

Mise en œuvre de la lecture interactive auprès d'une élève ayant des incapacités intellectuelles profondes : interaction personne/milieu

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Résumé

L'article s'inscrit dans une perspective d'interaction entre la personne et le milieu. Ici, la personne a des incapacités intellectuelles profondes et elle est scolarisée dans une classe spéciale où son enseignante met en œuvre de la lecture interactive. Nous proposons d'analyser cette mise en œuvre sous l'angle de deux modèles : didactique d'Irwin (2007) et psychopédagogique de Fougereyrollas et ses collaborateurs (1998). Il sera question de l'interaction entre l'élève, un contexte, la classe spéciale, la lecture interactive et le développement des processus liés à la lecture (Irwin, 2007). Il s'agit d'une recherche collaborative. Les résultats issus de cette recherche montre que la personne ayant des incapacités intellectuelles profondes peut développer ses processus impliqués dans l'acte de lire et qu'il est possible d'enseigner avec la littérature de jeunesse à cette clientèle.

Abstract

The article is part of a person and environment interaction perspective. Here, the person has profound intellectual disabilities and she is educated in a special class where her teacher implements interactive reading. We propose to analyze this implementation from the angle of two models: didactic from Irwin (2007) and psychopedagogical from Fougereyrollas and his collaborators (1998). It will discuss student interaction, context, special class, interactive reading and the development of reading processes (Irwin, 2007). The results show that a child with an intellectual disability can develop his or her reading processes and that it is possible to use children's literature with these types of students.

Mots-clés

incapacités intellectuelles, déficience intellectuelle, littérature -jeunesse, programme de formation spécialisé, lecture interactive

Keywords

Intellectual disability, picture book, children's literature, special education, interactive reading

Introduction

Au Québec, la plupart des élèves ayant des incapacités intellectuelles profondes (nommé IIP pour alléger le texte) sont scolarisés dans des classes spéciales au sein d'écoles régulières ou spéciales (Ministère de l'Éducation, des Loisirs et du Sport [MELS], 2014). Plus précisément, en 2017-2018, un nombre total de 2 470 élèves ayant

des IIP étaient présents dans le système scolaire québécois (Ministère de l'Éducation, de l'Enseignement Supérieur et de la Recherche [MEESR], 2019). Parmi ces élèves, 78,3 % sont scolarisés dans une école spéciale et 18,9 % d'entre eux sont intégrés dans une école régulière, mais dans une classe spéciale. Seulement 1,4 % de ces élèves sont scolarisés en classe ordinaire (MEESR, 2019).

Les élèves ayant des incapacités intellectuelles profondes et la lecture

Les élèves ayant des IIP manifestent une déficience au niveau du développement cognitif. Dans le cadre scolaire, le ministère de l'Éducation octroie des codes administratifs pour les élèves handicapés ou en difficulté d'apprentissage ou d'adaptation (HDAA). Dans le cas de ces élèves, parmi l'ensemble des difficultés possibles, le langage (qu'il soit oral ou écrit) constitue inévitablement un défi (Beaulieu, 2013; MELS, 2007). Les situations de difficulté ciblées dans cet article sont précisément en lien avec le développement des compétences en littératie, inséparablement lié aux compétences langagières. En effet, tous les processus (Irwin, 2007) impliqués dans l'acte de lire (microprocessus, processus d'intégration, processus d'élaboration, macroprocessus et processus métacognitifs) sont très probablement touchés et limités chez cet élève (Beaulieu, 2013). D'ailleurs, l'élève qui a des IIP se retrouve en situation de difficulté dès les premiers apprentissages en lien avec la littératie, puisque par définition, il a un retard global du développement et que l'âge mental du lecteur et son développement cognitif sont des déterminants pour l'entrée dans l'écrit (Beaulieu et Langevin, 2014). Ainsi, le développement de sa conscience phonologique et la découverte du principe alphabétique est retardé par rapport aux pairs du même âge (Chapelle, 1998 ; Sermier-Dessmontet et Martinet, 2016). Or, la conscience phonologique est jugée comme un précurseur au développement des habiletés en lecture (National Institute for Literacy, 2008). Également, pour Foulin et Pacton (2006), apprendre à reconnaître les lettres faciliterait grandement l'apprentissage de la lecture (microprocessus). Comme la langue est complexe, l'élève peut éprouver des difficultés à apprendre les correspondances entre les graphèmes et les phonèmes de la langue. Finalement, pour clore le profil d'apprenant de la lecture de l'élève ayant des IIP, une pensée préopératoire est peut être présente et entraîne une pensée égocentrique, des difficultés potentielles à se mettre à la place d'un personnage dans une histoire par exemple ou de répondre à une élaboration nécessitant de dépasser le texte (Beaulieu et Langevin, 2014).

En résumé, il n'est plus à démontrer que l'apprentissage de la lecture par l'élève ayant des IIP n'est pas une tâche facile (Beaulieu et Langevin, 2014). Par ailleurs, dans une perspective d'interaction entre l'élève et son milieu (Fougeyrollas, Cloutier, Bergeron, Côté et St-Michel, 1998), la situation de handicap étant la résultante de l'interaction entre la personne et son milieu, il importe d'analyser le milieu sous l'angle des traces écrites présentes en classe et des situations didactiques dans laquelle se trouve l'élève ayant des IIP, afin d'avoir un portrait de la problématique ciblée.

Les traces écrites dans les classes des élèves ayant des incapacités intellectuelles profondes

Dans les faits, les traces écrites (livres, affiches, mots, etc.) seraient très peu présentes dans les classes spéciales accueillant ces élèves, pour soutenir leurs besoins de communication (Wehmeyer, 2006). En ce sens, plusieurs moyens sont mis en place pour pallier la communication verbale, parfois difficiles, de ces élèves. Par exemple,

les pictogrammes sont affichés sur les objets, en remplacement des mots étiquettes généralement affichés sur les objets dans les classes ordinaires. Des procédures sont présentées aux élèves par une série de pictogrammes, des cartes conceptuelles contenant des photos ou des images sont réalisées et affichées à la vue des élèves, etc. Toutefois, les traces écrites, telles que les livres de littérature de jeunesse, sont très peu présentes dans ces classes spéciales comparativement aux classes ordinaires (Wehmeyer, 2006). Aussi, toutes pratiques pédagogiques visant le développement des compétences en lecture, autres que la reconnaissance de mots isolées, sont très peu présentes auprès des élèves ayant des IIP (Browder, Wakeman, Spooner, Ahlgrim-Delzell et Algozzine, 2006). À ce sujet, Hessels-Schaltatter (2010) est de l'avis que les croyances persistantes du personnel enseignant voulant que les élèves ayant des IIP ne puissent pas accéder à la communication écrite, sont la cause de la quasi-absence du livre dans ces classes.

La littérature-jeunesse au service des élèves ayant des incapacités intellectuelles profondes

Néanmoins, Hessels-Schaltatter (2010) et Sermier-Dessmontet et Martinet (2016) nuancent que cette croyance des enseignantes n'a jamais été démontrée et validée par des chercheurs et que le potentiel des élèves ayant des IIP serait grandement sous-estimé. Certains auteurs avancent l'idée que les élèves ayant des IIP devraient être exposés à des situations de lecture complexes, telles que la lecture de livres de littérature de jeunesse (Wehmeyer, 2006) et qu'ils peuvent acquérir des habiletés liées aux microprocessus (Allor, Mathes, Robers, Cheatham et Otaiba, 2014; Bradford, Shippen, Alberto, Houchins et Flores, 2006; Frederick, Davis, Alberto et Waugh, 2013). Cependant, plusieurs auteurs ont avancé qu'il n'était pas souhaitable d'attendre que les lecteurs ayant des incapacités intellectuelles soient compétents pour décoder et mettre en œuvre les microprocessus, ce qui peut prendre trois années, avant de leur enseigner des habiletés plus complexes de compréhension (Chatenoud, Turcotte, Adama et Godbout, 2017; Snowling, Nash et Henderson, 2008; Waugh, Alberto et Frederick, 2011; Browder et al., 2006). En effet, il serait souhaitable de faire une lecture soutenue et répétée d'un même texte auprès de ces élèves, afin d'augmenter les stratégies de compréhension telles que les processus d'intégration, les processus d'élaboration et les macroprocessus (Schnorr, 2011).

En lien avec ce fait, une littérature scientifique émergente pointe les tâches complexes, tel que l'enseignement avec la littérature de jeunesse, comme une alternative gagnante qu'il faut offrir comme opportunité à ces élèves, afin de diversifier les supports à la communication et à la compréhension et ainsi proposer divers choix en situation d'apprentissage, de loisirs ou de communication (Gremaud et Tessari Veyre, 2017). D'autres auteurs mettent de l'avant la pertinence de la lecture interactive afin de soutenir les apprentissages, mais également de leur donner du sens, d'enrichir le vocabulaire et de développer les compétences à comprendre le texte (Sermier-Dessmontet et Martinet, 2016).

Ainsi, à l'instar de chercheurs tels que Sermier-Dessmontet et Martinet (2016) et Chatenoud, Turcotte, Adama et Godbout (2017) et en harmonie avec les programmes de formations adaptés québécois, nous souhaitons analyser la mise en œuvre de la lecture interactive auprès d'une élève ayant des IIP, dans une perspective d'interaction entre la personne et son milieu. Nous voulons répondre à la question : Comment peut-on décrire l'interaction entre l'enseignement avec la littérature de jeunesse et la

personne ayant des IIP (contexte de la classe, livres choisis, processus/structures développés) ? Il s'agit d'analyser cette mise en œuvre sous l'angle combiné du modèle didactique d'Irwin (2007) et du modèle psychopédagogique de Fougeyrollas et ses collaborateurs (2010). Ces deux modèles sont détaillés dans le cadre conceptuel de cet article.

Cadre conceptuel

Nous proposons ici de tisser des liens entre le modèle didactique de Irwin (2007) et le modèle davantage social de Fougeyrollas (2010). Afin, de broser un portrait tant didactique que social du développement des compétences en lecture d'élèves ayant des IIP. Ensuite, il sera question de l'enseignement avec la littérature de jeunesse.

Le pont entre un modèle didactique et un modèle psychopédagogique

La lecture est définie par Giasson (2011) comme « un processus plus cognitif que visuel, un processus plus actif que passif, comme un processus de construction de sens et de communication » (p. 6). Autrement dit, pour lire, le lecteur doit être actif, il doit vérifier constamment ses hypothèses et prendre en compte ses connaissances syntaxiques, grammaticales et générales (Legendre, 2005). Le lecteur est au cœur d'un processus de construction de sens (Brodeur et al., 2003; Burns et al., 2003; Byrne, 1992; Marin et Legros, 2008; Montésinos-Gelet et Besse, 2003). Il fait le pont entre ses connaissances et le texte.

Selon le modèle interactif de la lecture proposé par Irwin (2007) et traduit par Giasson (2011), la lecture est un processus interactif qui met en relation le lecteur (structures cognitives, structures affectives, microprocessus, processus d'intégration, macroprocessus, processus métacognitifs et processus d'élaboration), le texte (types de textes), la structure du texte (et le contenu) et le contexte (contexte psychologique, contexte social et contexte physique) dans lequel il lit (Giasson, 2011; Irwin, 2007). L'aspect interactif du processus qu'est la lecture est très perceptible dans la finalité première de la lecture : la compréhension. Comprendre un texte, c'est combiner des informations qui peuvent être explicites dans le texte ou implicites à ses propres connaissances (ses structures), et se faire une représentation mentale dans un contexte donné (Giasson, 2011).

Nous proposons ici de faire un lien entre un modèle didactique proposé par Irwin (2007) et un modèle davantage psychopédagogique proposé par Fougeyrollas et ses collaborateurs (2010). Ces deux modèles sont en fait très semblables, mais leur provenance, de deux champs différents, offrent une richesse intéressante pour la présente recherche et permet d'avoir une approche plus globale de la situation d'apprentissage. D'une part, pour le cadre conceptuel d'Irwin (2007), le lecteur du modèle didactique est présent avec ses structures cognitives (ses connaissances sur la langue, sur les phonèmes, sur les graphèmes, etc), structures affectives (ses connaissances sur le sujet du texte, sur le monde, etc), microprocessus (ils regroupent l'identification des mots (décodage et reconnaissance globale), la lecture par groupe de mots et la microsélection (identification des informations importantes dans les phrases), processus d'intégration (inférences à résoudre), macroprocessus (compréhension générale du texte), processus métacognitifs (gestion de sa compréhension, de ses stratégies, etc.) et processus d'élaboration (dépassement du texte, lien avec d'autres textes, poursuite d'une tâche connexe avec le texte). Le modèle didactique permet d'avoir cette vision des compétences du lecteur. D'autre part, le modèle

psychopédagogique (Fougeyrollas et al., 2010) propose d'analyser des caractéristiques personnelles de la personne, avec ses facteurs de protection et ses facteurs de risques. Ensuite, ce modèle prescrit d'analyser le milieu, sous l'angle des obstacles et des facilitateurs présents. En résumé, dans le cas précis de la présente étude, il s'agit de faire l'analyse de l'interaction entre la personne qui a des incapacités intellectuelles et la situation de lecture sous l'angle des obstacles, par exemple la perception de la part du milieu que les personnes ayant des incapacités intellectuelles ne peuvent pas accéder à l'écrit et des facilitateurs, par exemple, le soutien des techniciennes en éducation spécialisées pour s'occuper des autres élèves. Enfin, lors de l'interaction entre tous ces éléments, dans le cas qui nous concerne, ou, dans le cas d'une situation de participation sociale, l'élève comprendra le texte, il pourra répondre aux questions, ou dans le cas d'une situation de handicap, l'élève ne comprendra pas le texte, ne pourra pas répondre aux questions.

La littérature de jeunesse et la lecture interactive (texte)

Parmi l'ensemble des pratiques d'enseignement en lecture possibles à mettre en oeuvre, celles qui sont spécifiquement ciblées ici sont celles directement en lien avec la littérature de jeunesse. En effet, la lecture de livre de littérature de jeunesse et de texte courant par l'enseignant est pointée par plusieurs comme une stratégie judicieuse pour développer le langage et favoriser le développement des compétences en littératie chez l'élève ayant des IIP (Allor et al., 2009; Bradford et al., 2006; Browder et al., 2006; Cavallini et al., 2010; Cohen et al., 2008). Turcotte, Giguère et Godbout (2015) amènent la nécessité de ne pas seulement savoir faire la correspondance entre les graphèmes et les phonèmes (mettre en œuvre des microprocessus), mais également être mis en contact avec un texte, une structure narrative, afin de mettre en œuvre des stratégies de compréhension. Dans cette foulée, Sermier-Dessmontet et Martinet (2016) propose un enseignement explicite systématique très structuré et encadré par l'enseignante. Selon ces auteures, il importe d'y aller de modélisation et de guidage, d'étayage.

À la suite d'une recension des écrits, aucune définition théorique de la lecture interactive n'a été répertoriée. Par ailleurs, elle s'inscrit dans la vision d'enseignement explicite et structurée proposée par Sermier-Dessmontet et Martinet (2016) et d'autres auteurs (Allor et al., 2009; Bradford et al., 2006; Browder et al., 2006; Cavallini et al., 2010; Cohen et al., 2008). Nous proposons donc d'en esquisser une définition pour mieux saisir le point de vue choisi dans cette recherche. La lecture interactive est une lecture à haute voix par l'enseignant accompagnée de questions pour soutenir la compréhension, la réaction, l'interprétation et l'appréciation des élèves. La lecture interactive ne se limite pas, pour l'enseignant, à lire une histoire à haute voix, mais plutôt d'orienter la lecture et les réflexions avec les élèves à partir d'une structure narrative structurée autour de plusieurs pistes d'intervention. Ces pistes, comme d'autres types de lecture, peuvent être réalisées avant (mis en situation, thème), pendant (compréhension et réflexion autour des thèmes ciblées) et après (intégration avec des situations vécues, liens avec d'autres histoires, réinvestissement dans d'autres activités) la lecture de l'histoire (Morin et al., 2007).

Ainsi, l'objet du présent article est de présenter l'interaction entre le lecteur, la personne qui a des IIP, son milieu la classe spéciale et le texte, un livre de littérature de jeunesse, et ce, dans le cadre de lecture interactive.

Méthodologie

Quant aux choix méthodologiques, la vision choisie par les auteures tendait à démontrer une certaine posture épistémologique d'ouverture face aux enseignants, voire une reconnaissance et une valorisation de leurs pratiques. Ce projet de recherche a été entièrement co-construit avec le milieu. Ainsi, les choix méthodologiques reflètent donc l'importance accordée au milieu de pratique dans ce projet ; il s'agit d'une recherche collaborative. La recherche collaborative exige du chercheur et du milieu de pratique de s'entendre sur un « [...] objet d'investigation conjoint au carrefour des préoccupations de l'ensemble des participants » (Desgagné, Bednarz, Lebus, Poirier et Couture, 2001, p. 52). Pour ce faire, chercheur et enseignants ciblent un thème principal, puis un objet de formation aux fins des praticiens et un objet de recherche aux fins de la recherche, c'est ce qui a été fait ici (Desgagné et al., 2001). Les activités réflexives documentent les nouvelles connaissances issues d'actions et de réflexion ; les résultats répondent tant aux visées du milieu de pratique que celui de la recherche.

L'objectif spécifique de ce projet est d'analyser l'interaction entre l'enseignement avec la littérature de jeunesse et la personne ayant des IIP, dans une perspective d'interaction entre la personne et son milieu (contexte de la classe, livres de littérature de jeunesse et processus/structures mises en œuvre par l'élève). Il s'agit d'analyser cette mise en œuvre sous l'angle combiné de structures d'analyse issues du modèle didactique d'Irwin (2007) et du modèle de processus de production de handicap de Fougereyrollas et ses collaborateurs (2010).

La participante à ce projet de recherche

Parmi l'ensemble des enseignants intéressés et qui ont débuté la collaboration, une seule enseignante a collaboré à ce projet de recherche à plus long terme. Il s'agit d'un échantillonnage opportuniste, l'enseignante ayant entendu parlé des intérêts de recherche de la chercheuse. Cette participante (nom fictif Frédérique) est une enseignante qui compte plus de 25 années d'expérience à titre d'enseignante en adaptation scolaire auprès d'élèves ayant des IIP. Depuis 28 ans, elle enseigne dans une école spéciale qui accueille des élèves ayant 4 à 21 ans ayant des déficiences légères, moyennes, sévères, à profonde et offre des services spécialisés à des élèves âgés de 4 à 21 ans présentant une déficience intellectuelle moyenne à sévère et ayant des limitations qui nécessitent un niveau d'encadrement élevé (académique, social et physique).

Le contexte d'enseignement réfère à une élève (nom fictif Sara) de quinze ans ayant une IIP qui fréquente une classe composée de trois autres élèves. L'élève ciblée ici présente plusieurs problèmes de santé qui l'empêchent de se déplacer librement. Elle se déplace dans un fauteuil roulant. De plus, sa condition de santé ne lui permet pas de regarder des écrans ou de rester concentrée sur une même tâche longtemps. Cette élève a été scolarisée depuis sept ans dans cette école et fréquente le même groupe-classe depuis trois ans. Elle a été ciblée pour sa capacité manifeste à regarder ou s'intéresser à un livre de littérature de jeunesse, contrairement aux autres élèves ayant des problèmes graves de vision. Elle possède des habiletés limitées liées au langage oral. De plus, elle utilise également une méthode de communication alternative ; elle pointe des pictogrammes, de manière autonome, pour nommer ce qu'elle veut communiquer.

Déroulement de la recherche

Un livre de littérature de jeunesse accompagné d'une planification de lecture interactive ont été remis à chaque mois à l'enseignante durant deux années scolaires.

Le choix des livres et la planification ont été faits en collaboration avec l'enseignante. Ainsi, dans ces planifications se retrouvaient des idées de questions et d'interactions avec l'élève. L'enseignante a travaillé avec l'élève à raison de trois fois par semaine avec un même livre. Chacun des livres était travaillé en moyenne deux semaines par mois. L'élève se faisait donc lire un même livre à six reprises dans un mois. Chaque séance durait trente minutes au maximum, selon l'état de santé de l'élève. À chaque mois, la chercheuse et l'enseignante se rencontraient, afin de discuter du livre (sélection des ouvrages), des pratiques de lecture interactive (questions posées, planification, etc.) et des compétences à lire de l'élève (structures et processus).

L'instrumentation et l'analyse des données

Pour permettre de collecter des données sur l'accompagnement d'implantation de nouvelles pratiques d'enseignement avec la littérature de jeunesse auprès d'un élève ayant des IIP, deux instruments ont été mis en place. D'une part, des résumés des échanges, réalisés sous forme d'entretiens semi-structurés, ont été transcrits. Les entretiens visaient à prendre des données sur le contexte de la classe, sur les livres utilisés, les perceptions de l'enseignante et sur le développement des processus et structures impliqués dans l'acte de lire. D'autre part, l'enseignante a rempli un journal de bord à la suite de son enseignement intégrant la littérature de jeunesse. Le journal de bord était divisé en trois parties : contexte de la classe (gestion du temps, de l'espace, des autres élèves, etc.), livres utilisés (pertinence du choix des livres, pertinence des questions, etc.) et développement des processus et structures impliqués. Ces modalités de collecte de données ont permis de faire une analyse qualitative des résultats. Nous avons ainsi pu faire une analyse thématique et ressortir le portrait du contexte de la salle de classe, des livres choisis et des processus/structures développés dans le cadre de cette recherche. Le cadre conceptuel ci-haut a servi de grille d'analyse et a permis de constituer les résultats.

Dans le cadre de cet article, l'ensemble des données présentées est consacré entièrement autour d'un seul livre de littérature de jeunesse, soit « Le lion et l'oiseau » de Marianne Dubuc.^{1,2} Nous avons choisi d'utiliser le présent livre de littérature de jeunesse, puisqu'il regroupait plusieurs caractéristiques dégagées par notre recherche comme facilitateur à la lecture auprès des élèves ayant des IIP (Beaulieu et al., 2019). De ces caractéristiques, nommons : des images toujours en lien avec le texte, des images en soutien au texte qui permettent de résoudre certaines inférences, du vocabulaire simple et en lien avec la vie quotidienne de l'élève, du vocabulaire en lien avec le vocabulaire réceptif de l'élève (des mots qu'elle comprend) et un livre suffisamment court pour être lu en vingt minutes. Aussi, ce livre était suffisamment riche pour questionner l'élève sur des éléments implicites dans le texte, mais aussi des éléments qui n'étaient pas explicites, mais où les images donnaient des réponses. Nous avons toutefois utilisé, dans le cadre de cette recherche collaborative, de nombreux autres ouvrages. Nous avons choisi, afin de favoriser la lecture de cet article, de présenter les résultats autour d'un même ouvrage de littérature de jeunesse. Nous présentons ici les résultats avec l'ensemble des livres de littérature de jeunesse utilisés, mais nous utilisons seulement ce livre comme exemple.

¹ La référence de ce livre est : Dubuc, M. (2013). *Le lion et l'oiseau*. Montréal : Les Éditions de la Pastèque.

² Les droits d'auteur ont été respectés pour cet article. L'auteure a d'ailleurs donné son autorisation pour l'utilisation de son livre pour les fins de cet article précité.

Résultats

Afin de décrire l'interaction entre la lectrice ayant des IIP et le livre « le Lion et l'oiseau », nous présentons les résultats dans une perspective d'interaction entre la personne et le milieu, collé sur les modèles interactifs de la lecture (Irwin, 2007) et le modèle de processus de production de handicap de Fougeryrollas et ses collaborateurs (2010). En effet, c'est l'interaction entre Sara, le texte (sous l'angle du dispositif qu'est la lecture interactive) et le contexte qui fait en sorte qu'elle peut participer, avoir accès au sens ou non. Subséquemment, les sections suivantes sont décrites et analysées : 1) le portrait du contexte de la salle, 2) le portrait du livre choisi (sous l'angle de la lecture interactive), et finalement 3) le portrait du développement des compétences à lire de Sara en lien avec les processus et les structures proposées par Irwin (2007). Cette dernière section détaille cinq compétences et est imbriquée avec les différentes pratiques d'enseignement et les situations didactiques qui ont été offertes à l'élève.

Le portrait du contexte de la salle

Ce portrait du contexte de la salle de classe de Frédérique où Sara est présente, comprend la notion de « contexte » selon Irwin (2007) et la notion de « milieu » selon Fougeryrollas et ses collaborateurs (1998).

La classe de Frédérique est divisée en plusieurs aires de travail dont une aire collective avec des places assises pour tous, une aire de stimulation sur un tapis de gymnastique notamment. Dans ces deux premières aires, il n'y a pas de traces en lien avec l'écrit (livres, mots, affiches pour les élèves, etc.). Une toilette est adjacente à la classe et, sur la porte, des pictogrammes (images seulement) sont collés. Il s'agit du plan de la journée de chacun des élèves. D'autre part, une bibliothèque est placée dans le fond de la classe. La bibliothèque n'est pas à la disposition des élèves. L'enseignante nomme que les livres seraient détruits si elle permettait à chacun de les consulter comme bon leur semble. Les élèves n'ont donc pas accès aux livres lors des temps libres ou les moments où les intervenantes n'ont pas de temps pour s'occuper d'eux dans un ratio d'un intervenant pour un élève. Finalement, une petite salle adjacente à la classe est peinte en noire. Cette pièce répond aux besoins des élèves lorsque l'enseignante a besoin d'avoir toute leur concentration, étant donné que peu de stimulation est réalisée par le milieu (couleur, affiches, textures, etc.) ce qui permet, hypothétiquement, à l'élève de mieux se concentrer sur la tâche demandée. C'est dans cette salle que l'enseignante fera la lecture à l'élève au cours de cette recherche.

Portrait du texte (le choix des livres)

Dans un autre ordre d'idées, la place des livres dans l'enseignement de Frédérique était presque inexistante il y a deux ans. La bibliothèque était composée de livres de type « Recherche et trouve » et de livres cartonnés de peu de pages. Frédérique n'avait pas l'impression que Sara pouvait entrer dans l'écrit, mais reconnaissait le grand intérêt de l'élève pour le livre. Ainsi, la chercheuse a été amenée à sélectionner du matériel de littérature de jeunesse.

Comme aucun critère de sélection des livres n'existe pour les élèves qui ont des incapacités intellectuelles profondes, nous avons créé nos propres critères de sélection des ouvrages (Beaulieu et al., 2019). Les critères de sélection ont été établis sur une année, il s'agit d'un travail itératif et d'essais-erreurs. Plusieurs livres de littérature de jeunesse ont été mis à l'essai et des critères s'en sont dégagées. Pour les critères reliés à la forme du texte, des pages surchargées d'informations visuelles ont été rejetées. Elle

ne pouvait pas suivre l'histoire, puisqu'il y avait trop de détails. Sara n'arrivait pas à se concentrer sur les éléments importants. En ce sens, plusieurs ouvrages variés ont été ciblés afin de trouver des situations didactiques qui convenaient aux caractéristiques de Sara et allait lui permettre un développement des compétences en lecture. Nous avons proposé des textes de plusieurs longueurs différentes, pour cibler des leçons de vingt minutes. En lien avec des critères reliés au contenu du texte, d'autres livres ont été rejetés, puisque les thèmes étaient trop loin de la vie de l'élève. En effet, puisque Sara est en fauteuil roulant, qu'elle n'a jamais pris l'autobus et qu'elle est gavée, un livre qui se déroule dans un autobus public ou qui traite d'alimentation est peu approprié. Il nous fallait trouver du matériel pertinent et dont elle possédait un minimum de connaissances pour accéder au sens (Irwin, 2007), sans toutefois lui proposer des livres infantilisants qui ne permettent pas de la questionner et de développer ses compétences de compréhension.

