Reading the Book versus ‘Reading’ the Film: Cinematic Adaptations of Literature as Catalyst for EFL Students’ Critical Thinking Dispositions

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Abstract—This true experimental study investigates the effect of combining the reading of literature with the ‘reading’ of film on nurturing EFL (English as a Foreign Language) students’ critical thinking dispositions in areas of truth-seeking, open-mindedness, inquisitiveness, analyticity, systematicity, confidence in reasoning, and maturity of judgment. It was conducted with 50 third year students enrolled at the department of English in Chadli Bendjedid University in Algeria. The contrast group (n=26) took two semesters of a regular literature course whereas the treatment group (n=24) took one semester of typical literature instruction and a second of a reading and viewing course. The California Critical Thinking Disposition Inventory (CCTDI) was used as both a pretest and posttest to assess participants’ overall critical thinking dispositions and scale results. Data were analyzed quantitatively using inferential statistics that included Cronbach’s alpha reliability coefficient, means, standard deviations, t-statistics and Cohen’s d effect size. Empirical findings revealed that the difference in the progress both groups manifested proved non-significant in all seven dispositions to think critically. Results’ interpretation, pedagogical implications, limitations and future research directions are examined.

Index Terms—literature reading, film viewing, critical thinking dispositions, EFL students

I. INTRODUCTION

This study sprang from a number of observations. A bird’s-eye view of the scholarship pertaining to the relationship between literary studies, film and critical thinking suggests that literature instruction boosts critical thinking skills and so does film study (Bluestone, 2000; Heitin, 2013; Lazoré, 1987). Despite the sharp affinities between the two media and their systemic connection that is as old as the early civilizations that arose in the world (Corrigan, 1999, p.8), the striking majority of the research body in the area of critical thinking, with scant exceptions, including Renzi’s work (n.d.), looked at the effects of each artifact separately and failed to consider a combination of both. The dialogue between these two art forms has so adamantly existed throughout history in that literature and film never ceased to immensely influence each other (Corrigan, 1999, p.21). The practice of film as a “handmaiden” of literature dates back to the 1930s (Bruder, 1994, p.2) and its proliferation as an academic discipline claimed heavily by the literature departments since the fifties is but a testimony of its strong appeal and immediate relevance to the literature classroom (Bruder, 1994, p.3; Corrigan, 1999, p.62). Amid this reality, empirical research overlooked merging both media in one crucible under the critical thinking umbrella.

The existing theoretical and empirical literature has concentrated on either the cognitive dimension of critical thinking or the affective dispositions and the interaction of each with either film or literature apart. If critical thinking is a composite bi-dimensional concept, then previous research has suffered from a limited scope of investigation. If each cognitive skill is intricinsically intertwined with an affective disposition to execute it, the impact of coupling the teaching of literature with film has to be assessed with regard to both coin faces of critical thinking if we are to yield research that is more comprehensive. This realizes congeniality with Facione’s statement that “educating good critical thinkers […] combines developing CT skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society” (1990, p. 2).

Aside from these observations, critical thinking, however the cornerstone of higher education worldwide nowadays, seems lost in the shuffle in Algeria, particularly in the EFL classroom. Thus far, only a single study (Djamāa, Unpublished) drew attention to it despite the growing international urge to zero in on it as a key set of skills and amid advocacy to foster it in students. One of its overarching contributions was the amalgamation of film and literature to hone EFL students’ higher order thinking, an approach that experimentally proved to dramatically improve the analytical, inferential, evaluative, inductive and, most notably, the deductive skills of learners. While this very same study simultaneously examined the effect of adopting cinematic adaptations in the literature classroom on firing-up EFL students’ critical thinking dispositions, it was not possible to bind the results together in one manuscript due to space limitations. This paper works towards introducing this second part of the research. It therefore takes into account the flaws of previous studies and makes up for their limitations mainly by widening the scope of investigation to encompass
the affective components of critical thinking. Further, it adds one more brick to research on critical thinking in the context of the Algerian university as an attempt to whet other researchers’ appetite to sink their teeth into this area of investigation.

II. REVIEW OF RELATED LITERATURE

A. Critical Thinking: Spotlight on the Affective Dimension

Besides the cognitive aspect of critical thinking “which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which […] judgment is based” (Facione, 1990, p.2), the second coin face of it lies in its dispositional dimension. Experts agree that each cognitive skill is interwoven with a cognitive disposition. However, unveiling the correlation between the two rests a matter of empirical research (Facione, 1990, p. 4 & 11; Facione, 2000, Facione, 2013, personal correspondence). An individual who demonstrates proficiency in a particular cognitive skill is not necessarily equipped with the disposition to perform it. “A person can be disposed but not skilled, skilled but not disposed, both skilled and disposed, neither skilled nor disposed” (Facione, 2013, personal correspondence). It therefore is imperative to assess critical thinking skills and dispositions separately. These dispositions have been defined by Facione (2000, p.64) as “consistent internal motivations to act toward or respond to persons, events, or circumstances in habitual, yet potentially malleable ways.” The ones that have been agreed upon by experts as mentioned in The Delphi Report (Facione, 1990, p. 13; Facione & Facione, 2013, p.11, “Insight Assessment,” 2013) encompass the following summative personal attributes: (1) inquisitiveness, the eagerness to unearth information about a myriad of topics and satisfy one’s curiosity; (2) truth-seeking, the keenness on being constantly apprised of a variety of issues and on thoroughly understanding them; (3) open-mindedness, the habit of accepting exposure to diverse views one doesn’t necessarily agree with and the willingness to understand them, take them into account, and draw on them to amend one’s injudicious decisions if needed; (4) analyticity, the habit of predicting both the positive and negative effects a given situation might possibly engender; (5) systematicity, the desire of methodically and systematically tackling issues; (6) confidence in reasoning, the habit of trusting sound reasoning and judicious thinking processes and their effectiveness in leading to careful decision-making and sound problem solving; and (7) maturity of judgment, the tendency to be aware of the availability of divergent judgments and to consider them all while being prudent in discarding some and picking up the most appropriate ones in a wisely timed manner. Based on these constituents, the ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit (Facione, 1990, p. 2; Facione & Facione, 2014, p. 12).

