although convergent validity of the scales Empathy for characters (LRQ) and Character evaluation (TREQ) was sufficient, no intervention effects were found on these scales. As such, they deviate from the other indicators of insight into human nature. Possibly, evaluative responses such as constructing an opinion about a character may also have been evoked in the RLT condition, as these appear to be rather basic responses – on the other hand, we did find significant differences between conditions on this variable in the qualitative data. Data from teacher logs are not elaborative enough to explain these contradictory findings; as a remedy, control conditions may be monitored more closely in future studies. The absence of effects on Empathy for characters cannot be explained easily either; perhaps, the fact that these items were drawn from the LRQ and were therefore formulated somewhat differently than the TREQ items may have played a role. Empathy for characters may not have been targeted in TDLT as explicitly as the variables measured in the TREQ.

Third, we have adopted a rather specific perspective on reading strategies in this study. We have measured Strategy use solely based on self-reports, and its correlations with other variables do not shed light on whether reported use of these strategies is related to reading comprehension. Future studies may address to which extent students' comprehension of literary texts also plays a role in their development of insight into human nature.

Finally, written dialogues were collected at T2 only. Therefore, the question remains whether effects would have sustained at T3. Nonetheless, written dialogues added to the quantitative data we collected, as students explicated their thoughts in response to a story. In addition, transformative reading experiences and other response types were well-distinguishable in the dialogues. The instrument may be of added value for future studies that aim to explicate students' thinking in response to fictional and literary texts.

#### 6.3.3. Generalizability

The effects of TDLT can neither be generalized to educational tracks, grade levels, or literature curricula in countries other than those addressed in this study, nor to other genres than short stories, such as novels, plays or poetry. Future work may address how TDLT can be adapted to other educational contexts and other text genres. For example, as it may be beneficial to develop insight into human nature prior to adolescence, research may focus on how to accommodate TDLT to reading activities in primary school.

Finally, as in most intervention studies, conclusions concern TDLT as a whole. Future experimental studies may investigate the effects of text selection, internal dialogues, and external dialogues in separate conditions. Likewise, the effect of attending to transformative reading experiences could not be assessed separately from other intervention elements, but this study is a first step in validating the transformative reading model (Fialho, 2018) for adolescents.

#### 6.4. Conclusion and implications

In societies facing globalization, migration, and polarization, it is perhaps more important than ever for people to reflect on what it means to be “human”. In this paper, we have shown that literature education may be a promising domain for affecting adolescents’ insight into human nature. This study suggests that TDLT may guide students toward developing such insight. The instructional differences between the experimental and control condition imply that we may want to move away from formalist, knowledge-oriented instruction that may still exist in literature classrooms, as aptly described by Wilhelm (2016):

“Teachers [...] may emphasize knowing and recognizing literary devices, getting at the “internal logic” of a text’s construction [...], and relating a work’s central “organic” meaning to how this meaning was expressed. There may be an emphasis on “rightness” of literary interpretation. Interpretative questions about the text will be answered after reading [...], and discussions mediated by the teacher, who acts as the authority on the text” (p. 25).

If developing insight into human nature is acknowledged as one of the objectives of literature teaching, a formalist, knowledge-oriented approach appears not to be helpful. In contrast, as in TDLT, instruction should encourage students to explore their personal responses in dialogic interactions with and about literary texts, by completing purposefully designed combinations of pre-, during- and post-reading tasks in which analysis of literary devices is a means to reason about reading experiences, themes, characters, and moral implications.

As a reader- and affect-oriented approach, TDLT further appears to alleviate reoccurring challenges in the literature classroom, in terms of students’ motivation and the ways they handle difficulties in literary texts. All in all, if the demonstrated effects are supported or expanded in future studies, TDLT may be a promising approach for fostering students’ insight into human nature, their awareness and use of reading strategies, and their motivation for literature education.

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#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.learninstruc.2019.101216>.

#### Declaration of interest

Gert Rijlaarsdam is one of the Associate Editors for Learning and Instruction.

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