Ainsi, de fil en aiguille, la complexité des livres de jeunesse a été ciblée adéquatement selon les caractéristiques de Sara et il en va de même pour ses intérêts de lecture. Ces travaux itératifs ont permis de dégager des critères de sélection des livres de littérature de jeunesse pour les élèves ayant des incapacités intellectuelles profondes (Beaulieu et Moreau, 2018). Ces critères ont permis de formaliser la procédure de choix des ouvrages pour l'élève. Ce faisant, le choix judicieux des œuvres autant pour permettre à l'élève d'entrer dans le contexte de lecture (Irwin, 2007) que de créer une situation de réussite en respectant les facilitateurs et en éliminant les obstacles possibles (Fougeyrollas et al., 2010) a permis de mettre en place des situations d'apprentissage authentiques et efficaces. Le choix du livre « Le lion et l'oiseau » respecte en effet l'ensemble des éléments explicités dans cette section autant pour Sara, avec ses caractéristiques et ses intérêts, que pour les objectifs d'apprentissage en lecture visés.

Portrait du développement des compétences à lire de Sara en lien avec les processus

Préparation à la lecture de l'élève. Ainsi, pendant deux années, à raison de trois fois par semaine, son enseignante a débuté de la lecture de littérature de jeunesse interactive. En début de recherche, Sara manipulait le livre et ne feuilletait pas, elle ne semblait pas trop savoir quoi faire avec l'objet. Rapidement, après un mois d'utilisation, l'élève passait plus de temps à contempler la page couverture. Elle était également capable de décrire sommairement cette page couverture grâce aux pictogrammes. L'enseignante a été amenée à demander à l'élève de cibler son intention. Par des questions comme « De quoi va parler cette histoire? De qui? », l'élève pointe sur l'image les différents personnages. En effet, elle regardait la page couverture, mais ne faisait pas du tout le lien avec une histoire.

Les processus de lecture : microprocessus, processus d'intégration, processus d'élaboration et macroprocessus. D'abord, force est de constater que Sara n'utilise pas de microprocessus lors de la lecture. De plus, l'enseignante ne voulait pas aller dans ce sens ; elle n'y voyait pas de pertinence pour le moment. Dans un esprit de collaboration, nous n'avons pas approfondi cet aspect des compétences.

Par ailleurs, Sara utilise les illustrations pour mettre en œuvre ses processus d'intégration, inférer, et répondre à des questions sur le texte. Par exemple, dans cette situation-ci, la réponse de Sara est seulement basée sur l'illustration :



Figure 1.

Notre travail de chercheuses a été de pister Frédérique sur les questions à poser à Sara, afin qu'elle puisse accompagner le développement des compétences en lecture, ici des processus d'intégration. Par exemple, au début du travail collaboratif, l'enseignante devait recevoir un plan de leçon détaillé où, par exemple, la chercheuse proposait à l'enseignante de demander à l'élève « De qui le narrateur traite? ». L'élève pouvait ainsi pointer l'oiseau. L'enseignante était amenée à demander « Qu'est-ce qui se passe avec l'oiseau? ». L'élève devait pointer son pictogramme lié à la tristesse, puisqu'elle n'en avait pas en lien avec la blessure. Ensuite, l'enseignante était amenée à demander « Qu'est-ce qui arrive si toi, tu tombes? ». Ici, il s'agissait d'une question d'élaboration, l'enseignante veut que l'élève pousse sa compréhension plus loin et dépasse le récit. Après cinq mois de lecture interactive, Sara se servait maintenant des illustrations de la page couverture pour décrire le livre. Elle pouvait transférer et feuilleter les images pour répondre aux questions d'intégration et d'élaboration de Frédérique.

Puis, un problème s'est dégagé ; l'élève s'appropriait les émotions négatives de tous. Elle ne pouvait pas vivre avec la tristesse de l'enseignante et des personnages des livres présentés. Ce qui apparaît auparavant comme une situation d'apprentissage favorable s'est rapidement détériorée en situation de difficulté. Des choix ont été faits de ne pas changer complètement la situation d'apprentissage étant donné que l'élève ne peut, au quotidien, éviter ces émotions négatives ; elle y est confrontée et elle doit être outillée pour favoriser une participation sociale optimale. En ce sens, nous avons donc entrepris de travailler les émotions avec l'élève ce qui est directement en lien avec l'apprentissage de la participation sociale recommandé par le programme de formation CAPS (MELS, 2011). Nous lui avons proposé plusieurs livres sur la gestion des émotions. En début de recherche, l'élève évitait la tâche lorsque le personnage avait une émotion négative. Par ailleurs, elle reconnaît bien les émotions sur pictogrammes (processus d'intégration). Après deux surlectures, l'élève ne réagit plus aux émotions du personnage principal et peut même faire le transfert entre le non verbal de l'illustration et celui de l'enseignante (processus d'élaboration).

Varier les types de questions et les types de réponses pour le développement des processus d'intégration, d'élaboration et des macroprocessus. En début de recherche, nous missions beaucoup sur les mots dits par l'élève. Nous étions donc confinées à des questions fermées ou des questions de reconnaissance des images. Ainsi, en regardant

l'image du lion et de l'oiseau qui regardent le ciel, il était possible ici de demander à l'élève « Par où sont partis les oiseaux? ». L'élève pouvait pointer le coin gauche puisque les oiseaux se sont envolés de ce côté. Il était également possible de demander à l'élève « Qu'est-il arrivé aux oiseaux? ». Elle répondait « parti » ; il s'agit d'un mot oral qu'elle connaissait et, à ce moment, elle se dégageait de l'utilisation de ses pictogrammes.



Figure 2.

Par ailleurs, après un an de travail, nous avons inclus de nouveaux pictogrammes et un tableau de communication. Cela a grandement enrichi la qualité et la variété des réponses de l'élève. Il était possible de poser la question « Que ressent l'oiseau lorsqu'il voit ses amis partir? ». L'élève pouvait pointer le pictogramme de tristesse, elle nous montrait la mise en œuvre d'un processus d'intégration.

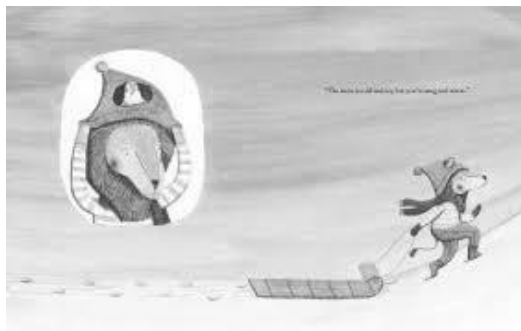


Figure 3.

L'apport du tableau de communication a été primordial pour faire progresser l'élève. Elle démontrait ainsi une compréhension d'une action importante dans l'histoire. Ainsi, l'élève, avec ses pictogrammes, peut nous tracer la séquence du texte, pouvant démontrer la compréhension de l'idée général du texte, c'est-à-dire des macroprocessus.

Établir le lien entre le texte et ses structures

Notre recherche a également permis à Sara de faire des liens entre le livre et ce qu'elle vit. Ainsi, dans cette page, le lion et l'oiseau font des tâches quotidiennes ensemble. Cette page a permis à la chercheuse de pousser l'enseignante à questionner

Sara sur ses tâches quotidiennes. Ensuite, il a été possible d'inclure de nouveaux pictogrammes liés au quotidien et de faire le lien entre son vécu et le livre.

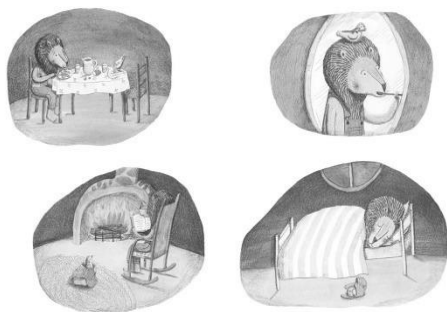


Figure 4.

Inévitablement, ces situations d'apprentissage ont un effet direct sur l'autonomie et la participation sociale de l'élève tel que prescrit par le programme de formation CAPS (MELS, 2011). La lecture interactive a permis à l'enseignante de connaître davantage l'étendue des connaissances de l'élève. Frédérique a été très surprise de l'ampleur des connaissances que possédaient son élève sur le monde. Ces moments de lecture avec l'enseignante ont modifié l'image que ce faisait Frédérique de Sara. Au fil du temps, les livres et les thématiques se sont complexifiés.

Partager ses impressions suite à la lecture

En début de recherche, nous n'avions pas de questions précises sur les impressions de la lecture, autre que « As-tu aimé ? » et le langage non verbal de l'élève était observé (hochement de tête, sourire, refus, etc.). Après une année de recherche, nous avons ajouté au tableau de communication un pictogramme d'appréciation positive et un pictogramme d'appréciation négative. Nous pouvons également la questionner sur les émotions qu'elle a ressenties lors de la lecture en utilisant les pictogrammes. Dès le début de la recherche, Sara n'avait aucune difficulté à signifier qu'elle n'appréciait pas un livre. Elle prenait simplement le livre, le fermait et ne voulait pas collaborer. Nous avons fait plusieurs essais-erreurs, l'enseignante lisait le livre à l'élève, mais l'élève n'était pas réceptive, elle pouvait répéter un mot ou seulement elle regardait ailleurs. Dans ces cas, nous avons cessé la lecture du livre et en avons proposé un autre. Cependant, nous voulions pousser plus loin et demander à l'élève, pourquoi elle aimait le livre. Toutefois, les questions posées avec le mot « pourquoi » sont difficiles pour Sara. En effet, il est difficile pour elle d'y répondre avec son champ lexical qu'elle utilise à l'oral et son tableau de communication. Dans des recherches futures, nous aimerions travailler cet aspect. Bref, à la suite de la présentation de ces résultats, il nous est possible de comprendre que cette élève a pu développer des compétences en lecture par l'exposition répétée à des situations d'apprentissage issues de la littérature de jeunesse.

Discussion

Peu de recherches s'intéressent à la description des processus impliqués dans l'acte de lire auprès des élèves ayant des IIP en lien avec des pratiques de lecture interactive. Par ailleurs, la recherche en lien avec les IIP est trop souvent en lien avec

des tâches isolées et décontextualisées (Browder et al., 2006). Notre recherche collaborative a permis de rendre compte de progrès importants d'une élève en lien avec le développement processus impliqués dans l'acte de lire (Irwin, 2007) et les pratiques de lecture interactive d'une enseignante. Nous avons décrit le développement de différents processus impliqués dans l'acte de lire tels que les processus d'élaboration, les processus d'intégration et les macroprocessus (Giasson, 2011; Irwin, 2007). Dans ce même ordre d'idées, nous pouvons constater que les pratiques de lecture interactive se sont complexifiées et ont permis de guider l'élève dans son développement des compétences.

En résumé, suite à la lecture interactive, l'élève met en place des processus d'intégration, elle résout des inférences appuyées par les illustrations du texte. Les résultats de cette recherche montrent que cette élève ayant des IIP peut faire des inférences de causalité. Elle est capable de transférer des apprentissages réalisés avec le livre de jeunesse à un autre contexte. Elle peut dégager les émotions d'autrui et se mettre à la place d'un personnage tiers, ce qui est loin d'être évident étant donné sa pensée préopératoire et son égocentricité développemental (Beaulieu, 2013). Elle se fie aux images pour comprendre le texte et y appuie sa compréhension. Elle peut dégager des liens entre les différentes pages. Elle a acquis plusieurs éléments en lien avec l'entrée dans l'écrit. Elle peut également dépasser le texte, faire des tâches autres en lien avec un texte donné, mettre en œuvre des processus d'élaboration. Enfin, elle peut démontrer une compréhension générale d'un texte, mettre en place des macroprocessus.

Sait-elle lire? Si la réponse à cette question est : est-ce qu'elle décode et reconnaît globalement des mots? Non. Sara ne divise toujours pas les syllabes à l'oral, il est difficile de savoir si elle a une conscience phonologique et n'a pas découvert le principe alphabétique. Elle ne reconnaît pas globalement les mots fréquents. En fait, l'observation d'une lecture interactive montre que Sara ne regarde pas les mots, lorsque l'enseignante lit, elle regarde uniquement les images, elle ne semble pas du tout intéressée par les lettres et les mots. Ce qui l'intéresse c'est l'histoire, c'est la compréhension de ce qui est écrit. L'enseignante ne porte pas du tout l'attention de Sara sur les lettres et les mots. Elle pointe davantage les illustrations pour capter l'attention de l'élève et soutenir sa compréhension. Sa salle de classe est dénuée de mots étiquettes, il s'agit davantage de pictogrammes. Est-ce que Sara pourrait reconnaître des mots globalement? Selon son enseignante le tout serait impossible. Plusieurs recherches menés auprès d'élèves ayant des incapacités intellectuelles sévères à profondes montrent toutefois qu'il est possible sur une longue échéance d'enseigner les microprocessus et surtout les correspondances entre les graphèmes et les phonèmes à ces personnes (Allor et al., 2014; Bradford et al., Shippen, 2006; Frederick et al., 2013). Il serait intéressant, dans une recherche future auprès de Sara, de tenter le développement des microprocessus.

La visée, dans le cadre de cet article, n'était pas de transformer des pratiques, mais de détailler l'interaction entre une élève avec ses structures, la lecture interactive, et ce, dans son milieu la classe spéciale. La présente étude semble montrer que le milieu qu'est la classe spéciale accueillant les élèves ayant des IIP est encore bien pauvre en traces écrites (livres, affiches, etc.) et que les attentes en matière de développement des processus impliqués dans l'acte de lire (surtout les microprocessus) sont basses. Ce constat est déplorable sachant que les élèves ayant des IIP sont scolarisés jusqu'à vingt-et-un ans et qu'après peu de ressources existent pour occuper ces personnes. Il va de

soi que la littérature peut devenir un loisir intéressant, développant même le vocabulaire de l'individu.

Conclusion

En conclusion, les élèves ayant des IIP, comme tous les élèves, ont droit, selon la loi de l'instruction publique, d'être scolarisés. Trop souvent, leurs salles de classe sont dénuées de littérature de jeunesse et de traces écrites (livres, affiches, textes, etc.). Aucune recherche ne fait la preuve qu'ils ne peuvent pas accéder à l'écrit. Une question se pose : Ont-ils les mêmes chances que les élèves n'ayant pas d'incapacités intellectuelles de développer les processus impliqués dans l'acte de lire? En d'autres mots, nous savons que les caractéristiques personnelles de l'élève ayant des IIP le place à risque d'échec (Beaulieu, 2013), mais est-ce que le milieu est suffisamment riche en écrit pour favoriser le développement des processus impliqués dans l'acte de lire de cette clientèle très à risque de vivre une situation de handicap? Trop peu de recherches posent l'hypothèse que le tout est possible, les enseignants y croient peu, ces conditions ne sont peut-être pas très propices au développement des compétences en lecture des élèves ayant des IIP (Hessels-Schaltatter, 2010). Il importe donc que d'autres recherches se poursuivent auprès des clientèles les plus vulnérables pour décrire le développement de leurs compétences en lecture et ainsi peut-être convaincre le milieu que le tout est possible.

Références

- Allor, J. H., Mathes, P. G., Champlin, T. M. et Cheatham, J. P. (2009). Research-based techniques for teaching early reading skills to students with intellectual disabilities. *Education and Training in Developmental Disabilities*, 44(3), 356-366.
- Allor, J. H., Mathes, P. G., Roberts, J. K., Cheatham, J. P. et Otaiba, S. A. (2014). Is scientifically based reading instruction effective for students with below-average IQs? *Exceptional Children*, 80(3), 287-306.
- Beaulieu, J. (2013). *Productivité de manuels scolaires adaptés pour élèves ayant deux années de retard en lecture* (Doctoral dissertation, Université de Montréal (Canada)).
- Beaulieu, J. et Langevin, J. (2014). L'élève qui a des incapacités intellectuelles et la lecture. *Revue francophone de la déficience intellectuelle*, 25, 52-69.
- Beaulieu, J. et Moreau, A. (2018). Enseignement avec l'album jeunesse auprès d'un élève ayant des incapacités intellectuelles. *Revue francophone de la déficience intellectuelle*, 28, 50-60.
- Beaulieu, J., Marilyn, D. B., Bowen, F., Levasseur, C., Montésinos-Gelet, I. et Dupin de Saint-André, M. (2019). DISPOSITIFS DÉCLARÉS D'ENSEIGNEMENT DE LA LECTURE AU MOYEN DE LA LITTÉRATURE DE JEUNESSE EN CONTEXTE D'INCLUSION PÉDAGOGIQUE D'ÉLÈVES HDAA DU PREMIER CYCLE DU PRIMAIRE. *McGill Journal of Education/Revue des sciences de l'éducation de McGill*, 54(3), 479-499.
- Bradford, S., Shippen, M. E., Alberto, P., Houchins, D. E. et Flores, M. (2006). Using Systematic Instruction to Teach Decoding Skills to Middle School Students with Moderate Intellectual Disabilities. *Education And Training in Developmental Disabilities*, 41(4), 333-343.

- Brodeur, M., Deaudelin, C., Bournot-Trites, M., Siegel, L. E. et Dubé, C. (2003). Croyances et pratiques d'enseignants de la maternelle au sujet des habiletés métaphonologiques ainsi que de la connaissance des lettres et pistes de développement professionnel. *La Revue Des Sciences de L'éducation*, 29(1), 171-194.
- Browder, D. M., Wakeman, S. Y., Spooner, F., Ahlgrim-Delzell, L. et Algozzine, B. (2006). Research on reading for individuals with significant cognitive disabilities. *Exceptional Children*, 72(4), 394-408.
- Burns, S., Espinosa, L. et Show, C. E. (2003). Débuts de la littérature, langue et culture: perspective socioculturelle. *Journal Des Sciences de L'éducation*, 29(1), 75-100.
- Byrne, B. (1992). Studies in the acquisition procedure for reading. Dans P. G. Gough, L. C. Ehri & R. Treiman (Eds.), *Reading acquisition* (pp. 1-34). New Jersey, NY: Lawrence Erlbaum Associates.
- Cavallini, F., Berardo, F. et Perini, S. (2010). Mental retardation and reading rate: Effects of precision teaching. *Life Span and Disability*, 13(1), 87-101.
- Chapelle, M. (1998). Analyse d'une activité d'identification de mots chez des apprentis lecteurs handicapés mentaux. *Revue francophone de la déficience intellectuelle*, 9(2), 3-25.
- Chatenoud, C., Turcotte, C., Aldama, R. et Godbout, M-J. (2017). Favoriser la compréhension en lecture auprès des jeunes ayant une déficience intellectuelle. Université du Québec à Montréal.
- Cohen, E. T., Hellen, K. W., Alberto, P. et Fredrick, L. D. (2008). Using a three-step decoding strategy with constant time delay to teach word reading to students with mild and moderate mental retardation. *Focus on Autism and Other Developmental Disabilities*, 23(2), 67-78.
- Desgagné, S., Bednarz, N., Lebuis, P., Poirier, L. et Couture, C. (2001). L'approche collaborative de recherche en éducation : un rapport nouveau à établir entre recherche et formation. *Revue des sciences de l'éducation*, 27(1), 33-64.
- Fougeyrollas, P. (2010). *La funambule, le fil et la toile: transformations réciproques du sens du handicap*. Presses Université Laval.
- Fougeyrollas, P., Cloutier, R., Bergeron, H., Côté, J., et St-Michel, G. (1998). *Classification québécoise Processus de production du handicap*. Québec, QC: Réseau international sur le Processus de production du handicap (RIPPH)/SCCIDIH.
- Foulin, J.-N. et Pacton, S. (2006). La connaissance du nom des lettres : précurseur de l'apprentissage du son des lettres. *Éducation et Francophonie*, 34(2), 28-55.
- Fredrick, L. D., Davis, D. H., Alberto, P. A. et Waugh, R. E. (2013). From initial phonics to functional phonics: Teaching word analysis skills to students with moderate intellectual disability. *Education and Training in Autism and Developmental Disabilities*, 48(1), 49-66.
- Giasson, J. (Ed.). (2011). *La lecture - Apprentissage et difficultés*. Montréal, QC: Chenelière Éducation.
- Gremaud, G. et Tessari Veyre, A. (2017). *Augmenter les opportunités de communiquer. Manuel de situations et de stratégies*. Lausanne, Suisse : Éditeur HES-SO.

- Hessels-Schlatter, C. (2010). Les jeux comme outils d'intervention métacognitive. Dans M.G.P. Hessels et C. Hessels-Schlatter (Eds.) *Evaluation et intervention auprès d'élèves en difficultés* (p. 99-128). Bern, Suisse: Peter Lang.
- Irwin, J. W. (2007). *Teaching reading comprehension processes*. London, UK: Pearson.
- Legendre, R. (2005). *Le dictionnaire actuel de l'éducation*. Montréal, QC: Éditeur Guérin.
- Marin, B. et Legros, D. (2008). *Psycholinguistique cognitive - Lecture, compréhension et production de texte*. Bruxelles, Belgique: Éditeur De Boeck.
- MELS. (2007). *L'organisation des services éducatifs aux élèves à risque et aux élèves handicapés ou en difficulté d'adaptation ou d'apprentissage (EHDA)*. Gouvernement du Québec.
- MELS. (2011). *Programme éducatif sur les compétences axées sur la participation sociale (CAPS)*. Direction de l'adaptation scolaire et des services complémentaires. Gouvernement du Québec.
- MELS. (2014). *Statistiques de l'éducation - Éducation préscolaire, enseignement primaire et secondaire*. Gouvernement du Québec.
- MEESR. (2019). *Nombre et pourcentage d'élèves ayant une déficience intellectuelle profonde (code 23) ou moyenne à sévère (code 24) à la formation générale des jeunes des réseaux d'enseignement public, privé et gouvernemental, selon le type de handicap et de scolarisation, 2017-2018*. (Document inédit). Gouvernement du Québec.
- Morin, M.-F., Dupin de Saint-André, M. et Montésinos-Gelet, I. (2007). Pourquoi lire à haute voix en classe et comment le faire? *Québec Français*, 145, 69-70.
- Montésinos-Gelet, I. et Besse, J. M. (2003). La séquentialité phonogrammique en production d'orthographe inventées. *Revue des sciences de l'éducation*, 29(1), 159-170.
- National Institute for Literacy (2008). *Developing early literacy: Report of the national early literacy panel*. Washington, DC: National Institute for Literacy. Récupéré de <https://lincs.ed.gov/publications/pdf/NELPReport09.pdf>
- Schnorr, R. F. (2011). Intensive reading instruction for learners with developmental disabilities. *The Reading Teacher*, 65(1), 35-45.
- Sermier-Dessemontet, R. et Martinet, C. (2016). Lecture et déficience intellectuelle: clés de compréhension et d'intervention. *Revue suisse de pédagogie spécialisée*, 3, 40-47.
- Snowling, M.J., Nash, H.M. et Henderson, L.M. (2008). The development of literacy skills in children with Down syndrome : Implications for intervention. *Down Syndrome Research and Practice*, 13, 62-67.
- Waugh, R.E, Alberto, P.A. et Frederick, L. (2011). Simultaneous prompting: an instructional strategy for skill acquisition. *Education and Training in Autism and Developmental Disabilities*, 46(4), 528-543.
- Wehmeyer, M. (2006). Beyond access : Ensuring progress in the general education curriculum for students with severe disabilities. *Research and Practice for Persons with Severe Disabilities*, 31(4), 322-326.

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Do Books Make a Difference? The Effects of a Book-Buying Grant and Teacher Professional Learning on Intrinsic Motivation for Reading in a Middle School

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Abstract

This study documents, over a three-year period, the effects of an Indigo Love of Reading Foundation grant and teacher professional learning in literacy on the motivation for reading in a large urban middle school. The school-wide focus on literacy included: 1) the development of a Literacy Exploratory, a 50-minute daily period set aside for teachers to help students develop as readers, choose books to read, and have time to be involved in a reading community, 2) ongoing teacher professional learning, and 3) a \$125,000.00 Indigo Love of Reading Foundation grant. The grant was provided to support the school's literacy initiatives through purchasing new books for the library and for the development of classroom libraries for every teacher. Using the Motivation for Reading Questionnaire (MRQ) (Wigfield and Guthrie, 1997), students' favourable ratings of four aspects of intrinsic reading motivation – efficacy, importance, challenge, and social – increased significantly over the course of the study. Teachers' perceptions indicate they have valued the school-wide focus on literacy, their principal's support, and the professional learning opportunities that were offered; they pointed to the effect of the grant on helping them create and use classroom libraries in their instructional practice. Students, too, indicated that their motivation for reading has been positively influenced by the school's focus on literacy, with the suggestion that teachers continue to offer greater choice in their reading material. The findings of this study do not contradict previous research that shows, overall, motivation for reading declines over the middle school years.

Introduction

Middle school literacy continues to be one of the most important aspects of students' school experience and achievement. Often times, adolescent literacy takes a backseat to early literacy instruction which results in less attention being paid towards the middle and high school levels (Alvermann, 2002). However, one area of middle school literacy receiving important attention is engagement and motivation for reading (Gambrell, 2011; Guthrie & Humenick, 2004; Hudson & Williams, 2015; Kennedy, 2009; McElhone, 2012; Merga, 2014; Miller, 2009, 2014; Piercey, 2013). Educators stress the importance of reading engagement and motivation because of its role in learning and literacy development (Gambrell, Palmer, Codling, & Mazzoni, 1996). "Students' accounts suggest, though, that engaged reading promotes much more than strategic reading and greater involvement in the world of the text. More precisely, they become more strategic and involved in the navigation of their lives" (Ivey & Johnston, 2013, p. 273).

Reading motivation is particularly important as it relates to self-concept and the extent to which students value this activity (Gambrell & Marinak, 2009). There is consensus in the research that student motivation (or its absence) is the result of self-efficacy, which refers to the beliefs students hold about themselves as successful readers. These beliefs are responsible for the choices they make, the effort they are willing to invest, and the persistence they demonstrate in the face of difficulty (Bandura, 1977, 1986). Students who are successful in school are those who enjoy reading and students who do not enjoy reading do not achieve the same success, academically or in their lives outside of school (Grams, 2003). The problem is that children “who do not attach importance to learning to read will not be motivated to learn” (Roe, Smith, & Burns, 2005, p. 3). It seems clear that what teachers and schools do to motivate reading has value for developing a positive self-concept and future success.

The purpose of this paper is to share the results of one middle school’s undertaking to improve intrinsic motivation for reading through a school-wide literacy focus. The principal and teachers embarked on a school-wide literacy focus that included: 1) on-going professional learning, 2) daily literacy instruction for students referred to as the Literacy Exploratory, and 3) a generous book-buying grant. This article presents the results of a mixed-methods study of students’ intrinsic motivation for reading over three years through both survey and interview data. To understand the changes in student intrinsic motivation for reading that occurred over the course of the study, an examination of motivation research is needed.