B. Film, Literature and Critical Thinking Dispositions

The abundance of scholarship that brags the might of literature and film to boost critical thinking skills is met with the severe scarcity of empirical studies that place the affective dimension in relation to any of these artifacts under the microscope. Our search for works that shed light on this area of investigation yielded a single empirical study tied to the much younger medium, film.

Tanriverdi (2013) conducted a quasi-experimental study for 14 weeks with 49 pre-service teachers enrolled in their fourth year of an English teaching program at a university in northern Turkey. Their ages ranged from 19 to 26 (\(M=22.7, \ SD = 1.28\)). All Participants took the California Critical Thinking Disposition Inventory (CCTDI) as a pretest to assess their attitudes to critical thinking before assigning them to a treatment group that pursued filmic analysis and a contrast group that took a regular teacher education course scheduled in their curriculum. Both groups were gender-balanced. To teach film as text, Tanriverdi used a framework adapted from Teasley and Wilder (1997) and Eken (2003), which draws on literary, dramatic, cinematic and linguistic analysis of the medium and injected a cultural and pedagogical component into it. The latter involved participants in preparing mini film-based activities for use in their future career as teachers. At the end of the program, both groups took the CCTDI as a posttest that targeted the evaluation of six critical thinking dispositions, namely truth-seeking, analyticity, open-mindedness, self-confidence, systematicity, and curiosity. Tanriverdi (2013) reports that there was no significant difference in the CCTDI overall and scale scores between both groups in the pretest. In the posttest, however, the film-group exhibited results that were substantially higher than those of the contrast group in open-mindedness, curiosity, truth-seeking and CCTDI overall scores. These results empirically testify that film cultivates positive dispositions. However, more studies are needed to enrich this area of investigation; especially amid the limitations this single study had, which stood in the way of generalizing the findings.

III. RESEARCH QUESTIONS

This study seeks answers to the following pair of questions:
Q1: Does the amalgamation of film adaptations with their source literature nurture EFL students’ critical thinking dispositions? 
Q2: Are there differences in critical thinking dispositions of students exposed to the film-enhanced literature course compared with those taking the reading-based course?

IV. RESEARCH HYPOTHESES

Empirical evidence is sought to support the presumptions that:

H1: Coupling the study of film adaptations with their source literature would cultivate students’ critical thinking dispositions.

H2: Students who study both the print and film versions of literary achievements would exhibit better critical thinking dispositions than students who study merely the source literature. The former would outperform the latter in all dispositional dimensions of critical thinking.

V. METHOD

A. Participants

Participants in this study (N=50) were in their graduation year in 2012-2013 with a major in didactics. They consisted of five (10%) males and 45 (90%) females with a minimum age of 21 and a maximum of 45 (M=22.24, SD=3.75). They all studied English as a foreign language for at least six years prior to joining Chadli Bendjedid University in Algeria, where they received the same education at the department of English during their freshman and second year of undergraduate studies.

The non-probability sampling method was executed following the judgmental or purposive sampling technique. Two main principles made the selected sample the only one with the needed knowledge and skills to participate in this study:

Having taken two semesters of Intro to Literary Studies and Literary theory and two other semesters of Stylistics, third year students are well equipped with the basics of literary analysis and critique. They, to a certain extent, have a thorough understanding of the elements of the narrative and are ready to handle a relatively intensive reading agenda and couple it with the exploration of a new narrative text: Film. Freshmen and second year students are new to literary studies; hence lack the expertise to be part of this study.

1. Out of 110 third year students, only 50 were majoring in didactics with the literature course being a requirement for their B.A. degree. The remaining 60 students were majoring in English for tourism, which does not entitle them to take a literature class.

B. Measures

The California Critical Thinking Disposition Inventory (CCTDI) is the instrument used in this study. It is the exclusive property of Insight Assessment, the unique company that produces and distributes it throughout the globe. It is the premier instrument worldwide that measures dispositions toward thinking and reasoning (Facione & Facione, 2013, p.11). The tool proved effective with a myriad of individuals and groups from high school up to graduate level across the United States and in more than 40 other countries. No specific content knowledge is required of the CCTDI test-takers (Facione & Facione, 2014, p.16).

The mindset attributes and dispositional attitudes expected of good critical thinkers constitute the constructs measurable by scales through the CCTDI. They are seven and are universally identified as truth seeking, open-mindedness, inquisitiveness, analyticity, systematicity, confidence in reasoning, and maturity of judgment. Each of these scales comprises nine to 12 items amounting to an overall total of 75 Likert scale items presented in a six point continuum from A=strongly agree to F=strongly disagree. Through the CCTDI items, respondents express their values as well as their perception of and viewpoints about particular ideas. No neutral option is offered in the six possible answers. Each item stands either for or against a particular disposition with varying degrees and does not include any technical vocabulary or jargon pertaining to critical thinking. The CCTDI can be allotted up to 30 minutes. Completing it in a short time is not an indicator of poor critical thinking dispositions (Facione & Facione, 2014, p.16).