Framework and Related Research

Early on in the attempt to understand reading, Frank Smith (1978) wrote, “The primary function of reading teachers can be summed up in a very few words—to ensure that children have adequate opportunity to read” (p.187). Smith himself used the term “motivation,” saying that, “Children are motivated to learn whenever there is something they do not understand, provided they feel there is a chance that they can learn” (p. 187), adding that they must be able to bring “meaning” to the printed word. Smith’s theory helped set the context for the importance of literacy engagement which has been taken up by researchers and teachers over the last two decades.

The prominence of student engagement and motivation for reading has developed in recent years, partly in response to research about adolescents’ out-of-school literacies (Irvin, Meltzer, & Dukes, 2007), and partly to teachers’ own observations and changing practices in reading instruction (Miller, 2014). Research shows that adolescents engage in literacy activities on a regular basis in their own lives outside of school when there are three conditions present: 1) the topic is important enough to them that they want to communicate about it, 2) the topic is something they feel strongly about or are interested in, and 3) the reading or writing they do occurs when they want to engage in the activity (Irvin, Meltzer, & Dukes, 2007). It has been argued that when these conditions are present, students are intrinsically motivated to read. “Intrinsic motivation arises from an individual’s personal interest in a topic or activity and is satisfied through pursuit of that topic or activity” (Unrau & Schlackman, 2006, p.81).

A number of studies show that motivation declines precipitously from the elementary grades through to high school (Gottfried, Fleming, & Gottfried, 2000; Wigfield, Gladstone & Turci, 2016). Researchers have developed tools (profiles, surveys, and questionnaires) to administer to students at various times throughout their

schooling in an attempt to understand this decline in attitudes towards reading (Gambrell, Palmer, Codling & Mazzoni, 1996; McKenna, Kear, & Ellsworth, 1995; Wigfield & Guthrie, 1997). It is disheartening to note that most children in grade one begin their reading careers in a positive manner and by grade six are ambivalent about it, and that “the increasingly negative attitude toward recreational reading was related to ability” (Unrau & Schlackman, 2006, p. 83). These researchers noted that their findings were related to ability, with the least able readers having the most negative attitudes. One of the most popular tools cited in research (Unrau & Schlackman, 2006) is the Motivation for Reading Questionnaire (MRQ), which has been successfully and widely used by researchers in the middle grades (Wigfield & Guthrie, 1997). A major finding from this and other studies is that intrinsic motivation is strongly related to the amount and breadth of reading that students do and ultimately, to their overall achievement (Mason, Stahl, Au, & Herman, 2003).

Studies also show that teachers’ practices have a positive influence on students’ intrinsic motivation to read (Allington, 2002). Brock and Boyd (2011) describe one middle school teacher’s successful practice as being able to “link the topics and issues that her students are learning in social studies and science to their reading, writing, and discussions during guided reading” (p. 13). Furthermore, this teacher credits her success with increased levels of achievement by encouraging her students to develop a love of reading. More and more researchers are focusing their attention on, not only how teachers develop a reader’s skills, but also on affective aspects of reading, which should not be overlooked or minimized in reading instruction (Ivey & Johnstone, 2013). Teacher factors that influence affective aspects of reading include enthusiasm, support for autonomy, understanding of the reading process, specific instructional practices, and the overall school community and its support for reading (McGeown, Johnston, Walker, Howatson, Stockburn & Dufton, 2015).

Specifically, one area that is widely acknowledged as contributing to intrinsic reading motivation is that of providing opportunities for students to develop their autonomy as readers and make their own choices about what they read (Guthrie & Wigfield, 2000; Ivey & Johnstone, 2013; Unrau & Schlackman, 2006). Miller and Kelley (2014) stated, “When students select their own books to read and enjoy, they develop confidence in their abilities to make reading choices and build their capacity for choosing books in the future” (p. 46). Yet, one of the struggles that many schools experience is the ability to financially provide their students with a wide variety of texts that are relevant, recently published, and ever-changing. Even when they are able to provide the necessary resources, without attention to developing autonomy, students may not know how to find out about the books they would like to read. Intrinsic motivation is therefore an important aspect of supporting students to build their competence and confidence in choosing books to read.

Gender Differences in Reading Motivation

Compared to boys, girls demonstrate higher levels of intrinsic motivation for reading, higher levels of reading achievement, and spend more time reading recreationally (Marinak & Gambrell, 2010; Reilly, Neumann & Andrews, 2018; Schwabe, McElvany & Trendtel, 2014). Furthermore, girls score higher on social motivation indicators (reading that is process oriented) and view reading as an appropriate activity to engage in while boys score higher on instrumental motivation indicators (reading that is goal oriented) and view reading as less appropriate for them

(McKenna, Conradi, Lawrence, Jang, & Meyer, 2012). This appears to show that girls value reading as an activity in and of itself and boys value reading for what it helps them do (Schwabe, McElvany, & Trendtel, 2014).

In research focused on gender differences in reading, particular motivation factors have been identified as important in middle school. These are: efficacy in reading, importance or value, and social context (Marinak & Gambrell, 2010). The beliefs that girls and boys hold of themselves affects their effort, persistence, and emotional responses to experiences. While girls demonstrated higher scores in importance and social context, no gender differences were viewed in reading efficacy (Pajares, 2010). Reading efficacy is an intrinsic motivational factor and if there is no difference between girls and boys, then an educational implication is that teachers can work to alter boys' views of reading so that it is perceived as important to them (Reilly, Neumann & Andrews, 2018). While gender differences are important to consider in a discussion about reading motivation, instructional practices and the ways in which teachers and students interact can impact all students positively (Pajares & Urdan, 2002).

School Context

Watson Middle School (WMS) is an inner-city school located in a medium-sized city of approximately 100,000 people in western Canada, representing a wide variety of social, cultural, and socio-economic levels. The school's student population comprises approximately 900 students with a staff of over 30 teachers and 10 educational assistants.

Since becoming Watson Middle School's principal, Donald Heath has passionately and effectively made sweeping changes within the school to make literacy a school-wide priority. Teachers specifically asked the principal to help them address low literacy levels when he joined the staff of WMS. Recognizing that a sizable percentage of WMS's student body was challenged by its literacy skills and attitudes towards reading, Mr. Heath restructured students' timetables to add additional instructional time for literacy. Over the course of this study, Mr. Heath remained steadfast in his support for staff attending professional development opportunities to enhance and build their capacity as literacy teachers. He has been a reliable and consistent advocate for students' literacy development at WMS. To preserve anonymity, neither the school nor the principal's actual names are used in this article.

Professional learning and the literacy exploratory. Teachers discussed the challenges and frustrations they faced as teachers with Mr. Heath and felt that these could be traced to the low levels of literacy many of their students exhibited. With a strong commitment to improving literacy levels and reading in particular, the staff felt that difficulties such as low motivation, absenteeism, and low achievement rates could be addressed more fully and positively. The principal agreed and worked the following year to address timetable issues that would support teachers' professional learning in the area of literacy and the introduction of an annual 6-week school-wide literacy class to run daily called the "Literacy Exploratory" for students. This class was to be developed with the teachers and offered at the school.

While the Literacy Exploratory was designed to provide embedded and explicit literacy support for students at WMS, an added emphasis was to help students choose their own texts for reading and have time to read and talk about books that engaged and

interested them. It is important to note that engagement and motivation are not viewed as a “warm and fuzzy extra component of efforts to improve literacy” (Irvin Meltzer, & Dukes, 2007, p. 31) but rather as an essential and integrated component to improving literacy.

As a language and literacy professor at the university, I worked extensively with the school staff, conducting a needs assessment regarding teachers’ knowledge of teaching literacy and providing professional learning workshops and resources designed to support their work in addressing students’ literacy needs. I also assisted the staff to design and implement the Literacy Exploratory which involved all teachers, regardless of their discipline, teaching reading and literacy for approximately one-hour each day for six weeks of the school year (Bright, 2014). Time throughout the school year during Professional Development (PD) days was devoted to professional learning about: 1) how reading develops, 2) the special needs of adolescent readers, 3) recently-published literature for middle school students, and 4) appropriate and worthwhile teaching strategies to engage all levels of readers in motivating and successful ways. Specifically, the “booktalk” was modelled and discussed as a way to introduce books and authors to students in a quick and engaging manner.

Through five sessions held every few months at the school, a strong foundation in understanding the components of learning to read developed among all of the staff members in the school, including educational assistants and math, science, social studies, English language arts, second language, physical education, art, music, and drama teachers (Heller & Greenleaf, 2007). Teachers learned to identify and teach the foundations of reading including: word identification, vocabulary development, comprehension, and fluency. Teachers with strong literacy backgrounds were just as enthusiastic as the teachers for whom literacy learning was new during the professional learning sessions. One teacher shared this, “Now we are all using the same language to talk to students about reading, whether in ELA or any other subject.” Motivation was an important aspect of early discussions because, “while phonemic awareness, phonics, vocabulary, fluency, and comprehension allow students to be skillful and strategic readers, without the intrinsic motivation to read, students may never reach their full potential as literacy learners” (Kittle, 2013; Marinak & Gambrell, 2010, p. 129).

During the first year, the teachers and I met together regularly for literacy sessions and eventually a method of working together had teachers contacting me with questions and suggestions throughout the year. In the following two years, I visited the school at the beginning of the year as a way to refresh the commitment to literacy and to help new teachers joining the staff understand the history of and the reading content related to the Literacy Exploratory. I was also invited into classrooms during the Literacy Exploratory to observe and talk with students and teachers and to share books for the students through booktalks (Broadway, 1999).

Book-buying grant. There are a number of literacy grants used for book-buying purposes in schools and this one in particular helps support high-needs elementary schools in Canada that may be lacking the resources for new and engaging books, essential for helping students become confident and passionate readers. For this grant, the following information was used to encourage schools to apply:

- school budgets provide for less than a 1/3 of a book per student.
- teachers are spending their own money on books and materials for students — over \$200 million a year.

- less than 25% of public elementary schools have a full-time teacher-librarian.

In order to address the challenges faced by schools in general and WMS specifically in meeting the needs for new and substantial book collections, the grant they received commits to providing millions of dollars in funding each year to high-needs kindergarten to grade eight school libraries. Specifically, 90% of the funding for this grant is set up to buy books and resources and 10% of the funding is for special literacy events or initiatives, such as author visits, to stir the imagination of the students and increase their excitement and enthusiasm for literacy learning and for reading.

In the year prior to the development of the Literacy Exploratory, teachers at WMS, together with Mr. Heath applied for the book-buying grant. On their third attempt, and with professional learning and the Literacy Exploratory underway, a revised application focusing on the needs of the students and the new literacy practices instituted at the school, WMS was awarded a \$125,000.00 grant. The grant was provided to support the school's literacy initiatives through purchasing new books for the library and for the development of classroom libraries for every teacher.

Research Question and Methodology

Focusing on the changes implemented at WMS over a three-year period, this study aimed to provide answers to the following research question: What is the effect of a book-buying grant and key professional learning opportunities on students' intrinsic motivation for reading in a middle school?

The Participants

The participants in this study were randomly-selected sixth, seventh, and eighth grade students. This decision was based on the most convenient way for them to administer the survey given the many other options and activities being offered throughout the school at the time. All of the students enrolled in the school during this study participated in the Literacy Exploratory upon its implementation, and they all experienced classes taught by teachers receiving professional development in reading. For the purposes of data collection, 141 students in Grade 6 (n=46), Grade 7 (n=43) and Grade 8 (n=52) responded to the first administration of the Motivation for Reading Questionnaire (MRQ) at the beginning of the study, and 202 students in Grade 6 (n=67), Grade 7 (n=59) and Grade 8 (n=76) responded to the second administration of the same survey conducted two years later. In addition, 24 students participated in conversational interviews during the third year of the study.

The students participating in both administrations of the MRQ were selected randomly by the teachers at each grade level at the school using the Rand function in Excel, and represented approximately 25% of the total number of students at each grade level. The students selected for individual conversational interviews were purposively selected by the teachers, ensuring that both male and female students be represented. Teachers were also asked for representation from students with low, average, and high reading performance. Taking into consideration these two criteria, the teachers asked students at each grade if they would be interviewed. Letters of consent were shared and read to students before taken home for parental/care-giver signatures. The students had the option to skip any question on the MRQ, and were sent home with a letter explaining the nature of the individual conversational interviews before consenting to participate. Eight students from each grade level provided consent letters and were interviewed, with both genders and a variety of reading levels represented at each grade level.

Data Collection Procedures

In order to study the effects of the school-wide literacy focus on students' motivation for reading, quantitative and qualitative data were collected, in order to embrace "greater reflexivity" and find ways of relating "voices of marginal groups to academic knowledge and researcher interpretations" (Brannen, 2007, p. 173).

MRQ. The quantitative data discussed in this article were obtained by administering the Motivation for Reading Questionnaire (MRQ) (Wigfield & Guthrie, 1997). In order to gain a picture of how students' motivation for reading was affected over a three-year period, the MRQ was administered twice, once at the beginning of the study when the first author began working with the staff on their school-wide literacy focus and prior to receiving the grant and again two years later after the grant money has been used. Data were also collected through teacher interviews at the same time the MRQ was administered and those results will be reported at a later time.

The Motivation for Reading Questionnaire (MRQ) consists of 53 items designed to gauge the effects of eleven different constructs of students' reading motivation. Intrinsic motivation constructs include: Reading Efficacy (tested by 3 items on the MRQ), Reading Challenge (5 items), Reading Curiosity (6 items), Reading Involvement (6 items), Importance of Reading (2 items) and Social Reasons for Reading (7 items). Extrinsic motivation constructs include: Reading Work Avoidance (tested by 4 items on the MRQ), Competition in Reading (6 items), Recognition for Reading (5 items), Reading for Grades (4 items) and Compliance (5 items). In both years that the MRQ was administered, the students completed the survey online, through Survey Monkey software (1999-2016). See Appendix A.

Conversational interviews. The qualitative data for this study consisted of students' conversational interviews conducted in the spring of the third year of the study. To gain a richer understanding of students' motivation for reading, conversational interviews are "designed to elicit information that will help the teacher gain a deeper understanding of the student's reading motivation in an informal, conversational manner" (Gambrell, Palmer, Codling & Mazzoni, 1996, pp. 527-528). Each individual student interview consisted of approximately 14 items assessing students' perceptions of the different constructs of reading motivation. The total number of items in each interview varied due to the researcher asking follow-up or clarifying questions (Appendix B).

Data Analysis Procedures

The MRQ produced two sets of quantitative data from Year 1 and Year 3. The students were provided with four options as responses to the statements on the MRQ regarding their motivations for reading: "Very Different From Me", "A Little Different From Me", "A Little Like Me", and "A Lot Like Me". The responses "Very Different From Me" and "A Little Different From Me" were classified as *unfavourably-rated* responses to the construct measured by a particular statement, and the responses "A Little Like Me" and "A Lot Like Me" were classified as *favourably-rated* responses to the construct measured by a particular statement.

Gender. The MRQ data from Year 1 and Year 3 were first analyzed by comparing the change for each individual statement between the two years. The data

from the second administration of the MRQ was then compared both by grade level and gender in each grade. We were interested in how gender differences would be represented in the data given findings that claimed “gender differences are disappearing” in reading (Caplan & Caplan, cited in Reilly, Neumann, & Andrews, 2018, p. 5). The constructs in which females answered significantly more favourably than males, the constructs in which males answered significantly more favourably than females, and the constructs in which there was no significant difference between genders were identified for each grade level, and an overall ranking of the constructs in terms of those rated favourably to those rated unfavourably was also established. A similar comparison was done with the data from all grade levels combined, analyzing only the differences between genders. Again, the constructs in which females answered significantly more favourably than males, the constructs in which males answered significantly more favourably than females, and the constructs in which there was no significant difference between genders were identified. A ranking of the constructs from those rated favourably to those rated unfavourably was established taking into account all the data from the MRQ, thus showing a rating for the school population as a whole.

Interviews. The individual conversational interviews with students in Year 3 produced a set of qualitative data to supplement the results from the two administrations of the MRQ. The student interviews were transcribed and analyzed through domain analysis (Spradley, 1980) in order to discover themes that revealed a deeper understanding of a student’s reading motivation (see Appendix B). First, the data were grouped as follows: 1) responses that were cited frequently by the students, 2) responses that reflected the context of this study (for instance, those related to the Literacy Exploratory, the book-buying grant, and the school-wide literacy focus), and 3) responses contrasting the general trend of the majority that were identified. Responses were then also grouped as they related to the constructs of reading motivation from the MRQ. Additionally, quotes from student interviews were highlighted that clearly emphasized the constructs of reading motivation and the effects of the grant money on them and the school culture.

Results

Changes in students’ intrinsic motivation for reading over time was the primary focus of this study. We focused on four constructs of intrinsic reading motivation: Reading Efficacy, Importance, Challenge and Social. The first three of these constructs showed the most positive changes and were the most strongly held aspects of reading motivation in the MRQ survey between the first and second administrations of the MRQ. The Social construct is important because of its prominence in the literature as an important aspect of intrinsic motivation even though it showed only a slight positive change over time. While students’ favourable ratings of the Social construct did increase – there was a 1.2% increase in students who rated this construct favourably from Year 1 to Year 3 – the majority of the students still rated this area unfavourably in the third year of the study.

Intrinsic Motivation for Reading

Table 1 summarizes the changes between the first and the second administration of the MRQ. Students’ favourable ratings increased for the intrinsic

motivation constructs of: Reading Efficacy, Challenge, Curiosity, Reading Involvement, and Importance. The Social construct also saw an increase between the first and second administrations of the MRQ. However, the Social construct showed less increase in favourable ratings than the other three constructs (1.2% compared with 4.2%, 4.6% and 5.3%). This finding is very positive for the school population as a whole since early conversations with the principal and teachers indicated that family time and effort was often expended on working and attending to the basics of life and survival. Additionally, there was an increase in students' favourable rating of the constructs of Recognition, Grades, and Competition. These can also be perceived positively, as they correspond to increases in student motivation for reading, albeit these represent extrinsic sources of motivation. Another positive change is the decrease between the first and second MRQ in students' favourable ratings of the Work Avoidance construct, as Work Avoidance carries negative connotations in terms of reading.

Table 1

Comparison of Construct Favourability Between MRQ Administrations

<i>Motivation Construct</i>	<i>% Favourable</i>		<i>% Change in Favourability</i>
	<i>Year 1</i>	<i>Year 3</i>	
<i>Reading Efficacy</i>	61.7	65.9	+4.2
<i>Challenge</i>	57.5	62.8	+5.3
<i>Curiosity</i>	51.8	55.5	+3.7
<i>Reading Involvement</i>	62.5	65.5	+3.0
<i>Importance</i>	55.3	59.9	+4.6
<i>Recognition</i>	52.7	55.5	+2.8
<i>Grades</i>	54.0	57.3	+3.3
<i>Social</i>	35.6	36.8	+1.2
<i>Competition</i>	55.0	56.2	+1.2
<i>Compliance</i>	48.8	50.4	+1.6
<i>Work Avoidance</i>	48.6	46.4	-2.2

Gender

Table 2 summarizes the differences in both gender and grade level of students as they rated the extent to which the constructs motivate them as readers in the second administration of the MRQ. Table 2 demonstrates the differences between genders at each grade level, as well as shows the overall trend of older students having more unfavourably-rated responses. The percentages were calculated averaging the favourable ratings for each statement pertaining to the specific construct. For Reading Efficacy, the percentage of girls favourably rating this construct was higher than the percentage of boys favourably rating it in Grades 6 and 7, but the percentage of boys favourably rating Reading Efficacy was higher than that of girls for Grade 8 students. High ratings of reading efficacy often translates into reading engagement. However, the average of both boys' and girls' students' favourable ratings of Reading Efficacy decreased from grades six to eight.

More female than male students rated favourably the importance of being a good reader at all three grade levels, and again, the average of both boys' and girls' students' favourable ratings of the Importance decreased over grades 6 to 8. A higher percentage of girls than boys responded favourably regarding the Challenge construct in Grade 6 and Grade 8, but more boys responded favourably than females in Grade 7. The Grade 7 girls rated the Challenge construct unfavourably in this set of data. Finally, the girls responded more favourably to the Social construct than male students across all three grade levels, while a decrease of favourable ratings for both boys and girls correlated to the increase in grade level.

Table 2

Year 3 MRQ Construct Averages by Gender and Grade Level

Motivation Construct	% Favourable					
	Grade 6		Grade 7		Grade 8	
	Boys	Girls	Boys	Girls	Boys	Girls
Reading Efficacy	71.6	78.3	61.3	64.2	63.4	59.1
Challenge	72.8	84.2	56.9	34.4	52.5	59.4
Curiosity	71.7	62.6	61.3	47.9	43.2	48.5
Reading Involvement	68.8	72.8	61.3	66.3	61.1	68.6
Importance	64.7	75.4	60.0	61.3	42.2	59.1
Recognition	69.2	66.2	56.8	55.9	35.7	49.8
Grades	77.8	70.6	53.5	50.8	44.4	59.1
Social	44.4	54.8	36.4	45.5	21.3	33.8
Competition	67.8	68.5	48.7	57.6	42.9	51.4
Compliance	56.6	52.4	46.8	47.3	43.3	50.5
Work Avoidance	51.1	51.7	41.4	44.7	40.2	46.0

Discussion

The purpose of this study was to document the results of WMS's efforts to improve intrinsic motivation for reading through its school-wide literacy focus, which included a book-buying grant. The next section of the paper discusses the results of both the MRQ and interview data regarding the four focus constructs of Efficacy, Importance, Challenge, and Social.

Reading Efficacy

Reading efficacy refers to students' belief in themselves as competent readers who willingly engage in reading activity. Questions from the MRQ related to this construct are:

- I know that I will do well in reading next year
- I am a good reader
- I learn more from reading than most students in the class

The interviews questions that were asked relating to Reading Efficacy included:

- Are you a better reader than last year?
- How do you know?
- What caused you to become a better reader?

Students' favourable ratings between the first and second MRQ clearly increased for Reading Efficacy. In addition, an overwhelming majority of the students, boys and girls, interviewed agreed that they were better readers than in the previous year. In addition, the interviews showed that 20 of the 24 students believed that they were competent and/or rapidly progressing readers.

When students were asked to list some of the signs of the improvement they exhibited from Year 1 to Year 3 of the study, the following signs were provided and appeared most frequently in their responses:

- An improved/expanded vocabulary
- An ability to read longer and more difficult books and reading material
- An improved pronunciation of difficult words
- Faster and more fluent reading with less stuttering
- Improved reading comprehension

It appears that the students were able to convey their views regarding Reading Efficacy more thoroughly through these statements than were provided in the Motivation for Reading Questionnaire. Their comments provide greater depth of understanding about the effect of the school-wide literacy focus on them as readers than was apparent on the MRQ.

One important aspect of the data that cannot be overlooked is that, while Reading Efficacy made gains over the three years of this study, it must be acknowledged that overall, it declined from grades six to eight which is consistent with previous research findings on this topic. This suggests the need for the school to attend even more closely to Reading Efficacy in grades seven and eight in order to find out why students rate Reading Efficacy less favourably than when they were younger. For instance, is the reading material they are expected to read more difficult over their three years in middle school? Are there other reasons the teachers can attribute to this decline? And, how can the Literacy Exploratory and the book-buying grant for books target Reading Efficacy more deliberately in grades seven and eight? Researchers suggest that when the texts that students read become increasingly necessary for discipline-area learning and are more complex, middle and high school students must adapt by using more advanced, special strategies as readers (Moje, 2008; Shanahan & Shanahan, 2008). It appears that going forward, professional learning about teaching strategies specific to reading in the disciplines could be emphasized.

Importance

Importance as a motivation construct refers to the way in which the reader values reading. If students think reading is important, they will spend more time engaging in reading. Reading volume enhances a variety of cognitive functions, most notably verbal intelligence (Cunningham & Stanovich, 2001).

Questions from the MRQ related to this construct are:

- It is very important to me to be a good reader
- In comparison to other activities I do, it is very important for me to be a good reader.

Questions from the student interviews relating to the Importance construct are:

- How does being a reader help you in school?
- In your life outside of school?
- Do you think that it is important to be a good reader?

Students' favourable ratings between the first and second MRQ clearly increased for Importance. Students spoke enthusiastically and animatedly in response to these questions and provided an exhaustive list of ways in which reading helps both in and out of school, including and most-commonly:

- Improving vocabulary in all subjects
- Relieving stress
- Reading the board or questions on a test
- Being able to help students in younger grades or your friends in your grade
- Having something to do when you finish everything else
- Improve reading speed and confidence in reading.
- Reading in stores – signs, flyers, etc.
- Reading street signs or maps
- Explaining words or phrases to ESL parents
- Improve your conversational abilities
- Use knowledge from reading to complete tasks
- Reading important documents

Based upon these responses, the students interviewed had a very clear understanding of the importance of reading in their day-to-day lives. This was also clarified when asked if the students believed that reading is important. Overall, the students agreed that it was important to be a good reader, although many students explained that you do not have to be the best reader; being an adequate reader was sufficient. One grade seven boy said that it was important to be a good reader, "Because if you aren't a good reader then life is hard." Students supported their responses by providing the following reasons for the importance of being a good reader:

- Important for the future – education, job, etc.
- Life is difficult if you aren't good at reading
- Important so you can understand what is happening in the world
- Reading is needed for everything in life
- Important so that you don't limit your opportunities

The verbal responses to this section of the student interviews provided a clear understanding of the importance of reading, also noted on the MRQ, where favourable ratings ranged from 42.2% to 75.4% (Table 1 and Table 2). Students showed their understanding of reading being a skill needed in all aspects of their lives as follows:

"If you can't read then you're basically saying to everyone else that you can't do anything, because everything is involved with reading." (Grade six girl)

"Reading is everywhere." (Grade seven girl)

Motivation appears to decline in reading in middle school and it could be that teachers' instructional practices are partly to blame. For instance, Guthrie and Davis (2003) state that "Middle school classrooms tend to be teacher-directed and teacher-led" and that "struggling readers are disengaged by this practice" (p. 68). Instructional strategies focused on competition, getting grades, and demonstrating ability, particularly as students move from the elementary to the middle grades, have also been linked to unfavourable ratings related to Importance (Anderman, Eccles, Roeser, Yoon, Blumenfeld & Wigfield, 1996). It is possible that the instructional strategies used

during the Literacy Exploratory, which focused on student choice in their reading, and small-group instruction, helped students understand the importance of reading in ways not previously made apparent.

It is clear from the MRQ data and the interviews with students that, along with the addition of the Literacy Exploratory and the book-buying grant, teachers attended to their literacy instructional practices in greater and more deliberate ways. This was accomplished through our professional learning sessions that focused on how to teach decoding, vocabulary, fluency, and comprehension using students' self-selected book choices. Students require the intermediary of a more skilled person, whether it is a teacher, a parent, a peer, or another invested individual, to encourage and help support their interest in reading.

Challenge

Reading challenge refers to the satisfaction students receive for mastering and understanding complex ideas in their reading. As a construct of reading motivation, it is strongly linked to reading efficacy and is therefore an aspect of intrinsic motivation.

Questions from the MRQ related to this construct are:

- I like hard, challenging books
- If the project is interesting, I can read difficult material
- I like it when the questions in books make me think
- I usually learn difficult things by reading
- If a book is interesting I don't care how hard it is to read

Reading Challenge showed the greatest increase in students' favourable rating. That is, students' beliefs in their reading competence showed the greatest gains over the three-year study. Research indicates that perceived efficacy and challenge are the strongest predictors of achievement (Wigfield & Guthrie, 1997). The finding appears to indicate that the introduction of the Literacy Exploratory and the book-buying grant have contributed greatly to the increase of students' ratings of challenge as motivating them as readers. This is an important finding as some research suggests that declining levels of motivation are inevitable given the increasingly difficult texts students face as they go through the grades. Yet, overall this aspect of motivation made the greatest gains for students at Watson Middle School. It should be remembered that this study took place in a school where several school-wide literacy initiatives had been undertaken and this could account for the increases in intrinsic reading motivation. However, it is somewhat sobering to note that there was still a downward trend in reading motivation from grades six to eight for both boys and girls.

Although the questions from the student interviews did not explicitly address the Challenge construct (Appendix B), the student responses to questions regarding their classroom libraries expressed their appreciation of the presence of books addressing a variety of topics and reading levels, and that they enjoyed being able to challenge themselves easily with books of a more difficult level. Again, this is consistent with the values from the MRQ regarding the support for the Challenge construct, which ranged from 52.5% to 84.2% of students in favour, with a 34.4% outlier found in the value from Grade 7 Females (Table 1 and Table 2). This was explained by teachers who characterized this group of students as less interested in reading than was typically observed. When asked about the kinds of books they liked to read, students commented on the level of difficulty of the books themselves. For instance, "I like to read chapter books a lot, just because they're a bit longer, also that

it uses up more of my time, instead of just reading a really short book and like having to move to a new one over and over again.” (Grade 6 boy). Interestingly, two students mentioned the term “challenge” in their verbal responses about the kinds of books they like to read. One student said that her teacher, “gives me a challenge, but I do get over it,” (Grade 6 girl) suggesting that she values the challenge. Another student answered in response to the question, what caused you to become a better reader this year from last year? “Probably more determination.” (Grade 7 girl). She attributed her reading improvement to the challenge aspect of motivation. Just having more books in the classroom readily available likely contributed to the students being able to access more books and more difficult books.

Social

Recently, teachers and researchers have focused their attention on the social aspects of motivating reading. This is because there is evidence to indicate that the way in which middle school students view the social status of reading among their family and peers can have an effect on their motivation for reading. “Making reading an important part of adolescents’ social interactions and shared experience was found to be integral to promoting adolescent enjoyment of books” (Merga, 2014, p. 473). According to Miller & Kelley (2014), “reading is ultimately a social act” (p. 100); readers seek connections with others about their reading, in order to consider their own reading experiences and to compare them with others.

Questions from the MRQ related to this construct are:

- I visit the library often with my family
- I often read to my brother or my sister
- My friends and I like to trade things to read
- Sometimes I read to my parents
- I talk with my friends about what I am reading
- I like to help my friends with their schoolwork in reading
- I like to tell my family what I am reading

The questions from the student interviews relating to the Social construct include:

- Do other people in your home read?
 - Do you like to talk with anyone about something you are reading? Who?
 - Do you follow authors on Twitter, Instagram and Facebook? Which ones?
- Why? What do you like about doing this?

Students’ favourable ratings of the social construct for reading on the MRQ made the smallest gains over the three-year study. It is important to try and understand the impact of the students’ attitudes towards reading and particularly, the impact of friends and the peer group on the perceived social acceptability of reading. There is a great deal of research to suggest that “many students are not receiving friend or peer encouragement to read books” (Merga, 2014, p. 473).

The majority of the students interviewed responded positively regarding peer and family members who also read, stating that their friends, parents or siblings also enjoyed reading. One student responded to the question about whether or not he visited the public library or a bookstore this way, “Well, I’d like to more often, but I don’t have a library card, and I have no one to drive me.” Another student said that having a library in the classroom has provided her with access to different types of books that she wouldn’t have found on her own. Additionally, when asked ‘What did you like about the Literacy Exploratory?’, many students suggested that their favourite part of the

Literacy Exploratory was discussing the book(s) they were reading and sharing their thoughts with their teacher and classmates. One student said,

“It was fun being able to read with a group of people, and then also just reading on your own, and then getting back with the group and talking about it.” (Grade 6 boy)

This response would suggest a more positive response to the Social construct than the ratings appear to indicate in the MRQ, which ranged from 21.3% - 54.8% of students' favourably rating (Table 1 and Table 2). Nonetheless, these comments show the importance of, not only family, but of the teacher and the school in providing experiences and resources to support reading.

Effect of the Book-Buying Grant

An obvious benefit of the grant money was the increased accessibility of the books in the school. The creation of the classroom libraries ensured that the students had access to books at all times during the school day, and this had not gone unnoticed by the students. The grant represented a clearly-visible change in the school and classroom environments. The summary below offers an analysis of the student interview responses in relation to the book-buying grant, the new resources it provided, and their effects on the intrinsic motivation constructs from the MRQ.

Overall, the greatest impact of the grant money emphasized by students was the vast increase in the quantity, quality, and variety of the books available in the school. Comments indicated that books greatly enhanced the library's collection; classroom libraries were created and utilized; public places in the school including the office, the display areas, and the cafeteria showcased books and book displays for students to access in new ways.

The volume and variety of books allowed the students to branch out in the content that they read; one grade six girl said, “I have found different book series that I enjoy,” and one of the girls in grade seven suggested that, “[the classroom library] gives me access to different types of books I would not have found on my own.” The students also suggested that having different types of books has helped to engage a greater number of readers in the school. A grade six boy said that, “I’ve seen a lot more people reading now, now that there’s the books,” and when asked what difference the grant money has made to the school, another grade six boy said, “Books for everyone to read, so everyone can like read.” A grade seven boy said that his classroom library helped him as a reader, “[B]ecause, if I’m done work early or something, I’ll go there and grab a book,” and a grade seven girl suggested that if she were to finish a book more quickly than she predicted, she could just take a book from her classroom library to read, without having to visit the school library.

Another grade six boy acknowledged the convenience of the classroom library for simply trying out books, saying, “[Y]ou don’t really have to check anything out, you could just pick it up for the class, and then read a little bit, and then after the [...] fifteen minutes are up, you can decide if you like that book or not...” Access to a variety of books has long been acknowledged as important to reading motivation (Guthrie & Wigfield, 2000; Marinak & Gambrell, 2010), but hearing the students voice the positive impact of books on their reading habits was a powerful statement about the need for resources in schools and classrooms.

Gender

While students' favourable ratings between the first and second MRQ increased for Reading Efficacy, four of the 24 students (all of them boys) interviewed explicitly stated that they had not improved at all since the previous year, citing reasons including a lack of time, school work taking precedence, and having less time to use the school's library; one student stated that he was still reading the same books as last year, and that he had not made much effort to improve his reading abilities.

Years of research data show that girls value reading over boys from their time in the elementary grades and up into middle and high school; one study reported that girls valued reading more than boys in both fourth and tenth grade and this manifested itself with girls spending significantly more time reading than boys (Kush & Watkins, 1996). "It appears that it is not simply a matter of boys having lower motivation to read, rather it appears that the low motivation to read for boys is strongly related to the value they place on reading activities" (Marinak & Gambrell, 2010, p. 136). The Literacy Exploratory was an important venue for teachers to focus their attention on boys' learning to see the value of reading for them both in and out of school and by sharing their own reading experiences with their students. This was accomplished by having a true variety of reading material through the use of classroom libraries and daily booktalks, both enabled through the book-buying grant.

Furthermore, the general trend is that reading challenge is held less strongly from grades six to eight, particularly for boys. One comment that was heard several times from boys is that they would like more choice in the texts they read during their Literacy Exploratory. In response to the question, 'Is there any advice you would like to give to your teacher about the Literacy Exploratory?', comments included:

"Just that we had to be given a book instead of choosing a book." (Grade 6 boy)

"Have it so that we don't necessarily have to read just the certain book, like if the book doesn't appeal to us at all after reading it for the first week. Cause then we could just change books to like, our own book." (Grade 6 boy)

"Give more choice, like different genres." (Grade 7 boy)

"Maybe have a public vote on the book, so we're not only reading the teacher's favourite, we can also read other stuff." (Grade 7 boy)

Given the research on gender and reading motivation, choosing what to read is one area where teachers can alter their practices. They might want to consider taking some time in the Literacy Exploratory to read together (to develop social motivation) and some time for individual reading (to develop importance and value). Going forward, this finding is especially important for boys who value reading more for its instrumental value than for its recreational value.

Conclusion

This study documents, over a three-year period, the effects of a book-buying grant and teacher professional learning in literacy on the motivation for reading in a middle school. The school-wide instructional focus on literacy included the development of a Literacy Exploratory, a 50-minute daily period set aside for teachers to help students develop as readers, choose books to read, and have time to be involved in a reading community. In addition, the book-buying grant supported the creation of classroom libraries, augmented the school library, supported school-wide community activities focused on reading, and enhanced the public spaces in the school with books, magazine, and book displays. Using the Motivation for Reading Questionnaire (MRQ),

students' favourable ratings of four aspects of intrinsic reading motivation – efficacy, importance, challenge, and social – increased over the course of the study.

Interview data gathered from students provided rich information about the contributions made by the Literacy Exploratory, the book-buying grant, and the school-wide focus on literacy. Students indicated that their motivation for reading has been positively influenced by the school's focus on literacy, with the suggestion that teachers continue to offer greater choice in the reading material they use in the Literacy Exploratory

Teacher Professional Learning

Based on these results, it is important to emphasize the value of several components to support motivation for reading in middle school. First, it appears important, as in other studies (Daniels & Steres, 2011; Teale & Gambrell, 2007), that administration and all teachers agree to make reading a priority. The principal's priority and support led to an environment where reading as a valuable activity was in evidence everywhere in the school. Second, there is a need for continuous professional learning for teachers, to learn to support reading skills but just as importantly, the motivation for reading. This study points to the value of supporting teacher professional learning so that they are knowledgeable about books, genres, and themes and can assist student not only in selecting titles to read, but can support the development of reading skills. Third, it is important the students have access and choice of reading material every day and in every way.

Addressing the Decline in Reading Motivation

Even with such positive gains made in students' intrinsic reading motivation over three years, it must also be recognized that the findings of this study do not contradict previous research that shows, overall, motivation for reading declines over the years a student is in school. Even though there is a trend for declining motivation from grades 6 to 8, the students at WMS maintained a significant increase in reading motivation over the same period suggesting that without the school-wide focus and the grant money, the decline could have been much greater than it was. Teachers and students contributed ideas about how to combat the decline in motivation that occurs over the middle school years, including continued attention to instructional practices that develop the student-teacher relationship, suggesting books to specific students that might interest them, and providing choice in what students read. Classroom libraries appeared to have made a difference in the lives of the students and teachers and maintaining these, over time, will be an essential component to the school's continued literacy focus.

Final Thoughts for the Future

The Literacy Exploratory and the book-buying grant contributed to the school-wide literacy in two important ways: 1) the professional learning helped teachers develop instructional strategies to meet the students' needs as developing readers and 2) the provision of an array of exemplary texts for all students in the school provided access and choice in new ways. While students did comment positively about the enjoyment of talking to peers about books, this did not translate into talking with their families in similar ways. It is important that teachers find ways to further support peer and even family interactions around reading to develop students' social motivations for

reading and that these initiatives receive attention by researchers. Parental involvement in education is widely viewed as integral to students' academic progress and reducing academic disparities in schools (Eccles & Harold, 1993). While home-school connections can be difficult to forge, they are important to developing social motivation for reading (Brozo, 2018; Moore, Bean, Birdyshaw, & Rycik, 1999). Overall, embracing a school-wide literacy focus that brings books into schools and classrooms impacts students' motivation for reading favourably and provides yet another means to affect the school experiences of middle students in a positive way.

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References

- Allington, R. (2002). What I've learned about effective reading instruction from a decade of studying exemplary classroom teachers. *Phi Delta Kappan*, 83(10), 740-747. Retrieved from <http://www.jstor.org/stable/20440246>
- Alvermann, D. (2002). Effective literacy instruction for adolescents. *Journal of Literacy Research*, 34(2), 189-208. Retrieved from http://journals.sagepub.com/doi/pdf/10.1207/s15548430jlr3402_4
- Anderman, E., Eccles, J., Roeser, R., Yoon, K., Blumenfeld, P., & Wigfield, A. (1996). Classroom influences on the value of reading. *Paper presented at the Annual Meeting of the American Educational Research Association* (pp. 1-29). New York, NY. Retrieved from <http://www.rcgd.isr.umich.edu/garp/articles/eccles96.pdf>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. Retrieved from <https://www.uky.edu/~eushe2/Bandura/Bandura1977PR.pdf>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Brannen, J. (2007) Mixing methods: The entry of qualitative and quantitative approaches into the research process. *International Journal of Social Research Methodology*, (3), 173-184. doi:10.1080/13645570500154642

- Brozo, W. (2018). Literacy achievement and motivation reconsidered: Linking home and school literate practices for struggling adolescent males. In P.O. Garcia & P.W. Lind (Eds.), *Reading achievement and motivation in boys and girls* (pp. 185-200). Heidelberg, Germany: Springer International Publishing.
- Bright, R. (2014). A middle school literacy initiative: Assessing and supporting students' motivation for reading. *Reading in the Middle*, 6(2), 3-9. Retrieved from https://www.researchgate.net/publication/274899349_A_Middle_School_Literacy_initiative_Assessing_and_Supporting_Students%27_Motivation_for_Reading
- Broadway, M. (1999). The ABCs of booktalking: Ideas to help produce terrific booktalks. *Children's Book and Media Review*, 20(2), 1-4.
- Brock, C., & Boyd, F. (2011). Fostering meaningful middle school literacy learning: Investigating beliefs and practices. *Voices from the Middle*, 19(1), 13-18.
- Cunningham, A., & Stanovich, K. (2001). What reading does for the mind. *Journal of Direct Instruction*, 1(2), 137-149.
- Daniels, E., & Steres, M. (2011). Examining the effects of a school-wide reading culture on the engagement of middle school students. *Research in Middle Level Education*, 35(2), 1-13. doi:10.1080/19404476.2011.11462085
- Eccles, J., & Harold, R. Parent-school involvement during the early adolescent years. *Teachers College Record*, 94(3), 568-587. Retrieved from https://www.researchgate.net/publication/233896430_Parent-School_Involvement_during_the_Early_Adolescent_Years
- Gambrell, L. (2011). Seven rules of engagement: What's most important to know about motivation to read. *The Reading Teacher*, 65(3), 172-178. doi:10.1002/TRTR.01024
- Gambrell, L., & Marinak, B. (2009). Reading motivation: What the research says. *Reading Rockets*. [web log] Retrieved from: <http://www.readingrockets.org/article/29624>
- Gambrell, L., Palmer, B., Codling, R., & Mazzone, S. (1996). Assessing motivation to read. *The Reading Teacher*, 49(7), 518-533.
- Gottfried, A., Fleming, J., & Gottfried, A. (2001). Continuity of academic intrinsic motivation from childhood through late adolescence: A longitudinal study. *Journal of Educational Psychology*, 93(1), 3-13. doi:10.1037//0022-0663.93.1.3
- Grams, D. (2003). E-books: Motivating students to read independently. *Research project submitted to Mingyuan Zhang, Central Michigan University*. Mount Pleasant, MI. pp. 1-16.
- Guthrie, J., & Davis, M. (2003). Motivating struggling readers in middle school through an engagement model of classroom practice, *Reading & Writing Quarterly*, 19(1), 59-85. doi:10.1080/10573560308203
- Guthrie, J., & Humenick, N. (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. In P. McCardle & V. Chabra (Eds.), *The voice of evidence in reading research*, (pp. 329-354). Baltimore, MD: Paul H. Brookes.
- Guthrie, J., & Wigfield, A. (2000). Engagement and motivation in reading. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Reading research handbook, Vol. 3*, (pp. 403-424). Mahwah, NJ: Erlbaum.

- Heller, R., & Greenleaf, C. (2007). *Literacy instruction in the content areas: Getting to the core of middle and high school improvement*. Washington, DC: Alliance for Excellent Education. Retrieved from https://www.researchgate.net/publication/234670422_Literacy_Instruction_in_the_Content_Areas_Getting_to_the_Core_of_Middle_and_High_School_Improvement [accessed Feb 9, 2017].
- Hudson, A., & Williams, J. (2015). Reading every single day: A journey to authentic reading. *The Reading Teacher*, 68(7), 530-538. doi:10.1002/trtr.1349
- Irvin, J., Meltzer, J., & Dukes, M. (2007). *Taking action on adolescent literacy: An implementation guide for school leaders*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Ivey, G., & Johnston, P. (2013). Engagement with young adult literature: Outcomes and processes. *Reading Research Quarterly*, 48(3), 255-275.
- Kennedy, E. (2009). Narrowing the achievement gap: Motivation, engagement and self-efficacy matter. *The Journal of Education*, 190(3), 1-11. Retrieved from https://www.jstor.org/stable/42744130?seq=1#page_scan_tab_contents
- Kittle, P. (2013). *Book love: Developing depth, stamina, and passion in adolescent readers*. Portsmouth, NH: Heinemann.
- Kush, J., & Watkins, M. (1996). Long-term stability of children's attitudes toward reading. *Journal of Educational Research*, 89(5), 315-319. Retrieved from <https://search-proquest-com.ezproxy.uleth.ca/docview/1290548192?pq-origsite=summon/>
- Mason, J., Stahl, S., Au, K., & Herman, P. (2003). Reading: Children's developing knowledge of words. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 914-930). Mahwah, NJ: Lawrence Erlbaum Associates.
- Marinak, B., & Gambrell, L. (2010). Reading motivation: Exploring the elementary gender gap. *Literacy Research and Instruction*, 49(2), 129-141. doi:10.1080/19388070902803795
- McElhone, D. (2012). Tell us more: Reading comprehension, engagement, and conceptual press discourse. *Reading Psychology Today*, 33(6), 525-561.
- McGeown, S., Johnston, R., Walker, J., Howatson, K., Stockburn, A., & Dufton, P. (2015). The relationship between young children's enjoyment of learning to read, reading attitudes, confidence and attainment, *Educational Research*, 57(4), 389-402. doi:10.1080/00131881.2015.1091234
- McKenna, M., Conradi, K., Lawrence, C., Jang, B., & Meyer, J. (2012). Reading attitudes of middle school students: Results of a U.S. survey. *Reading Research Quarterly*, 47(3), 283-306. doi:10.1002/RRQ.021
- McKenna, M., Kear, D., & Ellsworth, R. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30(4), 934-956. Retrieved from <http://www.jstor.org/stable/748205>
- Merga, M. (2014). Peer group and friend influences on the social acceptability of adolescent book reading. *Journal of Adolescent & Adult Literacy*, 57(6), 472-482. doi:10.1002/jaal.273
- Miller, D. (2009). *The book whisperer: Awakening the inner reader in every child*. San Francisco, CA: Jossey-Bass.
- Miller, D., & Kelley, S. (2014). *Reading in the wild: The book whisperer's keys to cultivating lifelong reading habits*. San Francisco, CA: Jossey-Bass.

- Moje, E. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A call for change. *Journal of Adolescent & Adult Literacy*, 52(2), 96-107. Retrieved from <http://www.jstor.org/stable/20111747>
- Moore, D., Bean, T., Birdyshaw, D., & Rycik, J. (1999). Adolescent literacy: A position statement for the commission on adolescent literacy of the international reading association. *International Reading Association*, 43(1), 97-112.
- Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy*. Retrieved July 24, 2017, from <https://www.uky.edu/~eushe2/Pajares/eff.html>
- Pajares, F., & Urdan, T. (2002). *Academic motivation of adolescents. adolescence and education series*. Charlotte, NC: Information Age Publishing Inc.
- Piercey, R. (2013). *Reading self-efficacy in early adolescent: Which measure works best?* (Unpublished doctoral dissertation). University of Kentucky, Lexington, KY.
- Reilly, D., Neumann, D., & Andrews, G. (2018). Gender differences in reading and writing achievement: Evidence from the national assessment of educational progress (NAEP). *American Psychologist*, 74(4), 445-458. doi:10.1037/amp0000356
- Roe, B., Smith, S., & Burns, P. (2005). *Teaching reading in today's elementary schools*. Boston, MA: Houghton Mifflin Company.
- Schwabe, F., McElvany N., & Trendtel, M. (2014). The school age gender gap in reading achievement: Examining the influences of item format and intrinsic reading motivation. *Reading Research Quarterly*, 50(2), 219-232. doi:10.1002/rrq.92
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review*, 78(1), 40-59.
- Spradley, J. (1980). *Participant observation*. New York, NY: Holt, Rinehart and Winston.
- Teale, W., & Gambrell, L. (2007). Raising urban students' literacy achievement by engaging in authentic, challenging work. *The Reading Teacher*, 60(8), 728-739. doi:10.1598/RT.60.8.3
- Unrau, N., & Schlackman, J. (2006). Motivation and its relationship with reading achievement in an urban middle school. *The Journal of Educational Research*, 100(2), 81-101. doi:10.3200/JOER.100.2.81-101
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wigfield, A., Gladstone, J., & Turci, L. (2016). Beyond cognition: Reading motivation and reading comprehension. *Child Development Perspectives*, 10(2), 190-195.
- Wigfield, A., & Guthrie, J. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology*, 89(3), 420-432. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.688.974&rep=rep1&type=pdf>

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*Appendix A: The Motivation for Reading Questionnaire (MRQ): Revised Version
(Wigfield & Guthrie, 1997)*

Reading Efficacy (three items)

I know that I will do well in reading next year

I am a good reader

I learn more from reading than most students in the class

Challenge (five items)

I like hard, challenging books

If the project is interesting, I can read difficult material

I like it when the questions in books make me think

I usually learn difficult things by reading

If a book is interesting I don't care how hard it is to read

Curiosity (six items)

If the teacher discusses something interesting, I might read more about it

I have favorite subjects that I like to read about

I read to learn new information about topics that interest me

I like to read about my hobbies to learn more about them

I like to read about new things

I enjoy reading books about people in different countries

Reading Involvement (six items)

I read stories about fantasy and make believe

I like mysteries

I make pictures in my mind when I read

I feel like I make friends with people in good books

I read a lot of adventure stories

I enjoy a long, involved story or fiction book

Importance (two items)

It is very important to me to be a good reader

In comparison to other activities I do, it is very important to me to be a good reader

Recognition (five items)

I like having the teacher say I read well

My friends sometimes tell me I am a good reader

I like to get compliments for my reading

I am happy when someone recognizes my reading

My parents often tell me what a good job I am doing in reading

Grades (four items)

Grades are a good way to see how well you are doing in reading

I look forward to finding out my reading grade

I read to improve my grades

My parents ask me about my reading grade

Social (seven items)

I visit the library often with my family

I often read to my brother or sister

My friends and I like to trade things to read

I sometimes read to my parents

I talk to my friends about what I am reading

I like to help my friends with their schoolwork in reading

I like to tell my family about what I am reading

Competition (six items)

I try to get more answers right than my friends

I like being the best at reading

I like to finish my reading before other students

I like being the only one who knows an answer in something we read

It is important for me to see my name on a list of good readers

I am willing to work hard to read better than my friends

Compliance (five items)

I do as little schoolwork as possible in reading

I read because I have to

I always do my reading work exactly as the teacher wants it

Finishing every reading assignment is very important to me

I always try to finish my reading on time

Reading Work Avoidance (four items)

I don't like vocabulary questions

Complicated stories are no fun to read

I don't like reading something when the words are too difficult

I don't like it when there are too many people in the story

Appendix B: Student Interview Question Sets

Question Set 1 – Are you a better reader than last year? How do you know? What caused you to become a better reader?

Question Set 2 – Do you like to read? Why or why not? What kinds of genres or topics do you like?

Question Set 3 – Do other people in your home read? Do you ever visit the public library or bookstores?

Question Set 4 – What other kinds of reading material do you read? (Fanfiction, blogs, websites, newspapers, magazines, etc.) Where do you like to read?

Question Set 5 – Do you like to talk with anyone about something you are reading? Who? What does your teacher do to help you as a reader? What does your librarian do to help you as a reader?

Question Set 6 – Did you enjoy the literacy exploratory? What did you like about it? What didn't you like about it? If you could give your teacher some advice about the literacy exploratory, what would you say? What did you read during the literacy exploratory?

Question Set 7 – Do the adults in your school care about reading? Do the adults in your school help you read? How?

Question Set 8 – Does your classroom have its own library? Has this made any difference to you as a reader? Do you like that? How does the classroom library help you as a reader? What would you like to see change about the classroom library? About the books that are there? Do you have any recommendations for the teachers and librarian about the kinds of books you would like to have available in the school and classroom libraries? Like a wish list?

Question Set 9 – Who suggests books to you? Do you find them on your own?

Question Set 10 – Did you know that your school received a large amount of money to purchase books for the students? What difference has this made to the school? To you?

Question Set 11 – Do you want to read a book if you know it is going to be a movie? Do you read a book after watching the movie? Do you prefer to read the book before you see the movie?

Question Set 12 – Do you follow authors on Twitter, Instagram, and Facebook? Which ones? Why? What do you like about doing this?

Question Set 13 – Do you like to read books when you know the author has a sequel for it?

Question Set 14 – How does being a reader help you in school? In your life outside of school? Do you think that it is important to be a good reader?

*These questions were used in a previous studies and publications by the author, including the book, *Write Through the Grades: Teaching Writing in Secondary Schools* (2007), Winnipeg, MN: Portage & Main and the article, A middle school literacy initiative: Assessing and supporting students' motivation for reading (2014). *Reading in the Middle*, 6(2), 3-1.

Narrative Inquiry as Relational Research Methodology and Andragogy: Adult Literacy, Identities and Identity Shifting

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Abstract

Using narrative inquiry as a relational methodology and as andragogy, the research puzzle was to deepen understanding of the experiences of women, living with limited literacies and as they engaged in tutoring. This work animates the temporal, curriculum and life making experiences of a tutee and tutor within the context of adult literacy with a focus on learning to write. As the study progressed and as trust developed, tension filled stories were experienced, shared and reimagined. Thinking through the lens of Dewey's continuity of experience we demonstrate the links between literacies, curriculum making, and efforts to shift identities. Field texts provided textured and nuanced descriptions of narrative inquiry as andragogy, while supporting the tutee to expand her literate identity and the tutor to become more relational. This work invites readers to reimagine the ways in which educators practice alongside adults who are described as struggling readers and writers.

Keywords

narrative inquiry as methodology and andragogy, tensions, writing and identity shifts

Always Start with a Story: Sandra Meets Edith

Sandra contacted adult literacy centers in a western Canadian city. She did this as part of her doctoral studies and in efforts to meet with potential research participants¹. A center director recommended Edith², who agreed to meet. Edith told Sandra she would be the one walking with a cane. Sandra saw her immediately and invited her to share a cup of tea. Edith sat down and Sandra went to get drinks. Upon return, Edith asked if there was a different location where they could talk; she did not appreciate the noise level. They took the elevator to Sandra's office. Once settled, Sandra described the proposed study and asked Edith if she had any questions. Edith told Sandra she would not sign the consent forms until she had a chance to share and read them aloud with her tutor. Edith also told Sandra she was keen to improve her reading and writing; however, she had to first check with her tutors.