The CCTDI overall score, which is a composite of the seven dispositions weighed equally, is not an accurate indicator of the test-taker’s critical thinking mindset in that an individual exhibiting a good total might, for instance, manifest weak results in some dispositional scale measures and vice versa. For this reason, the CCTDI enables the individual and independent examination of each of the seven aforementioned dispositional constructs by yielding scale scores that allow spotting test-takers’ areas of strengths and weaknesses (Facione & Facione, 2014, p.28). Scale scores range from 10 to 60 and are qualitatively interpreted as follows: (1) strong positive, for scores in the 50 to 60 range, which indicate that “the attribute or attitude is a positive habit of mind and likely to factor into the individual’s approach to all higher order thinking … particularly when the situation is of high consequence;” (2) Positive, for scores in the 40 to 50 range, which reflect a “consistent endorsement and valuation of the attitude or attribute being measured;” (3) Inconsistent/Ambivalent, for scores in the 30 to 40 range, which indicate an “ambivalent or inconsistent endorsement of the attitude or attribute being measured;” (4) Negative, for scores in the 20 to 29 range, which reflect a “poor valuation or aversion toward the attribute being measured;” and (5) Strong negative, for scores in the 10 to 19 range, which...
indicate a “strong negativity or hostility toward the attribute being measured.” Inconsistent strengths across scales indicate “poor efforts at defining and resolving high stakes problems” (Facione & Facione, 2014, p.29).

The CCTDI is of strong content and construct validity (Facione & Facione, 2014, p.52). As to criterion validity, the instrument is able to provide predictive value and meaningful measure, which demonstrate that the learning objectives and goals are met (Facione & Facione, 2014, p.54). This tool is of strong internal reliability with a minimum Alpha of .80 for attribute measures and a minimum KR-20 of .72 for skills measures (Facione & Facione, 2014, p.55). The instrument can be administered electronically as well as in paper-and-pencil format. Since the research locale is not endowed with internet access, the paper-and-pencil test was elected in this study.

VI. Procedure

This true experimental study opted for a pretest/posttest control group design to evaluate the aforementioned hypotheses. It was conducted over two research phases, with the first held in fall 2012 and the second in spring 2013. Each phase was 13 weeks long with 36 sessions of one and a half hours scheduled for every semester. Participants were randomly assigned to a treatment group \(n=24\) and a contrast group \(n=26\) using computerized random numbers generation. In fall 2012, both groups took a typical literature course with an intensive reading agenda. Teacher-student and student-student discussions, debates, brainstorming, questioning and reading circles elicited participation in class. Literary analysis drew mainly on the narrative, socio-cultural and rhetorical aspects of the assigned works.

The narrative analysis involved students in scrutinizing the theme and sub-themes of each work and unearthing the extent to which they reflect the zeitgeist typical of the period of their production. Reflecting on characters entailed classifying them into types or categories; protagonists versus antagonists, major versus minor, round versus flat, dynamic versus static, stereotypical, foils, etc. The class practiced identifying the patterns different protagonists follow: anti-hero, tragic hero, romantic hero, modern hero, or the Hemingway Hero. Their categorization needed to be supported by solid argumentation. Foci of character analysis also included a look at the different perspectives the author chose to depict characters from: physical appearance, intellectual abilities, emotional being, social standing, ethics and moral character, etc. The analysis further encompassed a consideration of the characters’ motivation, their contribution to the themes and meanings of the work, and what the author thinks of them. Shedding light on point of view entailed specifying its type, including first person, second person, third person and the omniscient or all-knowing point of view. Participants also considered how works are plotted from the beginning, through complications and climax up to the denouement. They looked at the plot structure (dramatic or progressive, episodic, parallel, or flashback), the sub-plots, and the relationship between the plot and the theme; whether the plot in the literary piece supports the theme and sub-themes; and how the conflicts unfold and culminate (Corrigan, 1999, pp. 83-84; “How to analyse plot in literature,” 2011; “Mhs Composition Guide: Literary analysis guide,” no date; “Guide to Literary terms,” no date; Chen, no date). Analysis of the setting invited students to unveil the ‘when’ and whereabouts of the story through authorial clues. Queries pertinent to this narrative element included, among others, a thoughtful look at (1) the rationale behind an author’s selection of a particular setting; (2) the setting type: Integral or backdrop; (3) how the choice of a particular time and place reveals authorial intent; (4) how the author linguistically conveys the description of a setting; (5) what diction is employed; (6) what mood the description of the setting creates and how it affects students’ responses to the story; (7) how the setting relates to, illuminates, and reinforces thematic foci of the narrative, how it mirrors, supports, influences, or drifts away from the plot, and how it determines characterization, events, and conflicts in the narrative; (8) whether the setting stands as an incentive for characters’ decisions and actions; and (9) whether there are setting conflicts in the story that trigger conflicts among characters. Besides the broadest anatomy of literature into prose, poetry, and drama, the discussion of literary genres was conducted following the primary universal generic taxonomy suggested by the literary critic Northrop Frye (1957). This encompassed comedy, with sentimental comedy as one subgenre; tragedy, with melodrama as a subgenre; romance; and satire; in addition to autobiography, myths, lyric fragments, or tragicomedies that were suggested as genres by other literary critics (Corrigan, 1999). Some of the queries the generic analysis took care of are: What genre the work belongs to? What knowledge do you have about works within this genre? How did your knowledge of the genre help you construct meaning out of the texts? How did it affect the way you read and interpreted them? What expectations, attitudes, judgments, and assumptions you have about works within the generic framework you are confronted with? Does the work you are studying meet the codes, conventions, and ideology of the genre it belongs to or drifts away from them? (Chandler, 1997, pp.10-11).