As we rode up in the elevator, I sensed I was being directed by Edith; I thought about agency. After she left my office, I wondered why she had to check with her tutors, before asking questions or signing the forms (*Field note*, Oct, 2009).

Over the next 18 months, the tutor, tutee relationship, and a friendship developed, as did rich field texts (Jack-Malik, 2012). Narratively thinking with the field

¹ Ethical approval was granted from the University of Alberta (2009).

² Edith is a pseudonym chosen by the participant.

texts afforded opportunities to consider narrative inquiry as relational andragogy³ within adult literacy instruction. Specifically, to think about how narrative inquiry as andragogy supported Edith as she shifted her literacy stories and became increasingly confident in her literate identity. Furthermore, how it helped Sandra shift her teaching stories and become a more relational educator.

This article explores and documents how Edith and Sandra's experiences within an adult literacy relationship were shaped by narrative inquiry as relational methodology and andragogy. Our goal is to provide an animated portrait of Edith and Sandra's stories as they shaped tutoring and life-making. Specifically, to describe and inquire into stories when narrative inquiry as andragogy created spaces where Sandra and Edith experienced tensions (Clandinin et al., 2010) and increasingly knew the tensions as a space to consider other explanations and other forward-looking stories.

We⁴ begin by providing an overview of the frameworks that guided the research. This is followed by a short description of why the work is important, as well as researcher positioning. Next we attend to Edith's early home and school curriculum making as shaping influences. Furthermore, we discuss what Edith referred to as her traumatic stories and how they shaped and continue to shape her identities. In addition, we include artwork that Edith created to explore and describe her identities. The section that follows explores the shared experiences of Sandra and Edith as they came alongside one another during tutoring and how narrative inquiry as andragogy supported their efforts to create counterstories. We then inquire into Edith and Sandra's journaling experiences. Finally, we finish by offering thoughts as we move forward.

Understanding Edith's Adult Literacy Experiences

Following two visits to Edith's literacy centre, Sandra noted her experiences as tutee, and later as tutor⁵, fit within a traditional model. Tett and Maclachlan (2008) argued, adult literacy is regularly framed as the acquisition of skills. Enriquez et al. (2016) describe this approach as "sedimented understandings of learning" (p. 8). Edith improved; however, progress fossilized, and she refused to write. Sandra wondered why Edith diligently attended for 15 years, however, her skills were at fifth grade levels. From their first meeting, Sandra was curious about relationships Edith formed with tutors, including how she was positioned. Returning to Tett and Maclachlan (2008), we understand adult literacy discourse is often constructed using a deficit model based on what students cannot do, leading to the subordinate positioning of the tutee.

Frameworks Guiding this Study

In the section that follows we describe three frameworks (theoretical, conceptual and methodological) that provided the structure for this research. As well, we provide the rationale for their inclusion.

³ Andragogy is described as "frameworks for programs designed for the adult learner...[with] the idea that the attainment of adulthood is concomitant on adults' coming to perceive themselves as self-directing individuals" (Simonson, et al., 2012, p. 50).

⁴ As part of Sandra's efforts to move her doctoral research forward, she collaborated with Janet L. Kuhnke.

⁵ At the adult literacy centre that Edith attended, she received training to become a tutor for adults beginning their literacy journey.

Theoretical Framework

Sandra was driven by research puzzles⁶ related to identities and literacies, and how they are shifted and or sedimented over time. She wondered how a literate identity shapes identity making. Sandra therefore carefully selected narrative inquiry because this inquiry seeks to “generate a new relation between a human being and her environment - her life, community, world,” one that “makes possible a new way of dealing with them, and thus eventually creates a new kind of experienced objects, not more real than those which preceded but more significant, and less overwhelming and oppressive” (Dewey, 1981b, p. 175 as cited in Clandinin & Rosiek, 2007).

Sandra wanted to understand her and Edith’s experiences. She therefore attended to Dewey’s (1934) ideas about experience: “things and events belonging to the world, physical and social, are transformed through the human context they enter, while the live creature is changed and developed through its intercourse with things previously lived” (p. 246-247). Dewey’s notion of continuity of experience also informed this work. It helped us understand how Sandra and Edith’s early childhood, familial curriculum making experiences were a shaping influence on tutoring. Dewey (1938) wrote, “every experience both takes up something from those which have gone before and modifies in some way the quality of those which come after” (p. 35). Moreover, Dewey’s interaction allowed us to wonder “how bodies are shaped by different histories, valued differentially, and open to re-signification across contexts” (Enriquez et al., 2016, p. 9).

Finally, Dewey’s (1938) idea that an experience is educative or mis-educative based on “the inherent values of different experiences” (p. 35) also guided the work. It helped distinguish between experiences “that have the effect of arresting or distorting the growth of further experience” (p. 25) and those that supported Edith and Sandra as they struggled to shift their stories. Having thoughtfully determined the theoretical framework, Sandra, working alongside her doctoral supervisor, D. J. Clandinin⁷, made the decision to explore her research puzzles about literacy while using a narrative inquiry methodology.

Methodological Framework

Narrative inquiry is a relational, qualitative research methodology and a way to understand experience. Narrative inquirers study stories, because “narratives are the form of representation that describes human experience as it unfolds through time” (Clandinin & Rosiek, 2007, p. 40). Narrative inquiry is recursive, reflexive and relational. Throughout the study, Sandra attended to relational responsibilities and tensions as she co-composed stories and field texts⁸ with Edith (Clandinin et al., 2011). Furthermore, she negotiated with Edith as they co-composed “interim and research texts” (Clandinin, 2013, p. 49).

Sandra began with the notion of narrative inquiry as pedagogy (Clandinin & Connelly, 1998) because it “embodies potential for shaping extraordinary pedagogy in education” (Huber et al., 2013). This potential is grounded in Clandinin and Connelly’s (1998) assertion that education is at the core of narrative inquiry “and not merely the

⁶ In narrative inquiry research questions are framed as research puzzles as they create reverberations as they “bump against dominant research narratives” (Clandinin, 2013, p. 43).

⁷ D. J. Clandinin supervised S. Jack-Malik.

⁸ The stories and field texts were co-composed in the spaces between Sandra the inquirer and Edith the participant (Clandinin, 2013).

telling of stories” (p. 246). Understanding narrative inquiry as pedagogy allowed Sandra to narratively consider “who a teacher is and who a teacher is becoming is... connected with the processes, strategies, or style(s) of instruction lived out by a teacher” (Huber et al., 2013, p. 226). Sandra was working alongside a woman within an adult literacy context; therefore she began to think about the notion of narrative inquiry as andragogy. She did this because when she thought narratively about their shared experiences she understood the developing relationship with Edith was an indispensable element to the time and space where together they imagined up and then tentatively lived out counterstories. These are “narrative(s) that take up a shared but oppressive understanding of who someone is, and set out to shift it” (Lindemann Nelson, 2001, p. 95). Within the andragogical space Sandra and Edith engaged in complicated conversations⁹ (Pinar, 1995), possible because of their developing trust. They deliberately and narratively attended to the temporality of their stories, the various contexts in which they occurred, alongside the subject matter of adult literacy. Together they discussed which books to read, activities to engage and goals to pursue. They regularly experienced relatedness, tensions and connectedness between themselves, the subject matter and their goals (Macintyre & Kim, 2011).

Conceptual Framework

Sandra read widely in efforts to understand the experiences she was having. The following concepts were used to understand the experiences. Stories to live by and curriculum making as life making, guided the work. Curriculum making as life making involves the storied experiences of Sandra and Edith as they lived out this narrative inquiry. Clandinin’s (2013) “concept of stories to live by [is] a narrative term for identity” (p. 37). It allowed Sandra to see past the dominant narrative of adult literacy as the acquisition of skills, and to consider Edith’s stories as the complex narrative of shifting identities. Furthermore, because Sandra thought narratively with stories, she knew both herself and Edith were in the midst of composing stories of who they are, and who they might become. For example, Edith’s entanglement with political, societal, institutional, and familial narratives, her stories to live by, her identity, and her efforts to shift her literate identity were shaped by, and shaped, the narratives in which she was embedded (Huber et al., 2013). Framing curriculum making as life-making (Clandinin & Connelly, 1992) provided a lens from which to view Sandra and Edith’s efforts to shift their identity stories from within the nested, temporal stories of their lives.

An additional concept that is threaded throughout is tension filled moments. During tutoring and research conversations, Sandra and Edith came to know one another from the stories they lived and shared; these stories included tensions. “Tensions that live between people...are a way of creating a between space, a space which can exist in educative ways” (Clandinin et al., 2010, p. 82). Appreciating this, we carefully selected tension filled stories from the journey Edith and Sandra shared. In the next two sections, we outline the importance of the research and we position Sandra.

⁹ Pinar (1995) argued curriculum is an extraordinarily complicated conversation...He also suggested educators ‘take back’ curriculum and make the curriculum field a conversation.

The Importance of this Work

This work is important because it proposes narrative inquiry as andragogy within adult literacy education in Canada. As well, it contributes a unique perspective by exploring the literacy learning and teaching experiences of a tutee and tutor in specific contexts. Furthermore, the rich and diverse field texts allow the reader to understand firsthand the development of a literate identity, and a more relational educator. Finally, the work is important because it invites readers to reimagine the ways in which educators practice alongside adults who are described as struggling readers and writers.

Researcher Positioning and Research Puzzles

Sandra learned to read early as she sat and listened while older siblings completed homework and were read to. Learning to read was not a struggle. Sandra is and has always been an avid reader. However, when Sandra became a teacher, she regularly encountered students, who had not learned to read fluently. After a few years of failing to teach this group of children to read, she went in search of professional development specific to teaching children living with dyslexia to read. Subsequently, she left public school teaching and opened a literacy clinic where, for 11 years prior to doctoral studies, she worked with children and adults who had not learned to read. From this work she wondered how literacies shaped clients' experiences and identities. Through doctoral studies she came to understand and appreciate, Clandinin and Connelly's (1992) notion of curriculum making as "a life-making process in which identity making, that is, stories to live by, is central" (p. 221). This understanding led to research puzzles about tutoring, tutors and tutees and how separately and together they were shaping influences on identity making.

The Study Begins

Sandra recruited participants who possessed the following characteristics: had attended school where English was the language of instruction, wanted to improve their literacy, were willing to participate in tutoring, research conversations and willing to take photographs.

When the study began, Edith was decoding at a fifth-grade level as determined by an informal reading inventory (IRI)¹⁰. Sandra was mindful of the passages selected, and how they might be experienced by Edith¹¹. Her comprehension, when read to was significantly better; she tested out at tenth grade. She was a reluctant writer, who when asked to write a paragraph describing her hopes for the future, wrote:

I hope to butter myself.

I hope to help my daughter and students.

I like to help Sandra in her studies.

I like to be butter in very day live. (*Research Conversation*, Nov, 2009)

Sandra implemented an Orton-Gillingham (2018) approach, which is an "explicit, multisensory, structured, sequential, diagnostic... approach to teach literacy when reading, writing, and spelling does not come easily" (para, 1). Over the course of

¹⁰ An informal reading inventory is administered to an individual. It includes graded passages, of increasing difficulty, and a series of comprehension questions for each reading.

¹¹ Crowther et al. (2001) reminds us to be mindful of how the use of children's reading levels contributes to the deficit positioning of adult learners.

six-months there were 59, 90-minute tutoring sessions. Throughout the study there were monthly research conversations.

Attending to stories Edith shared from early familial, school and community curriculum making and stories from the tutoring sessions, field texts were created. Thinking narratively with the field texts within the metaphorical, three-dimensional inquiry space¹², interim research texts and research texts were composed (Clandinin & Connelly, 2000). These texts looked backward and forward, inward and outward, while situating experiences within specific places. The three-dimensional inquiry space allowed us to pay attention to temporality (past, present & future) of stories by learning about historical narratives which were shaping influences. Sandra and Edith also attended to sociality by discussing their inner and outer worlds including the personal and social. Finally, they attended to the shaping influences of the physical place(s) where their experiences occurred (Connelly & Clandinin, 2006). When tutoring was completed, Sandra and Edith sat down and negotiated texts. Once Edith and Sandra were happy with the texts, Sandra thought narratively with the texts to identify narrative threads.

Edith's School and Home Curriculum Making

In small-town Ontario, Edith failed grade one. The following September she returned to the same class and teacher. The assumption, another year would result in Edith learning to read. She did not. In grade three, she was described as a “slow and struggling reader” (*Report Card*, 1968). In grade four, Edith was assigned to a contained, special education classroom where she remained for the duration of her schooling. This was also the year Edith and her sister were apprehended by child welfare services and placed with maternal grandparents. For high school she was streamed into a two-year, occupational program.

Mindful of temporality and the connections between stories, the narrative inquiry three-dimensional space, allowed us to place Edith's school experiences within political, familial and social narratives. Edith's high school experiences were shaped by federal initiatives embedded within specific sociopolitical stories. Enriquez et al. (2016) argued, “complex sociopolitical contexts, which include diverse literacy policies...often work to depersonalize and disembodify” (p. 9). The *Technical and Vocational Training Assistance Act of 1960* (Government of Canada, 1961-62 & 1962-63) influenced Edith's high school experiences. Goard (1965) described the act as “financial assistance to the provinces to develop technical and vocational services within... educational systems” (p. 396). John Robarts, Ontario Minister of Education (1968), welcomed the dollars while overhauling the curriculum. The *Robarts Plan*, introduced streaming which grouped students (Edith) by ability, either by individual subject or for all, or almost all classes. Assignment to an ability group was temporary, changed during the year, or relatively permanent (Ontario Institute for Studies in Education, 2010). Edith's streaming into the lowest group was permanent. In Ontario, there were three streams: a two-year course designed to prepare students to enter the workforce (Edith); a four-year vocational training program; and, a five-year academic pathway towards university. Smaller (2000) argued the following:

¹² Narrative inquirers and participants are situated within a three-dimensional space with temporality, sociality, and place serving as the three dimensions...thinking narratively means thinking through the three-dimensional space to understand lived experience (Clandinin, 2013).

Streaming works to sort and divide youth... Ironically, this force is supported in large part through the ideology of 'scientifically' determined, 'objectively' measured, levels of 'intelligence' or 'ability' - supposedly neutral, objective criteria, which nevertheless, results in significant social separation in our schools and in our society. (p. 3)

Edith was streamed into a contained, special education class in elementary school. We wondered how her familial curriculum making, including stories grounded in tensions: personal, familial, social and economic were part of the streaming decision (see Figure 1). Concerns noted by Smaller (2000) were experienced by Edith. During a research conversation, she described her early and school life:

Mom didn't care if we went to school and they never made us do homework. We didn't have many friends coming over because we were like outcasts; we were shunned. Other parents would not allow their children to come over. I remember sleeping at one friend's, once we moved to my grandparents. It was degrading because other students had parents who cared and ours didn't. We were teased because of my parents and their drinking. Sometimes we went to school in unwashed, dirty clothes. Sometimes we didn't have breakfast or lunch. There were six of us kids, so everyone knew about our family. Teachers knew what was going on at home; some cared, but most didn't. There was one teacher who brought us food, but that made it worse, because children said we were getting favouritism. We were teased because of our family and I was excluded because I was in the special class, but it's all rolled into one¹³ (*Research conversations*, Nov, 2009).



Figure 1. Edith experienced tensions at home and school.

¹³ Research conversations and journal entries were edited for readability.

These tension filled memories lived and found expression as she “live[d] and told” (Clandinin, 2013, p. 196) her stories in other places (blue arrows indicate her tensions). This image was created as part of our efforts to push at the boundaries of what constitutes an academic text and to make the reading more accessible. Our intention is to create spaces, where the reader stops and considers the ‘text’ through a different lens and perhaps in doing so, encourages the reader along a different path, one not readily available when text is limited to words on a page (de Mello, 2007, p. 220).

Edith’s early mis-educative (Dewey, 1938) school and familial curriculum making experiences were an ongoing influence on her stories. Edith’s label as a ‘slow and struggling reader’ was deficit based. It occurred early and it endured. Sandra requested and received her student records; no psychoeducational testing occurred. Smythe (2015) argued, “literacy policy is never just about literacy; its meanings and practices are formed and re-formed in a network of ever-shifting actors, texts and practices” (p. 16). Edith’s actors, texts and practices included a deficit label, streaming, and mis-educative familial curriculum making. Clandinin (2013) purports “the stories we live by, and the stories we live in, over time are indelibly marked for all of us by stories of school” (p. 21). Edith’s school and home stories regularly influenced tutoring, research conversations and her efforts to story herself as literate.

As an adult, Edith had a vehicular accident. Her rehabilitation included a psychoeducational assessment. The psychologist (1985) noted, “... her difficulties in learning to read have an emotional and familial etiology” (p. 6). We understood this as another incident of deficit positioning, the child of ‘that’ family. The psychologist wrote:

Edith is of average intelligence. It must be stressed that since she had average to above average performance in three of the five subtests, her potential abilities, including the fact she cannot read or write would indicate average intellectual abilities... The scores as suggested here would certainly not have required such a dramatic special education intervention during her early years in Ontario. I suggest... she was inappropriately placed... She is a learning-disabled adult with a language deficit and in particular a reading deficiency. (p. 6)

In the midst of mis-educative familial and school curriculum making, how did Edith make sense given she possessed average intelligence? Enriquez et al. (2016) reminded us “... individual meaning-making, institutional and ideological power structures represent individuals as constrained agents but agents and meaning-makers just the same” (p. 14-15). Many years later, and as part of our study it was apparent, Edith continued to make sense through a deficit lens.

Edith’s Traumatic Stories.

Edith repeatedly shared what she called her traumatic stories (see Figure 2) and her chronic pain. Sandra wondered why Edith told and retold these stories. Was Edith’s repeated telling of traumatic and chronic pain stories purposeful as part of her efforts to live out new stories? Sandra observed a “colliding of shapes and images” (Greene, 1995, p. 80) as Edith “struggled toward some new integrations of... [her] perception of being alive” (p. 84), embedded with a desire to improve her literacies. Returning to the three-dimensional narrative inquiry space allowed us to simultaneously examine multiple shaping influences within the context of Dewey’s (1938) continuity.

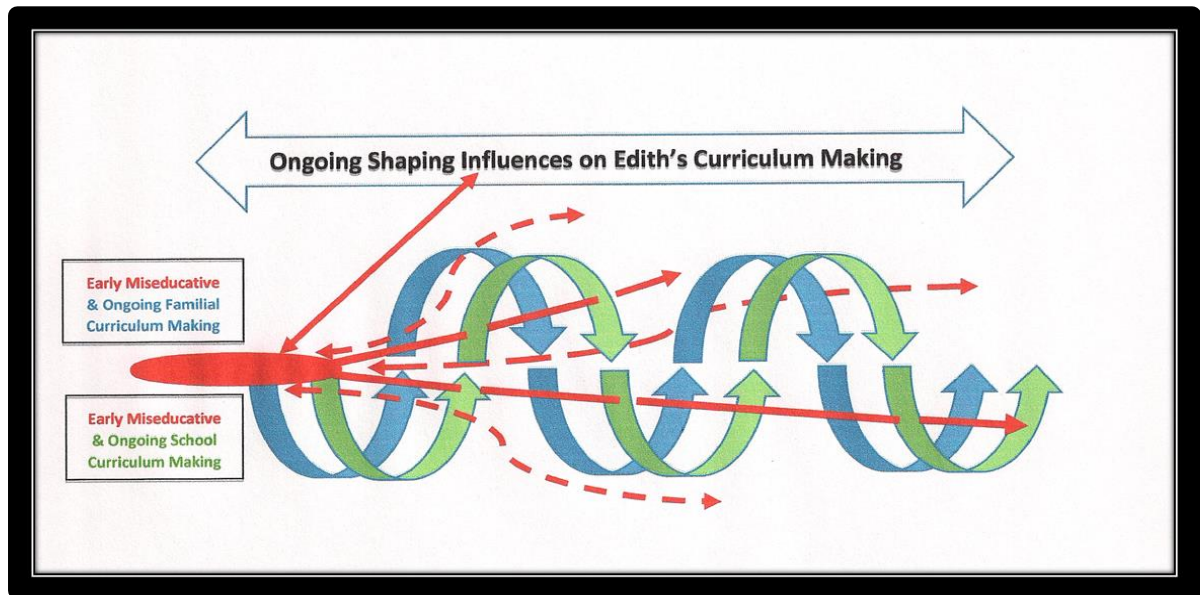


Figure 2. This image was created in an attempt to illustrate how early miseducative home and school curriculum making is an ongoing influence in one's life. This is important because it helped Sandra and Edith understand how their developing relationship, including the tutoring was being shaped by previously lived experiences. Once this was acknowledged, including naming the tension, they were able to know the spaces as potentially educative.

Edith Uses Pictures to Illustrate Her Identity

As their relationship developed, and as trust ensued, Sandra invited Edith to take photographs and videos in efforts to provide non word and text centric avenues to understand her curriculum making (see Figure 3). Edith brought "texts" to research conversations. She described them. Once Edith felt Sandra understood, they co-composed written text.



Figure 3. Edith constructed a metaphorical wall made up of her dogs, position as tutor, 'her agency', and a refusal to write.

My Dogs

I took a picture of my dog (see Figure 4) because he never judges me or tells me I can't. He supports me by not leaving me and never making fun of me. I deal with rude people who are verbally abusive because I struggle. My dog never, ever does that. He accepts me no matter how I read and write. He brings me comfort after I experienced a difficult day. Struggling with reading and writing is an invisible disability. Even though people cannot see my learning disability, I often feel isolated. My dog comforts me and does not care about my literacies. He makes a hard life a little easier. (*Research conversation, May, 2010*)



Figure 4. Edith's Dog

Journal Writing

Edith responded to the Orton-Gillingham tutoring; her reading ability improved quickly. Sandra knew it was time to include writing activities, specifically journal writing. Edith repeatedly described frustrations she experienced when attempting to write a journal¹⁴. She was adamant she **could not** and **would not** journal. She was happy to talk; she offered to speak into a tape recorder because she said there was a huge difference between what she could say, versus write. She also said spelling was impossible; often she could not understand her writing (*Research conversations*, Nov & Dec, 2009).

Tutoring for two weeks, and on a day, Edith had not referenced pain, Sandra described journal writing and the writers' workshop¹⁵. She explained journals would be a place where Edith could write, ask questions and reflect on her learning and her life.

Context for Could Not and Would Not

During a research conversation Edith shared this story. Following her vehicular accident, lawyers instructed Edith to keep a journal. She was to document activities of daily living she could no longer do independently. Edith was acutely frustrated by the request and her inability to write as directed. Lawyers told her the financial compensation would have been greater had she documented (June, 2010). Edith shared another story, which included fears. Sandra wondered how these stories were shaping reactions to the journal request.

Sandra wrote a response to Edith:

I wish I had a magic wand. I would wave it over you, and never again would you feel like you are back in elementary school where the children and teachers

¹⁴ Journals were given to participants early in the study. Edith took hers home following each tutoring session and returned it the next meeting. Sandra took it home, read it and typed out a letter in response to the issues Edith raised and to issues raised while tutoring.

¹⁵ Writing workshops are organized to engage students in writing. Students are taught to choose their own topics and to develop their writing style (Atwell, 2015).

are making fun of you. You are teaching me over and over again how these memories influence learning. (*Response to Edith's journal*, Feb, 2010)

Transcript from the Day Journals Were Introduced

Sandra: I am going to give you a pen and a journal. You can write or draw anything you want. I don't want you to use a dictionary. Please write in pen. Be guided by one thing, if it makes sense, leave it.

Edith: Can I look words up in the dictionary?

Sandra: No.

Edith: I can't look words up? You're taking all the fun out of it.

Sandra: The focus is writing, not spelling. It's for your eyes only. If you choose to share, I'll be grateful.

Edith: You know I am a perfectionist; **I hate this!** (firm voice). I like my things organized and right. I can't do this journal. I tried; other tutors asked me, it never worked. It just worked to get me frustrated. I can't do it! I won't do it! (Edith's voice is loud, commanding).

I am sitting across from Edith, not wanting to react. I step back and formulate a response.

Sandra: Will you try?

Edith: Yes! But it won't work! It never works!

Sandra: Thank you (*Tutoring*, Dec, 2009).

Inquiring into the Journal Writing Request

I repeatedly listened to the recording of the tutoring session while thinking narratively through the three-dimensional inquiry space (Clandinin & Connelly, 2000). Edith had a strong and escalating reaction to the journal requests. I recalled the frustrations she described when she could not get her thoughts down on paper. I also remembered her desire to improve. I want to be cognizant and respectful of the shaping influences of Dewey's continuity (1938) and I want to support Edith's articulated desires to improve her literacy. I am apprehensive and do not want to insist on journals (*Field notes*, Dec, 2009).

Struggling to reconcile the temporality of mis-educative experiences from Edith's early curriculum making and the subsequent shaping on tutoring, I attempted to thread the narratives through time. Using imagination (Greene, 1995) and the three-dimensional inquiry space, I imagine Edith as a small, sometimes hungry, dirty, uncertain, and afraid little girl. Next, a child failing and repeating grade one. Then Edith, living safely with grandparents. Next, a young woman, returned home to care for kid brothers. Across my imaginings, there is Edith a child, youth and young person enduring mis-educative experiences (Dewey, 1938). Inquiring into these tensions filled imaginings, I remind myself Edith is a grown woman, a few years younger than me and increasingly my friend. She is not a child, with parents who are paying for tutoring. She is a woman I respect and admire. What does this mean in relation to the journals, can I insist? What is the best way to navigate Edith's reluctance to journal, alongside her desire to improve literacies? Furthermore, who am I in the tension filled space, tutor, friend, or expert? I am also thinking about 15 years of adult literacy tutoring, how did Edith refuse to journal (*Field note*, Jan, 2010).

Tett and Maclachlan (2008) state "the tutor... [is] a holder of valued knowledge... She is therefore in a position of great power" (p. 663). Regardless of the

propensity for the tutor-tutee relationship to be hierarchical, Edith refused to journal for 15 years. Smythe (2015) stated “adult literacy education requires multi-skilled educators able to navigate diverse contexts of practice” (p. 7) including refusals to write. This did not happen; Edith would not write. In so doing she demonstrated agency in the midst of temporality from early mis-educative (Dewey, 1938) stories. Edith **would not** permit “laughing into... [her] back” (*Research conversation*, Nov, 2009). I am also thinking about Edith as she became a tutor for non-readers. I wonder if in part she did so to story herself into the power embedded within tutor-tutee relationships (Belzer, 2006). Moreover, I wonder if Edith created a metaphorical wall, constructed to prevent revisiting old or living out new traumatic stories (see Figure 5).

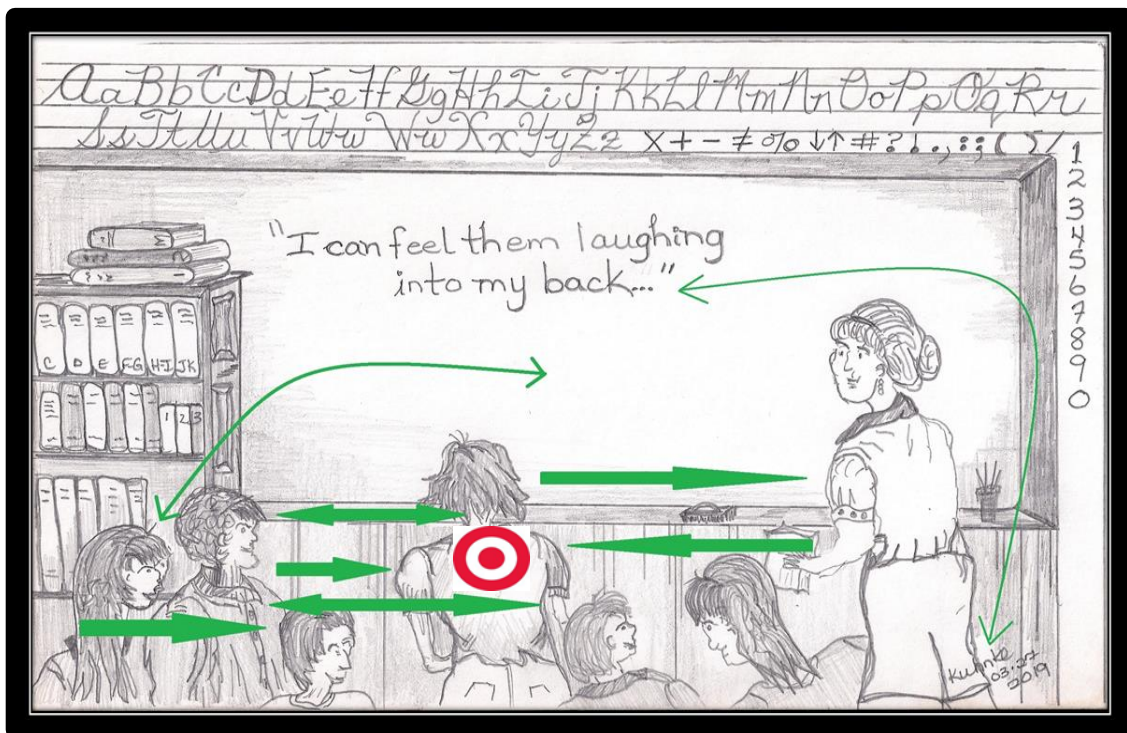


Figure 5. The children didn't treat me very nice in that class. They made fun of me. The afternoon teachers would make me stand up and read and the children would laugh. I was in the front row and I could feel them 'laughing into my back', but still I had to do it. It belittles you and you learn to do anything to avoid it (*Research conversation*, Nov, 2009). This image was created in response to this story that Edith shared during a research conversation. We are including it because of its potential to engage the reader and create a space where the reader lingers and imagines what it would feel like to have a teacher who purposefully organizes an experience that results in all of the students laughing at him/her. This is precisely what Edith repeatedly endured.

Temporality, Continuity and Andragogy as Shaping Influences

Edith wanted to create new, educative, literacy stories; however, the temporality of her past, continued to shape her efforts as she repeatedly told and retold her traumatic stories. Inviting Edith to participate in the study, deposited her in the midst of many mis-educative memories. Narrative inquiry as andragogy, included a way to talk about and reflect on Edith's traumatic stories. Sandra and Edith discussed

her early mis-educative curriculum making stories while considering how they continued to be shaping influences. Considering temporality and continuity allowed them to understand their stories in more coherent ways. Lingered within tension filled moments, they slowly understood they were creating spaces to imagine and try out educative, forward looking stories. Edith became more confident, and willing to imagine postsecondary educational opportunities. Furthermore, these tension filled, complicated conversations (Pinar, 1995) reminded Sandra she could tutor, and engage in research conversations, as long as she foregrounded the relational.

Trust Develops and Edith Continues to Share

I think the isolation I feel is one of the reasons I have been involved for such a long time with adult literacy centres. When I go there, I am surrounded by people who struggle like I do. I feel safe; I don't worry about someone hurting me or reminding me of earlier times. I am comfortable there and I can help others who are beginning to read. (May, 2010)

Adult literacy centres were safe for Edith. She knew them as places she would not be ridiculed, and where she could make a contribution. She did not, however, value them as a place to continue to improve her literacies, or as a bridge to post-secondary institutions. Her attendance includes a primordial need to be safe.

I am thinking about Edith's literacies, her traumatic stories and how they "...imparted a shape to...[her] childhood" (Greene, 1995, p. 74). I imagine temporal, embodied reverberations shaping Edith's identities and her attempts to shift them. I am also thinking about the energy required to construct and maintain a metaphorical wall in the midst of cultural, social and institutional narratives that often assume adults are literate. When it is discovered one is not, reactions are often swift, negative, hurtful and potentially result in traumatic stories. Edith knew to avoid these at all costs.

My request that Edith journal in pen and not use a dictionary may have dislodged one of the carefully constructed bricks in her metaphorical wall. As Edith struggled to feel safe, her anger and a refusal to journal were the only options because she **would not** endure another traumatic story. (Jack-Malik, *Field note*, May 2010)

Sandra's Stories

Sandra was aware Edith's anger and refusal to journal called forward her own tension filled stories from early curriculum making, including a pressing need to avoid conflict. Her reaction was to abandon journal writing; however, in response (Jack-Malik & Kuhnke, 2019) she recalled the importance of literacies, including the potential emancipatory capacity embedded within 'texts'. On one hand was her need to avoid tension, on the other, was her personal practical knowledge¹⁶ (Connelly & Clandinin, 1988) which valued literacy. Sandra revisited research conversations where Edith repeatedly said she wanted to get her thoughts down on paper. Dwelling in tensions, and in conversation with her doctoral supervisor, D. J. Clandinin, a decision was made to continue with journal writing.

¹⁶ Personal practical knowledge: the knowledge is personal and forms the base of teachers' actions for practice (Connelly & Clandinin, 1988).

The following entry further animates the complexities embedded within the journals¹⁷. Edith wrote:

I had a very bad night. I got up with my daughter and then she went to work. I went back to bed before I went for my class. I was telling Rico¹⁸ about my dream. I also told her about the journal that I am writing - that Sandra told us to do. She thought it was a very good idea (idea). I told Rico that I did not like to write a journal. I find it very frustrating. But I thought I would give it a chance. Rico thought I did well to try. I am very happy I am going to the University for classes. I can learn a lot from Sandra. I get very excited (excited) about our class. I tell everybody about them. I find I am getting more confident with my spelling. (Nov, 2009)

In December (2009), Edith's journal contained the following letter to Sandra.

The more I worked on the journal I hated it. I found that I couldn't put my complete thoughts on paper. I could put down simple details of what I did but not my true feelings in my heart (heart). I would have rather done bookwork or worksheets. I even stopped my personal reading. That made me mad. My other tutor and I sat down and wrote this letter to you because she knows how frustrated I am by doing the journal. And my vertigo did not help me, either.

Sandra (*Field note*):

It was difficult to read and respond to these journal entries. In my arrogance, I never imagined the journals would draw forward so many tension-filled stories. It feels like they hold the potential to derail me, our study, and relationship. I am unsure of myself as a teacher, a woman, and as one who increasingly knows Edith. I want to pass on the journals. I do not want to continue with an activity that is causing Edith frustrations and causing me conflict. I had a second discussion with D. J. Clandinin (Jan, 2010).

During Sandra's weekly doctoral meeting, Dr. Clandinin described the journals as a conversation. She suggested Edith was speaking to Sandra and Sandra was speaking back in her response letters. Framing the journals this way allowed Sandra to shift who she was as she read and responded to Edith's writing. No longer was she tutor and researcher; she was increasingly Edith's friend. This allowed her to read without feeling as if her personal practical knowledge was under siege. It also allowed her to experience narrative inquiry as andragogy because Dr. Clandinin's reframing of the journals as conversation, created a space for Sandra to wonder who she was as a tutor and how her stories were shaping the space between her and Edith. Working through the complex tensions, Sandra came to appreciate the value of the journals as a space where ideas were written and shared that might not have been shared during face-to-face communication (Jan, 2010).

In response to Edith's journal entry Sandra wrote her the following letter.

I wanted to speak about the frustration you experienced writing the journal. Let me begin by saying if you are more comfortable using a pencil, please feel free to do so. Moreover, if you would like to use a dictionary, again feel free. The purpose of the journal is to provide a space to write about things that are happening, questions you have about tutoring, things you are wondering about

¹⁷ This is how Edith's writing appeared. She could not tolerate having written a word that once on the paper she knew was wrong. Bracketed words were looked up in the dictionary. She didn't want Sandra to think she cheated, therefore she explained (*Field note*, December 2009).

¹⁸ Rico was Edith's long-standing, volunteer tutor.

or anything you choose to write about. There is no one way to use the journal. It was not my purpose or hope that the process would frustrate you and for that I apologise. I hope you will continue to write and share your thinking. Thank you for taking the time to write me a letter to express your frustration. I am confident that in the not too distant future you will be more than able to put your ideas down on paper in exactly the form you feel represents your ideas, creativity and imagination. (*Response to Edith's journal*, Jan, 2010)

Sandra hoped her letter would ease the tension; however, new entries introduced new layers of complexity.

Edith's Continues to Struggle to Shift Her Stories

In January (2010) Edith wrote and read aloud during tutoring:

Dear Diary, I know it's been 3 weeks since my last entry, but my thoughts are inportent to write in my journal. I know Sandra likes to read what I am about. I know I can write her anything and she always will write back to me. I started back at the university for my classes. They mean a lot to me too go too the class on Mon, Tues, Thurs. I wanted to say I like the letter Sandra wrote to me. The letter ment all to me. I know Sandra can understand my sayings. I have to get more confidce in myself. I have to stop saiding that I cannot do thing and try my very best work. I can do it.

Edith: (when she finished reading stated) I know confidence is spelled wrong.

Sandra: Remember, the journal is not a spelling test. You read the word, it was correct, the sentence was sensical and the paragraph was outstanding.

Edith: Yeah, I know, but it bugs me so much to see it down there on the page and know it is wrong. Also, I know I have to get away from using 'I like'. There are so many other words. I am confident with 'I like' and I know how to spell it. There are so many other words in the dictionary. I have to get away from using the same words.

Sandra: It is exciting to hear you talk about your writing this way.

Edith: When I look in the dictionary, sometimes I find other words. They have other words in there that mean the same.

The Journal Writing and Journal Responses Continue

Edith wrote entries; Sandra responded with letters. Ideas mentioned in their written correspondence found their way to research conversations and tutoring sessions. Increasingly the three spaces, tutoring, research conversations, and the journals included the unexpected; they were generative. This was evident during a research conversation when Edith stated:

I have to start and believe in myself that I can do the work and if I make a mistake it is ok. I should fockes [focus] on the work I am doing now rather than on the past. I feel if something is bothering me I should confront the problem and get it solved (Jan, 2010).

In April (2010) Edith further demonstrated the generative quality of her writing, thinking and learning:

I was focusing on what I was in the past on what I couldn't do but now I'm focusing on, now I can do this. I am really enjoying it, like I mean these classes mean a lot to me. They fit me, I am so focused. When I come home, I have to get right away to my homework. It's so fresh in my mind I want to get my

thoughts right down right. That's exciting for me. Like many times tutors asked me to do a journal. I would start but I would never finish. I **would never**. I would do it a couple days and that would be it. But for you, you read it and give me input on it and it's really good to get your input. I'm thinking you're not marking spelling mistakes and you're not writing in red pen. You focus on what I'm writing down but you're not getting into the nitty-gritty. In your letters you tell me how you're feeling about what I've writing. Well that's important to me because I thought I'd never be able to put my thoughts down and someone else would be able to read it.

In response Sandra wrote:

I wanted to write a little bit about how you described your difficulties when trying to get your thoughts down on paper... Your journal entries are thoughtful and very engaging to read and think about. (*Field note*, April, 2010)

As their journey continued Edith regularly brought questions to the research conversations.

Edith: Do my journals make sense?

Sandra: Yes, they make sense; I look forward to reading them. Your thoughts give me lots to think about.

Edith: What do you think about?

Sandra: Who I am as a teacher and friend. I think about you. I'm not sure I would have the courage to get up three times a week and come to the university if I was in pain. Can you talk about that?

Edith stated:

I can't, I can't, I can't. I don't know the words to give you because I like coming here. I meet my tutors, Rico and May at coffee shops, and they give me the help but I find this, here with you, I am in heaven. I am learning, learning so much. I tell people I am in heaven when I'm at the university. With you, for my classes. I am at the university, learning with you. (*Research conversation*, Dec, 2009)

Inquiring into this exchange, Edith's describes what she does with her tutors as "they give me the help, but". Edith met her tutors at coffee shops. Writing instruction was never part of their meetings. Sandman-Hurley (2008) found "writing instruction and strategies were included in tutor training, but of all the skills, tutors felt the least prepared to teach writing" (p. 101). This lack of preparation complimented Edith's refusal to write. D. J. Clandinin supported Sandra to consider narrative inquiry as pedagogy. Therefore, Sandra began to think about tutoring, journaling and research conversations as places where they could discuss tensions. Moreover, she began to think about narrative inquiry as andragogy.

Concluding Thoughts

Edith

As Edith journaled and engaged in research conversations, she began to imagine a counterstory (Lindemann Nelson, 1995), to her deficit-based narratives. At the outset, Edith storied herself as a non-writer. This understanding was enveloped within traumatic, early home and school curriculum making. The trust and safety inherent within narrative inquiry as methodology and andragogy supported Edith's efforts to compose counterstories. Specifically, Edith's journal entries and Sandra's responses were a safe space where she shared her thinking about who she was, who she

increasingly knew herself to be and who she occasionally imagined she might become. Greene (1995) helped Sandra understand the process Edith was engaged in:

to speak of a dialectic is to speak of forces in contest: the factors that hold us in place, that stand in the way of our growing, and the factors that provoke us to act on our desires, to break through the obstacles, and to become different, to be. (p. 112)

Edith's early familial curriculum making did not include activities "responsive to, or shaped by, the needs of a family to have food, shelter, to share love, [read and write]...and so on" (Clandinin et al., 2011, p. 25). Rather it revolved around the consuming demands often present in homes where dysfunction occurs. Edith's school making was embedded in deficits. She needed an adult to care and advocate for her. In the absence of such an adult, she constructed meaning hewn from experiences with parents, grandparents, children, subject matter, curriculum outcomes, teachers and places. When the study began, Dewey's (1938) continuity persistently shaped the tutoring, research conversations and their relationship. Narrative inquiry as andragogy allowed Edith and Sandra to inquire into the shaping influences of early experiences and to wonder who they might become if they told different stories. Edith began to live out stories that incarnated a writer's life and increasingly Sandra shifted her focus from expert to a relational educator where she had her ideas "pushed in ways...[she] might never...[have] imagined" (Clandinin, 2013, p. 7).

Edith regularly demonstrated agentic behaviour. For example, on the day Sandra met Edith, she demonstrated agency by asking for a quieter location. Furthermore, it was Edith who commented the tutoring sessions were insufficiently long at 60 minutes; they were changed to 90 minutes. In addition, her refusal to keep a journal was an act of agency; she made a choice. Each day she wrote in her journal, she risked being re-traumatized. However, she valued the journal conversation because she knew she was becoming a writer, who could get her thoughts down on paper and have them understood. She wanted this; therefore, she was willing to take the risk. This is agency. Edith arrived at the study with a well-developed agentic identity, regardless of her deficit positioning as one with limited literacy. How would all of her tutoring experiences have been different, had Edith been known as a woman of strength?

As Edith increasingly attended to content, sentence structure and variety, word choice and her willingness to write, her literate identity expanded. What might have been, had Sandra forgone journaling. Greene (1995) stated, "learning to write is a matter of learning to shatter the silences, of making meaning, of learning to learn" (p. 108); this is precisely what Edith did. As her literate identity stories developed, Sandra wondered how teachers, including herself are complicit in mis-educative school stories. Moving forward, Sandra imagines educators intentionally creating spaces to listen, make decisions, discuss, write about and respond to tension filled stories. Greene (1995) argued "we need to make it possible for writers to name not only the shape and byways of their lived world, but the problems and predicaments that have stopped and silenced them" (p. 108).

Sandra

Dwelling within tension filled stories and living out narrative inquiry as methodology and andragogy, Sandra expanded her understanding of how to teach and be in relationship with adult literacy learners. Edith's loud voice and refusal to journal could have put a stop to the journaling; however, narrative inquiry as andragogy

afforded opportunities to linger in the tensions. Struggling to compose a forward-looking story that acknowledged early shaping influences and in conversation with Edith and D. J. Clandinin, Sandra understood other stories were possible.

A Last Thought

Students continue to go to school and not learn to read and write proficiently. Who will come alongside these children (Clandinin, 2013)? Every student who struggles with literacy requires a consistent, caring adult who persistently advocates for early assessment, research-based remediation and accommodations, regardless of their home curriculum making.

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References

- Bader, L. A. (2005). *Bader reading & language inventory* (5th Ed.). Boston, MA: Pearson.
- Belzer, A. (2006). Less may be more: Rethinking adult literacy volunteer tutor training. *Journal of Literacy Research*, 38(2), 111-140.
- Clandinin D. J. (2013). *Engaging in narrative inquiry*. New York, NY: Routledge.
- Clandinin, D. J., & Connelly, M. (1992). Teacher as curriculum maker. In P. W. Jackson (Ed.), *Handbook of research on curriculum* (pp. 363-401). New York, NY: Macmillan.
- Clandinin, D. J., & Connelly, F. M. (1998). Asking questions about telling stories. In C. Kridel (Ed.), *Writing educational biography: Explorations in qualitative research* (pp. 245–253). New York, NY: Garland Publishing.
- Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry*. San Francisco, CA: John Wiley & Sons.
- Clandinin, D. J., Murphy, M. S., & Huber, J. (2011). Familial curriculum making: Reshaping the curriculum making of teacher education. *International Journal of Early Childhood Education*, 17(1), 9-31.
- Clandinin, D. J., & Rosiek, J. (2007). Mapping a landscape of narrative inquiry: Borderlandspaces and tensions. In D. J. Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 35–76). Thousand Oaks, CA: Sage.
- Clandinin, D. J., Murphy, M. S., Huber, J., & Murray Orr, A. (2010). Negotiating narrative inquiries: Living in a tension filled midst. *The Journal of Educational Research*, 103(2), 81-90. doi: 10.1080/00220670903323404
- Connelly, F. M., & Clandinin, D. J. (1988). *Teachers as curriculum planners: Narratives of experience*. New York, NY: Carnegie Corporation.
- Consulting Psychologist. (1985, May). *Psychological assessment* [private psychological assessment report]. (p. 1-6).
- Crowther, J., Hamilton, M., & Tett, L. (Eds.). (2001). *Powerful literacies*. Leicester, UK: NIACE.
- de Mello, D. M. (2007). The landscape of arts in narrative inquiry landscape. In D. J.

- Clandinin (Ed.), *Handbook of narrative inquiry: Mapping a methodology* (pp. 203-223). Thousand Oaks, CA: Sage.
- Dewey, J. (1934). Art as experience, later works, 1935-1953, Volume 10. In J. A. Boydston (Ed.). *The collected works of John Dewey*. Carbondale, IL: Southern Illinois University Press.
- Dewey, J. (1938). *Experience & education*. New York, NY: Kappa Delta Pi.
- Dewey, J. (1981). *The later works (1925-1953): Volume 10. Art as experience*. In J. A. Boydston (Ed.). Carbondale, IL: Southern Illinois University Press.
- Dewey, J. (1981b). *The later works, 1925–1953: Vol. 4. The quest for certainty: A study of the relation of knowledge and action* (J. A. Boydston, Ed.). Carbondale, IL: Southern Illinois University Press.
- Enriquez, G., Johnson, E., Kontovourki, S., & Mallozzi, C. A. (2016). *Literacy, learning, and the body*. New York, NY: Taylor & Francis.
- Greene, M. (1995). *Releasing the imagination*. San Francisco, CA: Jossey-Bass.
- Goard, D. H. (1965). Current developments in Canadian technical and vocational education. *The PhiDelta Kappa*, 46(8). Retrieved from <http://www.jstor.org/stable/20343389>
- Government of Canada. (1961-62 & 1962-63). *Survey of vocational education and training*. Retrieved from http://publications.gc.ca/collections/collection_2017/statcan/81-209/CS81-209-1963.pdf
- Huber, J., Caine, V., Huber, M., & Steeves, M. (2013). Narrative inquiry as andragogy in education: The extraordinary potential of living, telling, retelling, and reliving stories of experience. *Review of Research in Education*, 37(1), 212-242. doi:10.3102/009173X12458885
- Jack-Malik, S. (2012). Literacies & three women's ongoing struggles to shift their identities: A narrative inquiry. [Unpublished doctoral dissertation]. University of Alberta, Edmonton, AB, Canada.
- Jack-Malik, S., & Kuhnke, J. L. (2019). Currere, collaboration, and our tenure track journey. *Currere Exchange Journal*, 3(1), 18-30.
- Lindemann Nelson, H. (2001). *Damaged identities, narrative repair*. Ithaca, NY: Cornell University Press.
- Macintyre, M, L. & Kim, J-H. (2011). Investing in the curricular lives of educators: Narrative inquiry as pedagogical medium. *Journal of Curriculum Studies*, 43(5), 679-695.
- Ontario Department of Education. (1968). *Living and learning: The report of the provincial committee on aims and objectives of education in the schools of Ontario*. (Pub. No. CX5636). Retrieved from <http://www.connexions.org/CxLibrary/CX5636.htm>
- Ontario Institute for Studies in Education. (2010, December). *The facts on education. Should we be streaming students?* Retrieved from <https://www.edcan.ca/wp-content/uploads/cea-2010-foe-streaming.pdf>
- Orton-Gillingham Approach. (2018). *What is the Orton-Gillingham approach?* Retrieved from <https://www.ortonacademy.org/resources/what-is-the-orton-gillingham-approach/>
- Pinar, W. F., Reynolds, .W, M., Slattey, P., & Taubman, P. (1995). *Understanding curriculum: An introduction to the study of historical and contemporary curriculum discourses*. New York, NY: Peter Lang.

- Sandman-Hurley, K. (2008). Volunteers tutoring reading-disabled adult literacy learners: A case study. *Adult Basic Education & Literacy Journal*, 2(2), 94-103.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education*. (5th ed.). New York, NY: Pearson.
- Smaller, H. (2000). *Vocational education in Ontario's secondary schools: Past, present- and future*. Retrieved from <http://www.yorku.ca/crws/network/english/Smaller.pdf>
- Smythe, S. (2015). Ten years of adult literacy policy and practice in Canada: Literacy policy tensions and workarounds. *Language and Literacy*, 19(2), 4-21.
- Tett, L., & Maclachlan, K. (2008). Learners, tutors and power in adult literacies research in Scotland. *International Journal of Lifelong Education*, 27(6), 659-672. doi:10.1080/02601370802408316

Author's Biography

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The Brightest Part of the Forest: A Grit Analysis of an Ontario Children's Book Award

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Abstract

This study explores how grit manifests in the nominees of Ontario's Forest of Reading Blue Spruce Award children's literature competition from 2013-2018. Performing a document analysis (Bowen, 2009), we used a modified version of Duckworth's (2018) grit scale to gauge the grittiness of the nominees' protagonists. We found that 28 of the 60 titles portrayed grit with 19 of those titles scoring four or higher on the modified grit scale indicating that protagonists had consistently high scores for the various aspects of grit. Our paper concludes with a discussion about implications to educators seeking to use these books to engage students in discussions about grit and resilience.

Introduction

The Ontario Library Association's (OLA's) Forest of Reading is a recreational reading program and book competition that pulses with energy and succeeds in its primary goal of generating enthusiasm for reading. Engagement from young readers is particularly high: according to the Forest of Reading's information kit, "more than 250,000 readers participate every year individually, or at their school or public library" (OLA, 2018). The Forest of Reading offers eight reading programs to encourage reading at all ages. These programs are widely integrated into school curricula since many schools across Ontario take an active role in the voting process and teachers are encouraged to integrate nominees and award-winning titles into their classroom libraries. Although the fiction and nonfiction winners in the Forest of Reading award are reader-selected, the initial nominations are compiled by teachers, librarians, and library employees. The criteria for fiction nomination include: literary quality, audience appeal, accuracy, relevance, and possible curricular connections. Additionally, nominators are tasked with balancing the final list for considerations such as "gender identity of protagonists, gender and cultural diversity of subject appeal, geographical settings, e.g., rural, urban, cross-Canada locations, and genre variety" (OLA, 2018). Authors or illustrators must be Canadian and titles are often, but not only, published by Canadian presses.

Award-winning children's literature plays a significant role in curriculum development and implementation (Giorgis, 2013), and the Forest of Reading is no exception. Because of the widespread presence of these titles in classrooms across Ontario, it is necessary to examine their themes and content. This study explores the ways grit manifests in the nominees and winners of Ontario's Forest of Reading Blue Spruce Award children's literature competition from 2013-2018. The Blue Spruce Award subsection of the Forest of Reading competition focuses on illustrated children's literature and targets kindergarten to grade two (K-2) readers. This study is framed

around the question: How does grit manifest in the protagonists of the 2013-2018 Forest of Reading Blue Spruce Award nominees?

Theoretical Framework

We approach this analysis through the linked concepts of grit and resilience as our theoretical framework. Duckworth (2016) establishes four primary components of grit: interest, practice, purpose, and hope. Grit and resilience are closely related in this paradigm, existing as near synonyms. According to her research, grit is a major determinant to personal and professional success. More importantly, Duckworth believes that grit is not necessarily innate, but can be developed over time. In our conceptualization, based on Duckworth's findings, we use the terms grit and resilience interchangeably to mean the ability to persevere in the face of difficulties and bounce back from challenges. But why frame our analysis of titles in the Forest of Reading around grit and resilience?

Grit and the Classroom

In Ontario public schools, grit and resilience intertwine significantly with province-wide mandates to improve student mental health and well-being as outlined in *Supporting Minds: An Educator's Guide to Promoting Students' Mental Health and Well-being* (Ontario Ministry of Education, 2013). Moreover, the Ontario Ministry of Education also highlights the importance of grit and resilience for student mental health within Ontario curriculum documents. For example, the first goal outlined in the Ontario kindergarten to grade eight physical education curriculum is for students to develop the living skills needed to cultivate resilience through a variety of learning opportunities including practicing communication, building relationships, positive interactions with others, and critical and creative thinking (Ontario Ministry of Education, 2019). Grit is also emphasized in the Ontario kindergarten curriculum as resilience is framed as an important objective of the core pillars that organize the kindergarten program including problem-solving, self-regulation, and well-being (Ontario Ministry of Education, 2016).

A common understanding of the components of resilience emphasizes that “a foundation of self-awareness can assist youth to build aspects of resilience including improved coping and social skills, problem solving skills, and feelings of self-esteem” (Coholic, p. 314, 2011). Although grit has been shown to be a factor in teacher retention (Robertson-Kraft & Duckworth, 2014) and student success (Goodwin & Miller, 2013), the recent fascination with grit in formal education has also been criticized for cultivating a narrative that frames success and failure as a matter of individual responsibility without recognizing the impact institutional and societal inequities have on minoritized students (Golden, 2017). For example, in her criticism of “culture of poverty” discourses in urban schooling, Ladson-Billings (2017) points out that emphasizing grit for students that do not have the same supports as their well-off peers asks “the most disadvantaged to once again do more with less and, even more importantly, to blame them if they do not succeed” (p. 82). Because of these valid critiques of the grit narrative, it is important to consider the ways in which K-2 students are exposed to grittiness given the curricular directives to integrate grit, resilience, and growth mindset into schools in recent years. Developing a deeper and more critical perspective on grit and resilience can help educators and students better understand both the benefits and limitations of grit in learning.