The Socio-cultural analysis placed emphasis on the values literary works stress. Duplicating Fehlman’s (1996) approach, classes were sometimes split into small groups based on particular socio-cultural criteria, including age, gender, and marital status. They were required to critically examine how socio-cultural differences affect the lives of characters and the conflicts they undergo. Once each group came up with its own critical analysis, members of a particular team brainstormed on their findings with the whole class and answered questions, comments, or criticism stemming from their peers. The result of this activity is a synthesis of how the literary text in question addressed socio-cultural issues. Adopting another practice by Fehlman (1996) led to having students read the book through the lens of their own culture and sort out what they deemed “odd” or “funny.” After listening to their responses, the teacher-researcher explained how what might be regarded weird, awkward, or funny in one culture is common, appropriate or
obnoxious in another. The distance between students’ culture and the target one as presented in literature helped engender critical analysis.

The focal elements of rhetorical analysis entailed a look at the structural components and stylistic choices, strategies, and characteristics of the texts under study (Corrigan, 1999). In this respect, students were invited to examine (1) the writers’ choice of diction by looking at whether the vocabulary is simple or complex, common or unusual, cerebral or emotional, serious and direct or panning, decorous or straight, transparent or opaque in meaning, mainly denotive or connotative in use; (2) whether the author employs oxymoron, paradoxical words, technical terms, vernacular language, period language, or regional dialect; (3) the effects of the author’s choice of words on the overall meaning and style of the literary work; and (4) whether the author places emphasis on the sounds of words through the use of alliteration, assonance, dissonance, cacophony, euphony, pun, onomatopoeia, or any other techniques (“Elements of Literary Style,” no date; “Elements of Style: Literary Techniques,” 2014; “Literary Analysis Guide,” no date). The study of diction was followed by an analysis of the major characteristics of phrases and sentences, including their length and complexity, the degree of conventionality of word order, the use of chiasmus and its literal effect, words’ rhythmic pace and its significance to the meaning of the text, types of sentences (declarative, interrogative, exclamatory, and imperative) and authorial attitudes they convey. The structure of paragraphs and chapters came next. The class looked at their length and number, their arrangement into a cohesive whole, the prevailing paragraph types (descriptive, argumentative, narrative, and expository), and the frequency and degree of contrivance or spontaneity of dialogues and soliloquies in the text. Students also examined whether the writer resorts to aposiopesis in dialogues to communicate a particular emotion. Following were the rhetorical figures and their significance and effects in the work, including imagery, simile, metaphor, irony, allegory, allusion, cliché, conceit, epithet, euphemism, hyperbole, meiosis, litotes, metonymy, pathetic fallacy, parapsis, periphrasis, apostrophe, sarcasm, synesthesia, synecdoche, trope, zeugma, and others (“Elements of style: Literary techniques,” 2014; “Literary Analysis Guide,” no date; Silverblatt, 2001, p.133).

At the end of the first research phase, participants took the California Critical Thinking Disposition Inventory (CCTDI) and the pretest CapScore™ response forms were shipped to Insight Assessment for scoring.

In spring 2013, the second phase of the research started. The contrast group continued to take a regular literature class. The treatment group, however, took a film-based literature course and executed a comparative narrative, sociocultural, and rhetorical analysis of both media, in addition to cinematic analysis of films. The latter analytical aspect entailed a look at the powerfully expressive cinematic devices and techniques, including color, lighting, angles, distance, composition, camera movements, editing and montage, music, sound track, acting, cine-structuralism and the auteur theory. The teaching methods and strategies used in fall semester were maintained for both groups throughout the second phase of the research. Literary pieces were assigned as readings to be done at home whereas their cinematic adaptations were screened at school outside the regular class time. When spring semester wrapped up, both the contrast and the treatment groups took the California Critical Thinking Disposition Inventory (CCTDI) as a posttest and their answer sheets were sent to Insight assessment for scoring.

VII. FINDINGS

To evaluate the difference in the CCTDI overall and subscale scores between the treatment group and the contrast one before the beginning of the experimental phase, we conducted an independent t-test of the pretest scores for unequal sample sizes. Alpha was set at .05 to determine significance. Findings revealed that the difference between subjects was statistically non-significant for the CCTDI overall scores, t (47) = .54, p=.59, d=.15, 95% CI [-.11.53, 19.94]; and likewise for truth-seeking, t (47) = 1.83, p=.07, d=.52, 95% CI [-.35, 7.54]; open-mindedness, t (48) = .19, p=.85, d=.05, 95% CI [-.348, 2.89]; inquisitiveness, t (47) = -1.09, p=.28, d=.31, 95% CI [-.4.87, 1.44]; analyticity, t (45)= -.06, p=.95, d=.02, 95% CI [-.3.04, 2.85]; systematicity, t (47)= .39, p=.70, d=.11, 95% CI [-.3.43, 5.06]; confidence in reasoning, t (46)= -.86, p=.39, d=.24, 95% CI [-6.15, 2.46]; and maturity of judgment, t (48)=1.90, p=.06, d=.54, 95% CI [-.20, 7.25]. Cohen’s d values for truth-seeking (d=.52) and maturity of judgment (d=.54) suggest a moderate practical significance. For confidence in reasoning (d=.24) and inquisitiveness (d=.31), Cohen’s d values indicate a low to moderate practical significance. The CCTDI overall scores (d=.15), systematicity (d=.11), open-mindedness (d=.05), and analyticity (d=.02) all exhibited a small effect size. These statistics indicate that both groups had comparable levels of all dispositional dimensions of critical thinking before the start of the second phase of the research.