Various educational initiatives have emerged in correspondence to the emphasis on mental health, well-being, grit, and resilience in Ontario. Amongst these initiatives include schoolwide mindfulness activities, workshops, parent out-reach, and pilot programs targeting specifically at helping students develop their grittiness and resilience (Toronto District School Board 2015, 2016). Additionally, in a magazine distributed widely to all its members, the Elementary Teachers Federation of Ontario (ETFO) (2013) published an article outlining the impact of resilience on academic success and emotional well-being focusing specifically on strategies elementary school teachers can use to help teach students about grit and resilience. One of their suggestions is to facilitate conversations about resilience with students through literature. Specifically, ETFO recommends a book entitled *Tough Times* by Barbara Shook Hazen. *Tough Times* is a strong literary piece that can be used to engage students in discussions about grit and resilience because it grapples with topics such as family financial struggles, problem-solving, and critical thinking. However, it is a potentially challenging resource to integrate into the classroom since it was published in 1983 and therefore may be a difficult resource for teachers to locate and may come across as antiquated to children in a contemporary classroom. For this reason, there is great need critically examine the contemporary children's literature texts that are widely available to elementary school teachers with a focus on the presence of grit and resilience in these narratives—narratives such as the nominees in the Forest of Reading Ontario book competition.

Award-Winning Picture Books

Although research on the Forest of Reading has, thus far, been limited to a recent study on reader motivation (Maliszewski & Soleas, 2018), there is a body of literature exploring award winning picture books, particularly Caldecott winners and nominees, from a variety of lenses. The Caldecott, given annually since 1938, is an award that recognizes “the artist of the most distinguished American picture book for children” (American Library Association, 2019). Crisp and Hiller's (2011) work on the Caldecott winners from 1938 to 2011 focused on portrayals of gender in these titles, and they found that problematic portrayals of gender spans the picture books, including recent titles, rather than being a problem that is confined to the more out-of-date works, raising the very real concern “that these representations may have the power to lower self-esteem and increase feelings of “invisibility” for readers of *all* genders who don't fit the binary, culturally sanctioned performances of “male masculinity” and “female femininity” privileged” (p. 27) in these texts. Another study spanning both winners and honor books from 1938 to 2005 (Dyches, Prater, & Jenson, 2006), found that across all titles considered, there were only 11 characters with a disability, and that these portrayals included unrealistic and uncommon examples of disability, such as the temporary blindness suffered by the prince in *Rapunzel*. Out of the 11 titles the researchers analyzed, seven were based on folktales, further distancing the books' portrayals of characters with disability from any reality that students might encounter.

In contrast to these two studies which found the Caldecott books to be problematic in terms of portrayal of gender and disability, an analysis of a portion of the same award winners from 1975 to 1993 (Dellmann-Jenkins & Yang, 1997) found that the books' portrayal of elderly characters was mostly positive, with “the illustrators of the award-winning picture books were sensitive to portraying the majority (70% or more) of both older women and men throughout the 23-year period as healthy, clean,

friendly, happy, good, caring and not lonely” (p. 98). Although children’s award winners may be problematic in issues of representation, the presence of these titles in classrooms and libraries makes further exploration imperative. Despite the literature available on various award-winning titles, we found no studies that examined award winning picture books with an emphasis on grit and resilience.

An important strategy for teaching children how to develop their grit and resilience is to explicitly teach them about skills such as problem-solving, perseverance, and self-regulation while also modelling grit and resilience for them (Bashant, 2014). In schools, modelling grit and resilience usually takes the form of teachers and other school staff and leaders embodying these traits and having explicit conversations with students about their decisions and thought processes. However, it is important to note that books are another avenue through which we can offer children opportunities to observe modelled grit and resilience. For example, in a case study conducted by Stewart and Ames (2014), researchers explored the use of culturally affirming and thematically appropriate bibliotherapy with elementary school-aged African American children traumatized by the aftermath of Hurricane Katrina. Stewart and Ames found that participants learned how to rebuild their self-awareness and self-esteem by identifying with the strong and resilient characters in children’s books such as *MaDear* by Denise Lewis Patrick and *Drita, My Home Girl* by Jenny Lombard. Therefore, the presence of grit in the Forest of Reading Blue Spruce Award nominees may engage K-2 students in thinking beyond their known parameters, particularly if these characteristics are emphasized by adult readers with pre-literate students. In order to better conceptualize the ways in which the books in the Forest of Reading might offer readers a range of examples of grit beyond their lived experiences, this article focuses on our guiding research question: how does grit manifest in the protagonists of the 2013-2018 Forest of Reading Blue Spruce Award nominees?

Methods

We focused on analyzing the Forest of Reading Blue Spruce Award nominees and winners from 2013-2018. We selected this date range as a means of limiting the study to most current discourse on grit in education. Specific criteria for Blue Spruce nominees include: readability, literary merit, learning value, and quality of illustrations (OLA, 2018).

The methodology for this study was document analysis. In line with the data analysis procedures of document analysis, data was analyzed through both content and thematic analysis (Bowen 2009; Leavy, 2007). Content analysis entails a first-pass review in which documents are organized into two groups: 1) documents containing relevant information and 2) documents not containing relevant information (Corbin & Strauss, 2008). For the purposes of this study, we used Duckworth’s (2016) description of grit (resilience, passion in a project, and persistence) to guide our content analysis. During our content analysis, we did separate initial readings of the 2013-2018 Blue Spruce Award nominated books and sorted them into three categories: yes (shows evidence of grit), no (does not show evidence of grit), and maybe. Books in the “yes” group (28 of 60 titles) went on to the second phase of analysis: thematic analysis.

Thematic analysis involves re-reading documents deemed as having relevant information looking specifically for pattern recognition with emergent themes becoming categories for analysis (Fereday & Muir-Cochrane, 2006). To guide our more thorough reading of the qualifying Blue Spruce Award nominees, we used Duckworth’s

(2018) grit scale for children. Duckworth’s grit scale is a five-point Likert scale with self-assessment questions that align with the characteristics of grit as outlined by Duckworth. With permission from Duckworth, we modified Duckworth’s grit scale for children to better align it with the purposes of this research project by swapping “I” to “the main character” in each question. We read all relevant Blue Spruce Award nominees separately, completing a modified grit scale for each book. We then did a cross-check for inter-rater reliability to confirm our evaluations and reach 100% consensus. The following are sample items from our modified grit scale for children: new ideas and projects sometimes distract the main character from previous ones, the main character has been obsessed with a certain idea or project for a short time but later lost interest, the main character is a hard worker. Additionally, we considered the literary themes that emerged in these texts through subsequent close readings of the 28 titles included in this study. Those themes emerged inductively through close reading and dialogue between both authors, primarily through in-person reading and discussion sessions where we read, discussed, and revisited the titles.

Results and Conclusions

Out of a possible grit score ranging from 1 to 5, 19 of the 28 surveyed books scored a 4 or higher. The lowest score in this analysis was a 2.75 and one book earned a perfect score of 5, as seen in Table 1.

Table 1

Grit Scores for Blue Spruce Titles 2013-2018 Using the Modified Grit Scale

Nomination Year	Title of Book	Author/Illustrator	Grit Score
2018	Shark Lady	Jess Keating & Marta Álvarez Miguéns	5
2016	Stop, Thief!	Heather Tekavec & Pierre Pratt	4.75
2016	Butterfly Park	Elly MacKay	4.75
2016	Henry Holton Takes the Ice	Sandra Bradley & Sara Palacios	4.625
2015	The Most Magnificent Thing	Ashley Spires	4.625
2013	Splinters	Kevin Sylvester	4.625
2013	Really and Truly	Émilie Rivard & Anne-Claire Delisle	4.625
2018	A Squiggly Story	Andrew Larsen & Mike Lowery	4.5
2016	Super Red Riding Hood	Claudia Dávila	4.5
2014	Sky Color	Peter H. Reynolds	4.5
2014	If You Hold A Seed	Elly MacKay	4.5
2018	The Owl and the Lemming	Roselynn Akulukjuk & Amanda Sandland	4.375
2018	The Branch	Mireille Messier & Pierre Pratt	4.375

2015	The Highest Number in The World	Roy Macgregor & Geneviève Després	4.375
2013	JoJo the Giant	Jane Barclay & Esperança Melo	4.375
2017	Sometimes I Feel Like a Fox	Danielle Daniel	4.25
2017	The Wolf-Birds	Willow Dawson	4.125
2017	Snap!	Hazel Hutchins & Dušan Petričić	4.125
2013	The Busy Beaver	Nicholas Oldland	4.125
2015	Morris Micklewhite and the Tangerine Dress	Christine Baldacchino & Isabelle Malenfant	4
2018	Great	Glen Gretzky, Lauri Holomis & Kevin Sylvester	3.875
2015	The Day My Mom Came to Kindergarten	Maureen Fergus & Mike Lowery	3.875
2014	Oddrey	Dave Whamond	3.875
2018	The Little Boy Who Lived Down the Drain	Carolyn Huizinga Mills & Brooke Kerrigan	3.625
2015	Oddrey and the New Kid	Dave Whamond	3.5
2014	This Is Not My Hat	Jon Klassen	3.5
2017	The Good Little Book	Kyo Maclear & Marion Arbona	3.25
2014	Willow Finds A Way	Lana Button & Tania Howells	2.75

Additionally, four preliminary themes emerged from our analysis: creativity, intergenerational relationships, gender identity and performance, and the natural world. These themes emerged through close reading of the texts. Some books had multiple themes present, as seen in Table 2.

Table 2

Themes in the Books Explored in this Article

		Natural World	Creativity	Inter- generation al	Gender Identity/ Performance
Year of Nomination	Title of Book				
2018	The Branch	X	X	X	
	The Owl and the Lemming	X			

	Shark Lady	X		X
2017	Snap!		X	
2016	Butterfly Park	X		
	Henry Holton Takes the Ice		X	X
	Super Red Riding Hood		X	X
2015	Mom Came to Kindergarten		X	
	The Highest Number		X	X
	Morris Micklewhite		X	X
	The Most Magnificent Thing		X	
2014	If You Hold A Seed	X	X	
	Oddrey		X	
	Sky Color	X	X	
2013	JoJo the Giant		X	
	The Busy Beaver	X		

Discussion

To give a sense of the four themes that emerged from this analysis, we have chosen four exemplar titles to illustrate each theme, which are discussed in detail here.

The Natural World

Ten books highlight the protagonist's connection to the natural world as a way to develop grittiness. Four books that contain themes of the natural world are Nicholas Oldland's *The Busy Beaver*, Roselynn Akulukjuk's and Amanda Sandland's *The Owl and The Lemming*, and Elly MacKay's *Butterfly Park* and *If You Hold a Seed*.

In *The Busy Beaver*, readers are introduced to "a beaver who was so busy that he didn't always think things through" (Oldland, p. 5, 2011). The beaver never met a job he didn't throw himself into with gusto, but his grit is actually disastrous. He cuts a tree down on himself, landing him in the hospital with no ability to work and plenty of time to think. This unexpected opportunity to reflect leads the beaver toward a shift in his grit: he applies himself to his recovery in order to fix the mistakes his aggressive work ethic left in his wake. This book scored 4.125 on our modified grit scale, offering an interesting example of the ways in which demonstrating grittiness may not always be a positive thing. However, when the beaver shifts his focus, his grit becomes a redeeming quality, allowing him to work through conflict and take responsibility for his actions.

Based on a traditional story from Inuit oral history, *The Owl and The Lemming* (Akulukjuk & Sandland, 2016) is about a lemming that outsmarts an owl trying to catch it for a meal. The lemming realizes that she must trick the owl if she is to make it back to her burrow safely. After two of the lemming's schemes fail to trick the owl, she challenges him to a jumping contest. When the owl takes his turn and jumps, the lemming quickly runs underneath the owl and into her burrow. The young owl then returns to his father who comforts him while advising that next time he not play with his food. The young owl learns his lesson and vows to never let his pride lose his meal. *The Owl and The Lemming* portrays grit in two ways: first, through the lemming that persists despite failing to trick the owl in her first two attempts and second, through the owl that loses his meal but still optimistically plans on how he will improve in his future

hunting attempts. This book draws upon Inuit oral tradition and ecological relationships to provide readers of examples of grit in nature. This book scored a 4.375 on our modified grit scale and is also available as a short film made by the author (see <https://taqut.com/the-owl-and-the-lemming-2016/> for more information).

MacKay's (2015) *Butterfly Park* tells the story of a young girl who moves from the country to the city with her family. The park next to her new home is called "Butterfly Park," and the girl is excited to go and meet the butterflies. However, the one she meets does not linger in the park, even after the protagonist enlists the help of her neighbor to catch the butterfly and bring it back. Not deterred, the children follow the butterfly, collecting adults and other kids from the neighborhood as they go, until the protagonist realizes that the butterflies will not come back to park without flowers. In a neighbourhood effort, everyone who joined in on the chase gathers together to plant flowers and restore Butterfly Park, bringing back the butterflies and building a beautiful natural space in the middle of the city. With dimensional illustrations that are first painted and then arranged in miniature scenes, which MacKay photographs to create her artwork, this story is one of hope and connection as the girl and her neighbors join together to make something beautiful. *Butterfly Park* scores a 4.75 on our modified grit scale and is one of the highest scoring books in this evaluation.

Using the same distinctive illustration style as *Butterfly Park*, *If You Hold a Seed* (MacKay, 2013) tells of the patience and resilience demonstrated by the main character as they tend a seed to maturity. Opening with the lines, "if you hold a seed, and make a wish, and plant it in the ground...something magical can happen" (p. 3-5), and the book follows the progression from planting and nurturing and waiting, while also presenting a gentle, simple narrative that includes pollination, the cycle of the seasons, and the slow and steady lifespan of a tree. Readers are reminded to be patient as the prose repeats, even as the main character visibly grows up alongside the tree. The ultimate reward of both the tree and the protagonist's patience is that not only the growth of the tree, but that the wish made on the first page comes true on the last page of the book, where both the tree and the protagonist are grown, and the protagonist is able to sit in the branches of the tree and share it with another child (p. 28-32). Both the text and illustrations centre on the natural world, and MacKay's dimensional art shifts through the seasons and the growing cycle of the tree, emphasizing the time it takes for change to occur in the natural world. The narrative demonstrates interest, purpose, hope, and resilience as the protagonist displays grittiness over the seasons and years they are tending the tree, and in our analysis, the book scored 4.5 on our modified grit scale.

Creativity

Nine titles focus on grit as necessary to the creative process, including overcoming setbacks that may occur during a project. Four books that explore the relationship between creativity and grit are Ashley Spires's *The Most Magnificent Thing*, Dave Whamond's *Oddrey*, Peter Reynold's *Sky Color*, and Hazel Hutchins' *Snap!*

The Most Magnificent Thing follows a girl as she attempts to create an idea she has for a contraption. The girl becomes frustrated because after several attempts, none of the contraptions she has created match up to her image of "the most magnificent thing" (Spires, 2014). When her frustration overwhelms her, the girl destroys her latest attempt and quits. During a walk with her dog, the girl comes across all her previous

attempts at her contraption. She begins to feel frustrated again until she notices that, while some things in her past attempts are wrong, some things are right. By observing all the small successes in her past attempts, the girl is able to finally make the most magnificent thing (a side car for her dog that attaches to her scooter). This book portrays the creative process as a series of failures that we can learn from when we reflect on both our failures and successes, and scored a 4.625 on the modified grit scale.

Oddrey (Whamond, 2012) features a protagonist who, like her name, aspires to be a bit odd. She also exhibits grit: interest, practice, purpose, and hope are evident throughout the story. Oddrey "believed it was important to think for herself" (Whamond, 2014, p. 10), as illustrated by the gold chandelier that appears over her head in thought, when her classmates are only topped with cliché lightbulbs, and "she didn't let anything get her down for long. Oddrey knew how to make the best of any situation" (p. 14). When the play is announced, Oddrey is so sure she'll be the star, but she does not allow the fact that she's cast as a tree to diminish her enthusiasm. Instead, she designs a costume and decides that she will be "...the most unique tree ever" (p. 18). Oddrey is not deterred by setbacks, and she is creatively helpful when her classmates forget their lines, but as shown in the way she "saves" the show, her help mostly denies the agency of other characters. The double page spread of the "saving the day" action consists of Oddrey making tracks all over the stage to whisper lines, offer verbal encouragement, help pick up the bricks, and give Dorothy a hand standing back up (all while taking time to dance and spin a bit in between) (p. 22-23). Oddrey does offer encouragement, but more than that, she swoops in and actively corrects the "failed" situations. There's a lot to unpack in a story like this, particularly the constant evidence of grit and growth where Oddrey is concerned, paired with the lack of these attributes Oddrey permits her classmates to demonstrate. However, as a protagonist, Oddrey offers a moderate example of grit, scoring a 3.875 on our modified grit scale.

In *Sky Color*, Peter Reynolds (2012) introduces readers to Marisol, a girl who is an artist, through and through. Marisol has her own art gallery in her home (a room plastered with her drawings and paintings), and she believes that everyone is an artist, and offers gifts and encouragement accordingly to her friends. However, Marisol runs into a problem when her class begins to paint a mural and she cannot find any blue paint to paint the sky. After spending a day and night watching the different sky colors and noticing that she sees far more than blue when she looks up, Marisol is ready to tackle the project with enthusiasm. Her final contribution to the mural is a vibrant sky in just about every color aside from blue, and the pride she takes in her work is clear. *Sky Color* presents a protagonist who demonstrate persistence, passion, and hopeful optimism through not only her own creativity, but her encouragement of others, and this book scored 4.5 on our modified grit scale.

In *Snap!* (Hutchins & Petricic, 2015) the brown crayon from Evan's new crayon set snaps so he attempts to put it back together by pressing, taping, ordering, and staring at it. All of his attempts are unsuccessful but, as if by magic, something changes, and Evan realizes that he now has two brown crayons. When other crayons break, Evan sees them as magically becoming doubles and triples. As Evan continues drawing, his crayons are destroyed in other ways, but he turns their destruction into new ways of drawing—for example, when a red crayon is crushed, he turns it into furry spots. When Evan loses his green crayon, he encounters magic again when he sees green appear where yellow and blue cross each other in one of his pictures. When his purple and orange crayons disappear, Evan finds that he only needs red, blue, and yellow to make

a full rainbow. Eventually Evan realizes that it was him on his own, and not magic, that led to all his creative discoveries. *Snap!* demonstrates how grit plays a crucial role in the creative process as well as how creativity is an important skill for grit. *Snap!* scored a 4.125 on our modified grit scale.

Intergenerational Relationships

Seven titles focus on the importance of intergenerational relationships to the main character and how these relationships are related to the protagonists' development and/or experiences with grit. The majority of these relationships were between a child and their grandparent or parent. However, some books featured an important relationship between a child and an adult community member. Four books that feature intergenerational relationships in relation to grit are Messier's and Pratt's *The Branch*, Macgregor's and Després' *The Highest Number in the World*, Fergus' and Lowery's *The Day My Mom Came to Kindergarten*, and Barclay's and Melo's *JoJo the Giant*.

The protagonist of *The Branch* (Messier & Pratt, 2016) has a favourite branch she plays on in her front yard tree. After an ice storm, the protagonist is deeply upset to find that her favourite branch has snapped off of the tree. Mr. Frank, the protagonist's neighbour, encourages her to create something from the branch so that she can keep and use it. The protagonist has an idea of what to make from the branch but tells Mr. Frank that she does not know how to make it. Mr. Frank offers to help the protagonist so together they turn the branch into a swing for the front yard tree. In *The Branch*, Mr. Frank helps the protagonist develop her grit by acting as her guide. He guides her by both encouraging the protagonist to find a solution for her broken branch problem and by helping her complete her project even after she admits that she does not know how to make a swing. *The Branch* scored a 4.375 on our modified grit scale.

Gabe, short for Gabriella, is a talented hockey player that makes it onto a new hockey team. When Gabe is assigned a jersey number, she receives #9. Gabe is very upset about not having a #22 jersey since #22 is her lucky number. She hides her jersey in her closet and refuses to go to practice. When Gabe's grandmother visits, she shows Gabe a picture from when she snuck onto the boy's hockey team before she was kicked off. Gabe's grandmother convinces Gabe that nine is a lucky number because of the great hockey players who have worn #9 jerseys in the past. Gabe's grandmother tells her that she wore #9 jerseys as a fan because she was not allowed to play on the boys' team. When she goes to practice the next morning, Gabe sets a new goal for herself: to get her #9 jersey in the rafters for both her and her grandmother. In *The Highest Number in the World* (MacGregor & Swenson, 2014), Gabe's grandmother helps Gabe develop her grit by providing the encouragement Gabe needed to practice goal-setting and find new pride in her #9 jersey so that she no longer has to rely on her lucky #22 to play hockey. This title scored a 4.375 on the modified grit scale.

The Day My Mom Came to Kindergarten (Fergus & Lowery, 2013) is a charming story about a girl trying to be patient while her mom makes all the new kid mistakes at kindergarten. The mom decides to accompany her daughter to a day of kindergarten (because the little girl noticed at drop-off that mom was looking a little sad, so she invited her to stay). With a beautifully lighthearted tone, Mom makes gloriously kid-friendly mistakes: she forgets to take off her outside shoes, she slams art supplies down when she gets frustrated, she makes a mess at snack and doesn't clean up, and she even takes such a long restroom break with so much "dawdling" (according to her daughter) that she doesn't get to play music with the rest of the class. At the end

of the day, Mom has mostly adapted to kindergarten, but she is glad to be leaving the hard work of school to her daughter. The relationship between the mother and daughter is central to the narrative, and the role reversal offered by a mom who does not excel at kindergarten offers opportunities for both characters to demonstrate resilience: the mom as she attempts all the new challenges of kindergarten, and the daughter as she tries to cultivate the patience needed to help her mother succeed. Since the daughter is the narrator of the piece, we chose to read her as the protagonist, and the book scored 3.875 on our modified grit scale.

Another story that centers on the relationship between a mother and child is *JoJo the Giant* (Barclay & Melo, 2012). JoJo lives “with his mother and a marmalade cat in an apartment over a deli” (p. 5), and every day, he asks his mother if he has grown yet. Despite her gentle answer (that he has grown the tiniest distance between her two fingers), JoJo continues to embrace his dreams of growing one day, since “the way he saw it, bigger was better. So, he ate all of his broccoli. He drank all of his milk” (p. 9). He enters a race for a chance to win a pair of new sneakers, but the surprise comes not when he wins—he does, in “a burst of broccoli-fueled speed” (p. 26)—but in what he chooses to do with his prize. His mother is a mail carrier, and readers have been told that she is always tired from standing on her feet in her old pair of shoes, and JoJo applies his persistence and hope toward winning the race so he can give *her* the shoes. For JoJo, the relationship he has with his mother serves as the catalyst for the characteristics of grit he displays in the book, leaving JoJo feeling empowered and “ten feet tall” (p. 30) by the end of the narrative. The book scored a 4.375 on our modified grit scale.

Gender Identity and Performance

Six of the books feature protagonists who faced situations in which they question or challenge heteronormative gender roles and identity. Four books that discuss grit in relation questions about gender identity and performance are Bradley’s and Palacios’ *Henry Holton Takes the Ice*, Baldacchino’s and Malenfant’s *Morris Micklewhite and the Tangerine Dress*, Dávila’s *Super Red Riding Hood*, and Keating’s and Miguéns’ *Shark Lady: The True Story of How Eugenie Clark Became the Ocean’s Most Fearless Scientist*.

In *Henry Holton Takes the Ice*, Henry is expected to follow family tradition and play hockey but is much happier when he can skate freely. One day, Henry and his mother go to an ice dancing competition and Henry instantly has the desire to learn how to ice dance—the problem is that he does not have figure skates. When he asks his father for figure skates, his father refuses because they are a hockey family and his sister, Sally, says that figure skating is just for girls. Henry refuses to skate until he can use figure skates. When his grandmother shows him a picture of her figure skating, Henry asks to use her old skates. When the rest of Henry’s family sees how beautifully Henry skates in figure skates, his father buys him his own pair and hires an ice dancing coach. In *Henry Holton takes the Ice*, Henry demonstrates grit when he demands to use figure skates and ice dance even though it goes against his family’s tradition and the gender roles associated with hockey and ice dancing. It is worth noting that female characters in this book, including Henry’s sister Sally and his grandmother, are accepted as hockey players even though hockey is typically gendered as male. Where there is a perceived unaccepted resistance to gender roles is when Henry, a boy, wants to participate in an activity that is gendered as female (ice dancing). Henry Holton takes

the Ice has the potential to be a powerful example of grit for male children that do not feel as if they can participate in female gendered activities. *Henry Holton Takes the Ice* (Bradley & Palacios, 2015) scored a 4.625 on the modified grit scale.

In *Morris Micklewhite and the Tangerine Dress* (Baldacchino & Malenfant, 2014), Morris enjoys dressing up at school. His favourite thing to wear is a tangerine dress and shoes that go “click, click, click” (i.e. female dress shoes). Morris is bullied by classmates that tell him that boys do not wear dresses and refuse to play or sit with him because they are afraid that he is going to turn them into girls. Morris is ashamed of the mean things his classmates have said to him and refuses to return to school the next day. With gentle comfort and encouragement from his mother, Morris once again feels proud to wear the tangerine dress—a dress he likes because it reminds him of tigers, the sun, and his mother’s hair. When Morris returns to school and the boys in his class begin teasing him again, Morris begins a new game of spaceship without them. The boys become intrigued by Morris’ game of spaceship because it involves a planet with tigers. When a female classmate tells Morris that only girls wear dresses, he tells her “this boy does.” Morris shows grit when he is bullied and, instead of returning home and feeling ashamed, he chooses to feel proud of himself and stay true to how he wants to express himself despite the gender normativity presented to him by his classmates. This book scored a 4 on our modified grit scale.

Dávila’s (2014) fresh take on a fairy tale, *Super Red Riding Hood*, presents a heroine who uses her desire to be a super hero to help her tap into her own resilience, even when she finds herself facing something scary, since “a superhero must be brave” (p. 15), and “a superhero must be prepared for anything!” (p. 7). When Ruby, the protagonist, faces the wolf in the woods, she uses strength, intelligence, and, ultimately, compassion to solve the situation: it turns out the wolf was chasing her not to attack her, but because she is carrying a lunchbox full of raspberries, and the wolf is hungry. Despite being frightened, Ruby reminds herself that “a superhero always helps those in need” (p. 29), and once she and the wolf reconcile, she happily shares her berries. Ruby’s grit is an interesting blend of traditionally feminine characteristics (such as her compassion and willingness to help others) framed by her alter-ego as a super hero: the book presents an interesting take on feminine strength and empowerment, reaffirmed when the wolf, in the final pages of the story, remarks, “I didn’t know little girls could be superheroes,” to which Ruby responds, ““Oh yes”, said Ruby with a wide smile, ‘we can’” (p. 30-31). The story scored a 4.5 on our modified grit scale.