To assess pretest and posttest critical thinking dispositions of the treatment group and the contrast one, we calculated the means and standard deviations for all eight constructs imbedded in the CCTDI, including the overall scores. We then conducted a paired sample t-test within subjects of each group to find out whether film helped cultivate critical thinking dispositions of students assigned to the treatment group. As to the contrast group, the t-statistics aimed to track participants’ performance after one semester of literary studies compared with one academic year. The direction of the paired sample t-test was from posttest scores to pretest ones. Alpha was set at .05 to determine significance.

A. CCTDI Pretest versus Posttest Mean Scores for the Treatment Group

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Table I displays the statistical results of the treatment group and figure 1 presents them graphically. The CCTDI Cronbach’s alpha coefficient for the eight items of the inventory was .75 for the pretest scores, .78 for the posttest results.

Since the CCTDI overall scores should not be the basis for results interpretation, as instructed by the CCTDI User Manual (Facione & Facione, 2014, p.28), emphasis was placed on each of the seven dispositions, first separately to unearth respondents’ areas of strength and weakness, then together to come up with a composite assessment.

The treatment group exhibited an Inconsistent/Ambivalent endorsement of the truth-seeking ($M=30.75, SD=7.07$) and open-mindedness ($M=33.17, SD=5.31$) attributes in the pretest. Although the mean scores increased for truth-seeking ($M=37.88, SD=9.20$) and open-mindedness ($M=38.96, SD=5.61$) in the posttest, results still fell within the Inconsistent/Ambivalent range. T-test yielded $t(23) = 5.18, p=.00, d=.87, 95% CI [4.28, 9.97]$ and $t(23) = 5.03, p=.00, d=1.06, 95% CI [3.41, 8.17]$ for both dispositions respectively. The effect size for both truth-seeking and open-mindedness ($d=.87$) exceeded Cohen's (1988) convention for a large effect ($d=.80$). These statistics indicate that there was an important improvement in the performance of students as reflected through the significant difference within subjects in the pretest and posttest mean scores of both dispositions. However, the group as a whole upgraded to a higher score but not to a higher score range. It rather maintained an Inconsistent/Ambivalent attitude towards truth-seeking and open-mindedness over the two research phases.

In the pretest, the group fell within the Inconsistent/Ambivalent range for the maturity of judgment attribute ($M=35.83, SD=6.35$). After a semester of a film-based course, its performance upgraded to the Positive range ($M=40.50, SD=7.45$), $t(23) = 4.49, p=.00, d=67, 95% CI [2.52, 6.82]$. Cohen’s d for this analysis ($d=67$) is considered to be a medium effect size. The p-value being way lower than .05 is an indication that films significantly improved the group’s attitude towards the habit of striving to make prudent and nuanced decisions amid the complexity of situations and the myriad of possible solutions all along having the willingness to reconsider one’s thoughts and ideas if evidence is against a given belief (“Insight Assessment,” 2013).

The treatment group scored within the Positive range in the pretest in analyticity ($M=46.29, SD=5.67$), inquisitiveness ($M=46.25, SD=5.76$), confidence in reasoning ($M=44.54, SD=7.98$), and systematicity ($M=41.13, SD=7.57$). In the posttest, it maintained the same Positive endorsement of analyticity ($M=48.75, SD=6.34$), inquisitiveness ($M=48.46, SD=6.08$), confidence in reasoning ($M=46.13, SD=7.89$), and systematicity ($M=43.25, SD=7.22$). T-test yielded $t(23) = 2.75, p=.01, d=.41, 95% CI [0.61, 4.31]$; $t(23) = 2.74, p=.01, d=.37, 95% CI [0.54, 3.87]$; $t(23) = 1.60, p=.12, d=.20, 95% CI [-0.46, 3.63]$; and $t(23) = 3.74, p=.00, d=.29, 95% CI [0.95, 3.30]$ for the four dispositions respectively. Cohen’s d values for analyticity ($d=.41$) and inquisitiveness ($d=.37$) indicate a low to moderate practical significance whereas they reflect a small effect size for confidence in reasoning ($d=.20$) and systematicity ($d=.29$). These results show that film significantly boosted the group’s endorsement of the analyticity,
inquisitiveness, and systematicity attributes while the impact on confidence in reasoning was non-significant given that the p-value for this disposition (p=.12) was higher than .05, leading to the acceptance of the null hypothesis.

In a nutshell, the findings reveal that film significantly fostered students’ endorsement of the maturity of judgment attribute in that the group shifted from the Inconsistent/Ambivalent range to the Positive one. Further, film had an eminent impact on students’ truth-seeking and open-mindedness attributes in that their performance considerably improved within the Inconsistent/Ambivalent range, yet without upgrading to a higher score range. Likewise, the group maintained a Positive attitude towards analyticity, inquisitiveness and systematicity with a significant increase in scores within the same range. As to confidence in reasoning, scores fell within the Positive range in both research phases with a trivial change in the group’s attitudes.

B. CCTDI Pretest versus Posttest Mean Scores for the Contrast Group

Table II sums up the results of the contrast group and figure 2 presents them graphically. Cronbach’s alpha coefficient for internal reliability and consistency was .74 for the CCTDI pretest scores and .75 for the posttest results. These values pertain to all eight items imbedded in the inventory.

<table>
<thead>
<tr>
<th>Skill/Attribute Name</th>
<th>Pretest (n=26)</th>
<th>Posttest (n=26)</th>
<th>t(25)</th>
<th>p</th>
<th>95% CI</th>
<th>Cohen’s d</th>
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<tr>
<td>Overall</td>
<td>M=273.42, SD=26.39</td>
<td>M=299.85, SD=27.50</td>
<td>3.48</td>
<td>.00</td>
<td>[-1.91, 7.35]</td>
<td>.80</td>
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<td>Truth-seeking</td>
<td>M=27.15, SD=6.78</td>
<td>M=33.77, SD=7.47</td>
<td>3.24</td>
<td>.00</td>
<td>[1.02, 5.68]</td>
<td>.93</td>
</tr>
<tr>
<td>Open-mindedness</td>
<td>M=33.46, SD=5.84</td>
<td>M=35.35, SD=6.72</td>
<td>1.02</td>
<td>.32</td>
<td>[-1.91, 5.68]</td>
<td>.30</td>
</tr>
<tr>
<td>Inquisitiveness</td>
<td>M=47.96, SD=5.32</td>
<td>M=46.38, SD=4.67</td>
<td>3.24</td>
<td>.00</td>
<td>[1.02, 5.68]</td>
<td>.93</td>
</tr>
<tr>
<td>Analyticity</td>
<td>M=46.38, SD=4.67</td>
<td>M=49.08, SD=4.96</td>
<td>3.02</td>
<td>.00</td>
<td>[1.02, 5.68]</td>
<td>.30</td>
</tr>
<tr>
<td>Systematicity</td>
<td>M=40.31, SD=6.78</td>
<td>M=41.92, SD=6.00</td>
<td>.82</td>
<td>.00</td>
<td>[-1.91, 5.68]</td>
<td>.23</td>
</tr>
<tr>
<td>Confidence in Reasoning</td>
<td>M=46.38, SD=7.07</td>
<td>M=49.12, SD=6.53</td>
<td>1.40</td>
<td>.17</td>
<td>[-1.28, 6.74]</td>
<td>.40</td>
</tr>
<tr>
<td>Maturity of Judgment</td>
<td>M=32.31, SD=6.75</td>
<td>M=38.50, SD=6.89</td>
<td>3.30</td>
<td>.00</td>
<td>[2.32, 10.06]</td>
<td>.91</td>
</tr>
</tbody>
</table>

Figure 2. California Critical Thinking Disposition Inventory (CCTDI) Pretest versus Posttest Mean Scores for the Contrast Group (Group 2). Error bars denote one standard error around the mean.

The contrast group manifested a pretest “poor valuation or aversion” towards the truth-seeking attribute by obtaining a recommended performance assessment of Negative (M=27.15, SD=6.78) (Facione & Facione, 2014, p.29). In the posttest, however, respondents upgraded to the Inconsistent/Ambivalent range (M=33.77, SD=7.47), t (25) = 3.24, p=.00, d=.93, 95% CI [-2.40, 10.83]. Cohen’s d effect size for this disposition (d=.93) exceeded the value for strong practical significance (d=.80). Results indicate a significant improvement in students’ attitude towards truth-seeking.

Both pretest (M=33.46, SD=5.84) and posttest (M=35.35, SD=6.72) open-mindedness scores fell within the Inconsistent/Ambivalent range, t (25) = 1.02, p=.32, d=.30, 95% CI [-1.91, 5.68]. Cohen’s d effect size for this analysis (d=.30) reflects a low to moderate practical significance. The p-value, being superior to .05, suggests that lengthy exposure to literature did not affect students’ attitude towards open-mindedness. When it comes to the maturity of judgment scale, both pretest (M=32.31, SD=6.75) and posttest scores (M=38.50, SD=6.89) indicate Ambivalent or Inconsistent endorsement of the attitude, yet participants manifested a significant improvement, t (25) = 3.30, p=.00, d=.91, 95% CI [-2.32, 10.06]. Cohen’s d (d=.91) exceeded the convention for a large effect size (d=.80). In other words, while they kept a performance within the same recommended assessment level, they attained significantly higher scores. One can deduce that lengthy exposure to literary studies had improved students’ attitude towards maturity of judgment.

The contrast group showed a Positive endorsement of the remaining four dispositions in the pretest: Inquisitiveness (M=47.96, SD=5.32), analyticity (M=46.38, SD=4.67), confidence in reasoning (M=46.38, SD=7.07), and systematicity (M=40.31, SD=7.36). In the posttest, the group upgraded to a recommended performance assessment of Strong Positive in the scale of inquisitiveness (M=52.58, SD=4.21), t (25) = 3.48, p=.00, d=.96, 95% CI [1.88, 7.35]. The effect size for this scale (d=.96) exceeded Cohen’s (1988) convention for strong practical significance (d=.80). These statistics indicate that the literature course had fostered the attribute of inquisitiveness in students. For analyticity,
participants maintained a posttest performance at the Positive level (M=49.08, SD=4.96), t (25) = 2.02, p=.05, d=.56, 95% CI [-0.05, 5.44]. Cohen’s d value for this analysis (d=.56) suggests a medium effect size. Being at the cutoff value, p=.05 is interpreted as reflecting a significant improvement in students’ attitude within the same recommended performance level as the pretest. Thus, the reading-only course had boosted the analyticity attribute. As to confidence in reasoning (M=49.12, SD=6.53) and systematicity (M=41.92, SD=6.60), posttest scores were close to the pretest’s. T-test yielded t (25) = 1.40, p=.17, d=.40, 95% CI [-1.28, 6.74] for the former; t (25) = .82, p=.42, d=.23, 95% CI [-2.46, 5.69] for the latter. Cohen’s d value for confidence in reasoning (d=.40) reflects a small to medium effect size and for systematicity (d=.23) a low practical significance. These statistics indicate that there was no significant difference in students’ attitudes towards these two dispositions over the research period.

To sum up the findings, conducting literary studies for a long period had drastically improved students’ attitudes towards truth-seeking and inquisitiveness that witnessed an upgrade to higher performance levels. For the maturity of judgment and analyticity attributes, the progress proved significant, yet the group preserved the same recommended performance assessment level in the pretest and posttest. The open-mindedness, confidence in reasoning and systematicity scales manifested a non-significant difference between both research phases.

C. Comparison of the CCTDI Mean Difference Scores for the Treatment Group and the Contrast Group

Pretest and posttest mean difference scores and standard deviations for the treatment group (n=24) and the contrast group (n=26) were computed towards comparing the effect of viewing film adaptations and that of pure literature reading on students’ critical thinking dispositions. To track the difference in the significance of the progress attained by each group over both research phases, we conducted an independent t-test of the mean difference scores for unequal sample sizes between subjects of both groups. The direction of the independent sample t-test was from the results of the treatment group to those of the contrast group. An alpha of .05 was used to determine significance. Table III reports the findings and figure 3 presents them graphically. Cronbach’s alpha internal consistency coefficient was calculated for the CCTDI mean difference scores of the treatment group and the contrast one and proved to be .80 for the former, .74 for the latter. Thus, the instrument was found to be reliable. These values cover all eight items imbedded in the inventory.

<table>
<thead>
<tr>
<th>Skill/Attribute Name</th>
<th>Treatment Group (n=24)</th>
<th>Contrast Group (n=26)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Overall</td>
<td>26.00</td>
<td>27.79</td>
<td>26.42</td>
</tr>
<tr>
<td>Truth-seeking</td>
<td>7.13</td>
<td>6.74</td>
<td>6.62</td>
</tr>
<tr>
<td>Open-mindedness</td>
<td>5.79</td>
<td>5.64</td>
<td>1.88</td>
</tr>
<tr>
<td>Inquisitiveness</td>
<td>2.21</td>
<td>3.95</td>
<td>4.62</td>
</tr>
<tr>
<td>Analyticity</td>
<td>2.46</td>
<td>4.37</td>
<td>2.69</td>
</tr>
<tr>
<td>Systematicity</td>
<td>2.13</td>
<td>2.79</td>
<td>1.62</td>
</tr>
<tr>
<td>Confidence in Reasoning</td>
<td>1.58</td>
<td>4.84</td>
<td>2.73</td>
</tr>
<tr>
<td>Maturity of Judgment</td>
<td>4.67</td>
<td>5.09</td>
<td>6.19</td>
</tr>
</tbody>
</table>

![Figure 3. California Critical Thinking Disposition Inventory (CCTDI) Pretest versus Posttest Mean Difference Scores for the Treatment Group (Group 1) and the Contrast Group (Group 2). Error bars denote one standard error around the mean.](image-url)
group’s \((M=4.62, \ SD=6.77)\), \(t(48)=-1.55, \ p=.13, \ d=.44, \ 95\% \ CI \ [-5.54, 0.73]\). Cohen’s effect size for this disposition \((d=.44)\) reflects a moderate practical significance. The mean difference scores pertaining to the treatment group \((M=2.46, \ SD=4.37)\) and the contrast group \((M=2.69, \ SD=6.79)\) with regard to analyticity proved that the latter group outperformed the former in this disposition. However, the gap between them was non-significant, \(t(48)=-.14, \ p=.89, \ d=.39, \ 95\% \ CI \ [-3.51, 3.05]\). Cohen’s d value \((d=.39)\) stands for a small to medium effect size. There also was a non-significant difference between the progress achieved by the treatment group \((M=2.13, \ SD=2.79)\) and the contrast one \((M=1.62, \ SD=10.09)\) in the area of systematicity, \(t(48)=.25, \ p=.81, \ d=.07, \ 95\% \ CI \ [-3.70, 4.72]\). Statistics further revealed a non-significant gap between the improvement of the film group \((M=1.58, \ SD=4.84)\) and the reading-only group \((M=2.73, \ SD=9.93)\) as to confidence in reasoning, \(t(48)=-.53, \ p=.60, \ d=.15, \ 95\% \ CI \ [-5.57, 3.28]\). The difference between sample means for this scale was negative \((MD=-1.15)\) suggesting that the reading group, slightly and non-significantly, outperformed the viewing group. Likewise, the difference between the mean scores of the film group \((M=4.67, \ SD=5.09)\) and the reading-only group \((M=6.59, \ SD=9.58)\) for the maturity of judgment scale was negative \((MD=-1.53)\) and non-significant, \(t(48)=-.71, \ p=.48, \ d=.20, \ 95\% \ CI \ [-5.87, 2.82]\). Cohen’s d values for systematicity \((d=.07)\), confidence in reasoning \((d=.15)\) and maturity of judgment \((d=.20)\) all suggest a small effect size. These statistics stand as strong evidence in support of the null hypothesis. They indicate that viewing films cultivated students’ critical thinking dispositions in each of the CCTDI seven constructs as much as the reading of the source literature did.

VIII. DISCUSSION

This study aimed at investigating whether the amalgamation of literature and film bolsters EFL students’ critical thinking dispositions and whether the potential boost would be greater than that resulting from the mere study of literature. Findings indicated that teaching cinematic adaptations of literature hand in hand with the source texts nurtured critical thinking dispositions, thereby validating hypothesis 1 of this paper. However, the study further revealed that there were no significant differences between critical thinking dispositions of the film group and the reading-only group, thereby leading to the rejection of hypothesis 2, which predicted the treatment group to outperform the contrast one in all measured attitudes. One concludes that studying literature with or without films yielded the same level of progress in all dispositional constituents of critical thinking.

For the film group, the most flexible disposition that germinated drastically in students’ minds proved to be maturity of judgment. Conversely, the most salient improvement exhibited by the reading-only group covered the truth-seeking and inquisitiveness attributes. Film study then has the potential of invigorating cognitive maturity, prudent thinking, timely decision-making, and voluntary views amendment. This might be attributed to the medium’s “complex language systems of codes and conventions, signifiers and signified, formulae and genres which … both “cue” and “constrain” a viewer’s response” (Fehlman, 1994, p.39b). Throughout the viewing experience, students keep alert making predictions, putting them to test, and altering their expectations, processes that train them in being constantly prudent and in revising their opinions. They perpetually bring their own personal schemata—prior knowledge, experience, values, and cultural background—to the viewing process. They explore them, expand them, and most importantly, combine them with their deconstruction of film cues, codes, and conventions to construct their own personal meaning of the screened text. They later on compare their own understanding to other types of personal understandings and interpretations; looking at how it resembles or differs from them (Fehlman, 1994, p.43). One benefit of these processes is certainly the education and cultivation of mature judgment.

The pure literature course strikingly whetted students’ appetite to grasp a thorough understanding of texts and to constantly ask during bias-free questions informed by logic and reason in view of unveiling the truth. It further nudged them towards intellectual curiosity and knowledge acquisition regardless of the immediacy of its use or usefulness. These benefits might have been the result of drifting the instruction away from the traditional routine practice of lecturing that assigns to students the mere role of receiving knowledge and expects them to learn by rote. In the Algerian EFL literature classroom, students are usually denied opportunities to overtly question, evaluate or infer—putting them to test, and altering their expectations, processes that train them in being constantly prudent and in revising their opinions. The viewing experience feeds learners’ “familiar territory” for students, which encourages them to “speak” their “minds” more freely than they do when exposed merely to print literature (Brooks, 1998, p.24a). Students quite often make of films their focal discussion topic.
at home, in school buses, dining and residence halls, and even in classes. Thus, the medium trained them in lending ears and attention to others as they express their views about it and in tolerating their ideas regardless of whether or not they agree with them. Further, film viewing offers students a more direct and swift training in anticipating, inter alia, upcoming events, incentives, and outcomes informed by logic. While the reading of literature has this benefit, it is more time-consuming than film. Analyticity improves when tackling both media in that students have to keep constantly alert not only with regard to each medium separately but also when coupling them together. They, for instance, anticipate directorial choices based on authorial intent and scrutinize the degree of faithfulness of the cinematic adaptation to the source literature. Tracking the author and filmmaker’s approaches to organizing the flow of ideas, plot and subplots; to tackling themes and sub-themes; to introducing events; to building the story up to the climax and unfolding it; and to setting the mise-en-scène provides ample opportunities for students to probe into and assess the authors/filmmakers’ sense of systematicity, hence trains them to acquire this mind habit themselves. The discrepancies that might arise between the author and filmmaker’s approaches to the story in terms of organizing its components feeds students’ systematicity in that they are more challenged to orderly arrange information themselves in a disciplined manner to tackle different inputs and prompts. A work by William Faulkner, for instance, which falls within the modernist trend, employs “discontinuous fragments, “moment time,” a-chronological leaps in time, contrapuntal multiple plots, open unresolved endings” when weaving the plot and follows ““stream of consciousness”--tracing non-linear thought processes, moving by the “logic of association” or the “logic of the unconscious”; imagistic rather than logical connections” style-wise (Some Characteristics of Modernism in Literature, n.d.). If its adaptation to the cinema screen jettisons the modernist approach to elect a different order or alignment, then students have to cogitate about the way that is most disciplined and systematic to respond to prompts that address both media.

Film study seems to have cultivated students’ maturity of judgment better than literature did in that the treatment group significantly upgraded to a higher recommended performance range after exposure to print and visual texts whereas the mere study of the source literature drastically boosted this mind habit in the contrast group in the posttest yet within the same recommended performance range as the pretest.

The least flexible mind habit in the film course proved to be confidence in reasoning whereas the most resistant attitudes in the regular literature class were open-mindedness, confidence in reasoning and systematicity. These affective dispositions need a longitudinal research. A key conclusion to draw from this observation is that film succeeded in cultivating all dispositional constituents of critical thinking with the exception of confidence in reasoning whereas the mere reading of literature served as catalyst for four attitudes out of seven. That being said, film proved more fruitful in nurturing critical thinking dispositions than literature, a conclusion deemed consistent with Tanriverdi’s (2013).

IX. LIMITATIONS

We acknowledge the small population size as a limitation of this study. While we could have included level 3 students from other schools, that would have been prohibitive —8.17 USD per single-copy. We had to pay 1222.00 USD, including the preview pack and the set up individualized orientation, which is a huge amount of money, from our own pocket to enable the use of the CCTDI with such a limited sample size amid the absence of funding sources.

X. CONCLUSION AND FUTURE DIRECTIONS

This research testifies that the affective dimension of critical thinking can be successfully cultivated if students receive sound instruction and intensive practice in nurturing their mind habits. This ruins the mistaken belief that dispositions to think critically are either innate or ingrained in individuals at the earliest stages of their life learning, as early as childhood, but are not subject to development and/or change after, in adulthood. This study empirically proved that progress is not limited to young learners, but is applicable to adults too. Film is a very successful tool to teach good habits of mind if treated as a text that has its own discourse along with literature. The teaching of positive dispositions through literature is also beneficial, yet not as much as its combination with film.

Since this research belongs to a broader study part of which already looked at the effect of film and literature instruction on honing EFL students’ cognitive skills (Djamàa, Unpublished) and given that each cognitive skill is closely tied to an affective disposition, future research should delve into unveiling the correlation between both dimensions within the context of adopting film adaptations of literature in the EFL classroom.

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REFERENCES

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