The only book that scored a perfect 5 on our modified grit scale is the nonfiction picture book *Shark Lady: The True Story of How Eugenie Clark Became the Ocean’s Most Fearless Scientist* (Keating & Alvarez Miguens, 2017). Perhaps it could be argued that the life of Eugenie Clark exhibits such extraordinary characteristics of grit, but as the only nonfiction picture book in this survey, we chose to evaluate the book following the same criteria of the other titles, and since the protagonist (Eugenie herself) is exceptionally gritty, demonstrating passionate interest in her studies and research, persistence, hope, and a strong sense of overall resilience, we decided to include this title in our work. While in school, the narrator tells us, “many were still telling Eugenie what to do. Forget those sharks! Be a secretary! Be a housewife!” (p. 14). In the face of “some of her professors [who] thought women weren’t smart enough to be scientists or brave enough to explore the oceans,” (p. 14), Eugenie continues with her studies, ultimately making important discoveries about sharks and other ocean life. When she earns the title “Shark Lady”, the book tells us that “Eugenie had proven she was smart

enough to be a scientist and brave enough to explore the oceans,” (p. 21), and the final illustration of the book subtly drives home the importance of Eugenie’s gender in relation to her work: at a crowded aquarium, Eugenie is looking on with a smile as another little girl watches the sharks in wide-eyed fascination. An important subtext throughout the book is that Eugenie’s determination and passion helped blaze trails into marine science for other women. As with *Super Red Riding Hood*, *Shark Lady* offers readers with an expanded perspective on what women and girls can accomplish.

Educational Importance of the Study

An examination of these texts offers insight into the materials available to K-2 students as they explore their worlds, learn to make meaning, and begin to internalize the lessons of grit and resilience they are offered. Educators can access these resources in order to consciously scaffold classroom conversations around the passion, persistence, and hopeful resilience that are necessary for the development of grit. Given the already mentioned emphasis on resilience in Ontario classrooms, the results of this study suggest that picture books, specifically the titles in the Ontario Forest of Reading, can serve as powerful teaching tools and mentor texts to facilitate conversations about grit and growth in primary and junior classrooms. These books also open a conversation about the importance of failure and perseverance, since many of the grittiest protagonists fail in various ways as they keep persisting. The authentic integration of grit into the literacy curriculum is an important step toward normalizing conversations surrounding failure and growth, which in turn plays a part in helping students develop their own understanding of and expression of resilience and hope. These abstract concepts can be challenging to integrate into classroom discussions and activities, but the highly gritty books present in the Forest of Reading’s Blue Spruce Award list offer numerous entry points for teachers and librarians to bring these topics into the classroom.

One major limitation of this study is the absence of teacher and student perspectives on the Forest of Reading. Future work might build from the grit scores established here and use the high scoring books as a launch point for further explorations of the ways teachers and students are actually interacting with these gritty texts. An additional area of study would be to look closely at the grit differences between winners and nominees; the nominees are curated by teachers and librarians, but the winners are voted on by young readers, and it is possible that students are seeking something other than books that can serve as mentors in resilience. The possibility for future work on the Forest of Reading is exciting, and a space we hope others will step into.

Conclusion

Grit is not the only valuable collection of traits we can hope to model for our students, but the persistence, resilience, and passion that exemplifies this idea makes it particularly resonant as we move forward in our increasingly complex, technologically advanced world. Children’s literature has a great deal of power when it comes to shaping personalities, and these personalities, both young and old, may ultimately rewrite the paradigms of our cultures. The Forest of Reading is doing powerful work toward cultivating authentic, excited readers, while also presenting stories that, in some way, are representative of the Canadian experience. Further, these tales are still able to cross cultural boundaries in the way that good stories can. As Leavy points out, “Just

as texts can be an integral part in creating and maintaining the status quo, so too can they help challenge long-held beliefs and practices” (2007, p. 7). Context is important, however, and we think it is important to remember that the Forest is something distinctly Canadian, deliberately rooted in Canadian identity, and used to promote a sense of pride and identity in readers of all ages. These award-winning regional titles, in part, answer Cynthia Chambers’s demand that “Canadians need a literature about ‘here’ because this is where we live,” while also, it would seem, playing a major part in the second half of Chambers’s argument, that “Canadians also need a form of curriculum theorizing grounded in ‘here’” (Chambers, p. 144).

Even as the Forest of Reading is firmly rooted in a Canadian context, the award winners and nominees offer an interesting collection of contemporary children’s literature across cultural boundaries. Since award-winning children’s literature plays a significant role in curriculum development, and since the Blue Spruce Award books are linked so explicitly with early learning, it is important to continue to examine the wealth of regional literature in the Forest of Reading in order to understand what lessons, both implicit and explicit, may be presented in classrooms that rely on this reader-voted program to foster literacy and student interaction.

References

- American Library Association (2019). Association for library service to children: Welcome to the Caldecott Medal home page. Retrieved from: <http://www.ala.org/alsc/awardsgrants/bookmedia/caldecottmedal/caldecottmedal>. Document ID: 350098f6-f11c-5e44-1520-6e7ac9876a5a
- Akulukjuk, R., & Sandland, A. (2016). *The owl and the lemming*. Iqaluit, Nunavut: Inhabit Media Inc.
- Baldacchino, C., & Malenfant, I. (2014). *Morris Micklewhite and the tangerine dress*. Toronto, ON: Groundwood Books/House of Anansi Press.
- Barclay, J., & Melo, E. (2012). *JoJo the giant*. Plattsburgh; Toronto: Tundra Books.
- Bashant, J. (2014). Developing grit in our students: Why grit is such a desirable trait, and practical strategies for teachers and schools. *Journal for Leadership and Instruction*, 13(2), 14-17. Retrieved from <https://www.scooponline.us/wp-content/uploads/2017/10/JLI-Fall-2014.pdf>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.
- Bradley, S., & Palacios, S. (2015). *Henry Holton takes the ice*. New York, NY: Dial Books for Young Readers.
- Coholic, D. A. (2011). Exploring the feasibility and benefits of arts-based mindfulness-based practices with young people in need: Aiming to improve aspects of self-awareness and resilience. *Child & Youth Care Forum*, 40(4), 303–317. <https://doi.org/10.1007/s10566-010-9139-x>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.
- Crisp, T., & Hiller, B. (2011). Telling tales about gender: A critical analysis of Caldecott Medal-winning picture books, 1938-2011. *Journal of Children’s Literature*, 37(2), p. 18-29.
- Dávila, C. (2014). *Super Red Riding Hood*. Toronto, ON: Kids Can Press.

- Dellmann-Jenkins, M., & Yang, L. (1997). The portrayal of older people in award-winning literature for children. *Journal of Research in Childhood Education*, 12(1), 96-100. doi:10.1080/02568549709594720
- Duckworth, A. (2016). *Grit: The power of passion and perseverance* (1st Canadian Edition). Toronto: Collins.
- Duckworth, A. (2020). *Angela Duckworth*. Retrieved from <http://AngelaDuckworth.com/>
- Dyches, T.T., Prater, M.A., & Jenson, J. (2006). Portrayal of disabilities in Caldecott books. *TEACHING Exceptional Children Plus*, 2(5), Article 2.
- Elementary Teachers' Federation of Ontario. (2013). Building resilience. *ETFO Voice*, 11(4), 38-40. Retrieved from <http://etfovoice.ca/node/688>.
- Fereday, J. & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92. Retrieved from https://sites.ualberta.ca/~iiqm/backissues/5_1/PDF/FEREDAY.PDF.
- Fergus, M., & Lowery, M. (2013). *The day my mom came to kindergarten*. Toronto, ON: Kids Can Press.
- Giorgis, C. (2013). Caldecott in the classroom: Medal winners as mentor texts. *Book Links*, 22(4), 4-8. Retrieved from <https://www.booklistonline.com/booklinks>
- Golden, N. A. (2017). "There's still that window that's open": The problem with "grit". *Urban Education*, 52(3), 343-369.
- Goodwin, B., & Miller, K. (2013). Grit + talent = student success. *Educational Leadership*, 71(1), 74-76.
- Hutchins, H. J., & Petričić, D. (2015). *Snap!* Toronto, ON: Annick Press.
- Keating, J., & Álvarez Miguéns, M. (2017). *Shark lady: The true story of how Eugenie Clark became the ocean's most fearless scientist*. Naperville, IL: Sourcebooks Jabberwocky.
- Ladson-Billings, G. (2017). "Makes me wanna holler": Refuting the "culture of poverty" discourse in urban schooling. *The Annals of the American Academy of Political and Social Science*, 673(1), 80-90.
- Leavy, P. (2007). The feminist practice of content analysis. In S.N. Hesse-Biber, & P.L. Leavy (Eds.), *Feminist research practice: A primer* (pp. 222-248). Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781412984270
- MacKay, E. (2015). *Butterfly park*. Philadelphia, PA: RP Kids.
- MacKay, E. (2013). *If you hold a seed*. Philadelphia, PA: RP Kids.
- Maliszewski, D. P., & Soleas, E. K. (2018). Reading between the lines: Motivation lessons learned from the Forest of Reading in Ontario. *School Libraries Worldwide*, 24(2), 46. Retrieved from <https://iasl-online.org/publications/slw/index.html>
- MacGregor, R., Després, G., & Swenson, S. (2014). *The highest number in the world*. Toronto, ON: Tundra Books.
- Messier, M., & Pratt, P. (2016). *The branch*. Toronto, ON: Kids Can Press.
- Oldland, N. (2011). *The busy beaver*. Toronto, ON: Kids Can Press.
- Ontario Library Association (2018). *Forest of Reading and Festival of Trees information kit for media*. Retrieved from <https://www.accessola.org/web/Documents/OLA/Forest/Resources/2017/English/Forest-2017-Informational-Kit-English.pdf>

- Ontario Ministry of Education. (2016). *The kindergarten program, 2016*. Retrieved from the Ontario Ministry of Education website: https://www.ontario.ca/document/kindergarten-program-2016?_ga=2.149503094.1915180348.1566574719-1990486156.1560285168
- Ontario Ministry of Education. (2019). *The Ontario curriculum, grades 1-8: Health and Physical Education, 2019*. Retrieved from the Ontario Ministry of Education website: <https://www.ontario.ca/document/health-and-physical-education-grades-1-8>
- Ontario Ministry of Education (2013). *Supporting Minds: An Educator's Guide to Promoting Students' Mental Health and Well-Being*. Retrieved from <http://www.edu.gov.on.ca/eng/document/reports/SupportingMinds.pdf>
- Reynolds, P. (2012). *Sky color*. Somerville, MA: Candlewick Press.
- Robertson-Kraft, C., & Duckworth, A. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record*, 116(3).
- Spires, A. (2014). *The most magnificent thing*. Toronto, ON: Kids Can Press.
- Stewart, P. E., & Ames, G. P. (2014). Using culturally affirming, thematically appropriate bibliotherapy to cope with trauma. *Journal of Child & Adolescent Trauma*, 7(4), 227-236.
- Toronto District School Board. (2015). *Resilience—bouncing back stronger*. Retrieved from the Toronto District School Board website: <https://schoolwebtst.tdsb.on.ca/Portals/fairbank/docs/MHWP%20Newsletter%20March%202015.pdf>
- Toronto District School Board. (2016). *Put it all together: Perseverance, grit, self-regulation, and executive functioning & you have a recipe for... well-being*. Retrieved from the Toronto District School Board website: <https://www.tdsb.on.ca/Portals/0/Elementary/docs/MHWP%20Newsletter%20March%202016.pdf>
- Whamond, D. (2012). *Oddrey*. Toronto, ON: Owlkids Books.

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Modeling the Relationships between Language Skills and Sentence Comprehension among Chinese Junior Elementary Graders

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Abstract

The present study examined the contributions of vocabulary knowledge, syntactic skills, and oral narrative skills to sentence reading comprehension among Chinese junior elementary school children. Various language and reading measures were administered to 85 Chinese normally-achieving children at Grades 2 and 3 in Hong Kong. Results showed that vocabulary knowledge and oral narrative skills contributed significantly to word order skills, an important syntactic skill in Chinese. Vocabulary knowledge contributed to word recognition directly and contributed to sentence comprehension indirectly through word recognition and syntactic skills; and syntactic skills contributed to sentence comprehension directly. These findings suggest that while vocabulary knowledge is important for Chinese word reading, syntactic word order plays a central role in Chinese sentence comprehension. The implications of these findings for our theoretical understanding of the Simple View of Reading, as well as reading instruction, will be discussed.

Introduction

Reading comprehension is a multi-componential task involving many cognitive processes (Oakhill & Cain, 2012; Share & Leiken, 2004). These cognitive processes could roughly fall into two categories. Lower cognitive processes involve translating written codes into meaningful language units (e.g., word recognition and its relevant sub-lexical processes) and higher processes involve combining these language units into a meaningful mental representation (e.g., inference making that enables a reader to connect one part to other parts of the text) (Kendeou, Papadopoulos, & Spanoudis, 2012; Kendeou, van den Broek, White, & Lynch, 2009; Perfetti, 2007; van den Broek, 1997).

According to the multi-component view of reading comprehension, to comprehend a text, a reader must be able to draw on language skills and cognitive processes at the word-, sentence-, and discourse-level to construct a coherent mental representation of the text (Kendeou, Papadopoulos, & Spanoudis, 2012; Oakhill & Cain, 2012; Silva & Cain, 2015; van den Broek, Kendeou, Lousberg, & Visser, 2011; Vellutino, Tunmer, Jaccard, & Chen, 2007). Word-level reading (i.e., word recognition) involves lower cognitive processes and hence efficient word recognition could preserve processing resources for higher level comprehension (Perfetti, 2007). At sentence-level comprehension, to comprehend a sentence, a reader must decode individual words, access the phonological, orthographic, and semantic representations of the words to retrieve meanings, and combine these into clauses and sentences guided by syntactic knowledge (Silva & Cain, 2015). At discourse-level comprehension, a reader must be

able to connect individual idea units and integrate information across different parts of a text. Lower and higher levels of cognitive processes involved in reading comprehension begin to develop before formal reading education starts and they independently predict reading comprehension performance at a later age (Kendeou, van den Broek, White, & Lynch, 2009; Silva & Cain, 2015). It is essential for us to understand how these cognitive processes lead to successful reading comprehension. Such understanding has important implications for educational practice with respect to literacy programmes to foster reading comprehension skills in young children. The present study adds to this line of literature in examining the unique contributions of word recognition, vocabulary knowledge, syntactic, and oral narrative skills in sentence comprehension in Chinese (a logographic language other than English). In doing so, the decoding and linguistic components and their relations with reading comprehension as suggested in the Simple View of Reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) (SVR) are considered.

Understanding Reading Comprehension within the Framework of the Simple View of Reading

According to the SVR framework, reading comprehension is postulated as the product of two interrelated but relatively independent cognitive processes, i.e., decoding (or word recognition) and listening comprehension (or language comprehension). Both processes are necessary cognitive components, and neither of each alone is sufficient for successful reading comprehension (Hoover & Gough, 1990; Tunmer & Hoover, 1992). There is significant support for the central feature of the SVR that reading comprehension is the product of decoding and listening comprehension, namely, significant and sizable variance in reading comprehension explained by measures of these two broad sets of skills across a wide age range (Kendeou, Savage, & van den Broek, 2009; Language and Reading Research Consortium & Chiu, 2018; Oakhill & Cain, 2012; Vellutino, Tunmer, Jaccard, & Chen, 2007). Such finding also provides strong support for the assumption proposed in the SVR that the decoding and linguistic components are of equal importance for successful reading comprehension (Hoover & Gough, 1990).

Although the relationship between decoding and reading comprehension, and also listening and reading comprehension have been empirically substantiated, the nature of the decoding and linguistic components of the SVR remains less clear. The decoding component is defined as the ability to convert graphic stimuli into linguistic referents. The original use of the term decoding in Gough and Tunmer's study (1986) has caused confusion in how to conceptualize this construct. Strictly speaking, decoding may refer to the process of serial grapheme-to-phoneme conversion and hence non-word reading measures should be used to map onto the decoding component specified within the SVR (Kirby & Savage, 2008; Ouellette & Beers, 2010). Yet, the majority of studies conducted on the SVR have used measures of word or non-word reading or both to assess this component. Furthermore, substantial evidence has revealed that word reading measures are more predictive of reading comprehension for readers of more opaque orthographies (e.g., English), while non-word reading measures are more predictive of reading comprehension for readers of more transparent orthographies (e.g., Finnish, German, and Italian) (Florit & Cain, 2011). It seems that the strength of the relationship between decoding and reading comprehension is affected by how the decoding component is conceptualized and measured in the SVR. It can be argued that

the original definition of decoding by Gough and Tunmer (1986) that it refers to the ability to read isolated words quickly, accurately, and silently pertains more to serial decoding as word reading encompasses orthographic learning and recognition (Ehri, 2005; Share, 1995). According to several computational models of word recognition and reading aloud (e.g., the dual-route model), word recognition can be explained by a model of reading aloud that possesses a dual-route architecture from print to speech. The lexical nonsemantic route (i.e., the phonological decoding path) generates the pronunciation of a word and the lexical semantic route (i.e., the orthographic processing path) is responsible for retrieving the meaning of a word from the mental lexicon (Coltheart, Rastle, Perry, Langdon, & Ziegler, 2001; Plaut, McClelland, Seidenberg, & Patterson, 1996). The phonological decoding path may be the primary route in languages with highly transparent orthographies (e.g., Finnish, German, and Italian), while the orthographic processing path is more important in languages where the correspondences between graphemes and phonemes are less predictable (e.g., English) or there is no script-sound correspondences (e.g., Chinese). We use the term word recognition throughout to refer to successful word reading. Therefore, the decoding component of the SVR can be analyzed into phonological decoding and orthographic processes, corresponding to the paths to the dual-route model of reading aloud (Coltheart, Rastle, Perry, Langdon, & Ziegler, 2001).

Similarly, the use of the term listening comprehension might complicate the interpretation and evaluation of the SVR. Some researchers have argued that the original choice of listening comprehension as the construct of language skills most relevant to reading comprehension is too vague (Kirby & Savage, 2008; Ouellette & Beers, 2010). The linguistic component is defined as the ability to take word-level lexical information and derive sentence and discourse interpretations of aurally presented texts and thus is also referred to as listening comprehension (Florit & Cain, 2011). For consistency, we use the term language comprehension throughout. Some researchers have pointed out that the construct of language comprehension can encompass all aspects of language knowledge and hence does not fully reflect the important role of specific language skills in reading comprehension (Braze, Tabor, Shankweiler, & Mencl, 2007). For instance, Ouellette and Beers included measures of both language comprehension and oral vocabulary, along with measures of phonological awareness and word recognition to examine their shared and unique contributions to reading comprehension (Ouellette & Beers, 2010). It was found that for more advanced Grade 6 students, oral vocabulary contributed to reading comprehension beyond measures of the two constructs specified in the SVR: word recognition and language comprehension. It is worth to note that in this study, language comprehension would not be a significant predictor of reading comprehension but phonological awareness and oral vocabulary were the significant predictors of reading comprehension when all the variables were entered in the regression model (Ouellette & Beers, 2010). These findings suggest how the construct of language comprehension of the SVR may best be conceptualized and measured. Given that previous research that used measures that control for style, vocabulary, and length to assess oral and written comprehension has reported greater magnitude of correlations between language and reading comprehension (Hoover & Gough, 1990; Vellutino, Tunmer, Jaccard, & Chen, 2007), it may be reasonable to expect a more direct relation between language and reading comprehension both at the discourse-level and subskills specific to text comprehension (e.g., text integration and inferential processing, understanding

of story structure, and comprehension monitoring (Oakhill, Cain, & Bryant, 2003)) contribute to both oral and written comprehension at the discourse-level. For sentence comprehension, word recognition and its subskills (e.g., oral vocabulary and semantic skills) and syntactic skills might be better to represent the decoding and linguistic constructs of the SVR as they account for significant variances in sentence comprehension (Chang, Lieven, & Tomasello, 2008; Kidd, Lieven, & Tomasello, 2006; Nation and Snowling, 2004; Ouellette, 2006).

The other important feature of the SVR is the hypothesized asymmetry in the relative contributions made to reading comprehension by word recognition and language comprehension at different stages of reading development (Gough & Tunmer, 1986; Hoover & Gough, 1990). At the early stage of reading development (i.e., the stage of learning to read), beginner readers are still learning how to decode words and hence word recognition rather than language comprehension should account for more variance in reading comprehension. Language comprehension processes would not fully operate in reading comprehension until word recognition becomes relatively automatic and more resources could be reserved for higher level cognitive processes (e.g., inferences and syntactic repairs) involved in reading comprehension (Florit & Cain, 2011; Vellutino, Tunmer, Jaccard, & Chen, 2007). Support for the hypothesis in the SVR that the influences of these two components will change developmentally came from studies of reading development in children, in which word recognition and phonological decoding skills were found to be better predictors of performance on measures of reading comprehension in children with limited reading skill than in children with more advanced reading skill (Hoover & Gough, 1990; Vellutino, Scanlon, Small, & Tanzman, 1991; Vellutino, Scanlon, & Tanzman, 1994), while language comprehension was found to be a better predictor of performance on measures of reading comprehension in children with more advanced reading skill than in children with limited reading skill (Goff, Pratt, & Ong, 2005; Seigneuric & Ehrlich, 2005).

We had special interests in examining the mechanism of sentence comprehension in this study for two reasons. Firstly, Chinese children at the early stage of learning to read are still developing the automaticity of word recognition and their higher cognitive processes of sentence comprehension becomes less automatic. Only children with efficient word- and sentence-level processing skills would be able to achieve competent passage-level comprehension (Luna, Garver, Urban, Lazar, & Sweeney, 2004). In other words, sentence comprehension is a pre-requisite for passage comprehension. Secondly, despite the widely held view that reading comprehension is a multidimensional construct, the assessment of this construct in the majority of studies examining the relationship among the three components in the SVR favors measures at the discourse-level (Florit & Cain, 2011). However, the strength of the relationship between word recognition and reading comprehension is affected by text genre and test format of reading comprehension (Best, Floyd, & McNamara, 2008; Nation & Snowling, 1997). For example, there are substantial differences have been found in the strength of the association between word recognition and reading comprehension performance measured with materials of different text genres (e.g., narrative and expository) and formats (i.e., single sentences and passages) (Andreassen & Braten, 2010; Best, Floyd, & McNamara, 2008; Francis, Fletcher, Catts, & Tomblin, 2004; Nation & Snowling, 1997). For example, a stronger relationship was found between word recognition and reading comprehension measured with a sentence cloze task than with a task that involves passage reading and open-ended questions (Nation &

Snowling, 1997). This pattern was supported by other work (Andreassen & Braten, 2010). The findings from these studies demonstrate differences in processing demands of sentence- and passage-level comprehension. Both sentence- and passage-level reading comprehension involve lower and higher cognitive processes, but they differ in processing demands of reading comprehension tasks. For lower cognitive processes, word recognition and its relevant sub-lexical processes (e.g., applying knowledge about letter-sound correspondences to sound out a written word) are necessary to convert graphic stimuli into linguistic referents (i.e., words) in reading comprehension tasks involving single sentences or passages. Higher cognitive processes (e.g., integrative processes, inferences and syntactic repairs) involving connecting one element to other elements of a sentence or one part to other parts of a passage are essential to derive sentence and passage interpretations to construct a meaningful mental representation for comprehension. In a sentence cloze task, children need to decode individual words accurately to complete the task, whereas in a passage-reading task, inaccurate decoding of some words may not necessarily be detrimental to correctly responding to questions as children could integrate information across sentences to identify words decoded inaccurately (Garcia & Cain, 2014; Kendeou, Papadopoulos, & Spanoudis, 2012). Given the commonalities and differences in sentence- and passage-level reading comprehension, the exploration of the skills that foster sentence comprehension will enable us to better conceptualize the construct of reading comprehension as specified in the SVR (e.g., the necessity of separating the construct of reading comprehension into sentence- and discourse-level comprehension). Moreover, the literature reviewed earlier is suggestive of a more complicated relationship among word recognition, oral language, and reading comprehension than suggested in the current conceptualization of the SVR. Identifying subskills of sentence comprehension would be helpful to address these issues. For this reason, we evaluated the role of language skills most relevant to word recognition and/or sentence comprehension and their contributions to sentence comprehension. Next, we will discuss the language skills and their relations to various reading skills.

Relations of Vocabulary Knowledge to Word Recognition and Reading Comprehension

Although there is growing recognition of the developmental trajectories of the influences of word recognition and language comprehension on reading comprehension in the SVR, research findings with respect to the relative contribution of oral language skills (one of the important contributors of language comprehension) in early reading comprehension have been contradictory (Catts, Fey, Zhang, & Tomblin, 1999; Paris & Paris, 2003; Speece, Roth, Cooper, & de la Paz, 1999; Vellutino, Tunmer, Jaccard, & Chen, 2007). For example, Muter and colleagues (2004) found that when phonological awareness was taken into consideration, receptive vocabulary measured in school entry predicted passage comprehension rather than word recognition performance measured at Grade 2. Similar findings were also obtained in Catts and colleagues' study (1999) in which oral language skills (measured with receptive vocabulary, oral vocabulary, grammatical understanding, sentence imitation, and grammatical completion) assessed in kindergarten were predictive of reading comprehension assessed at Grade 2 after controlling for phonological skills. However, in a longitudinal study, Storch and Whitehurst (2002) found that oral language skills measured at kindergarten contributed indirectly to reading performance at Grade 2 via the contribution to word reading

performance at Grade 1. On the one hand, results of some studies suggest that oral language skills become fully operative only when word recognition becomes automatic (Speece, Roth, Cooper, & de la Paz, 1999; Vellutino, Tunmer, Jaccard, & Chen, 2007). On the other hand, results of other studies highlight the important role of such skills in early reading development (Catts, Fey, Zhang, & Tomblin, 1999; Paris & Paris, 2003). The lack of consensus in the literature may be due to the age range on which existing studies have focused. Most of the research on assessing the contribution of oral language skills to word recognition and reading comprehension investigated children in kindergarten throughout second grade (see the review by Storch & Whitehurst, 2002). Many oral language skills (e.g., receptive vocabulary), however, develop well among children before kindergarten (Kendeou, Broek, White, & Lynch, 2009) and more advanced oral language skills (e.g., discriminating differences in word meanings) should be the focus of school-aged children.

Another reason for the inconsistent results in previous research concerns the different ways that oral language skills have been conceptualized and measured. Oral language skills have often been measured with oral vocabulary tasks (e.g., receptive and expressive vocabulary) in literature (Kendeou, Broek, White, & Lynch, 2009; Nation & Snowling, 1998b; Nation & Snowling, 2004; Yeung, Ho, Chan, & Chung, 2016). Moreover, oral vocabulary has been conceptualized as the breadth (i.e., how many words are known) and depth (i.e., how well word meanings are known) of vocabulary knowledge. Such distinction comes from models of the mental lexicon. According to Levelt and colleagues (1999), the storage of vocabulary in the mental lexicon involves lexical representations of phonology or sound patterns of word and semantic representations of word meaning. In accordance with this definition, the mental lexicon is regarded as a store of phonological word forms and semantic representations of word meanings and therefore a distinction between the number of lexical entries (i.e., vocabulary breadth) the extent of semantic representation (i.e., depth of vocabulary knowledge) (Coleman, 1998; Levelt, Roelofs, & Meyer, 1999). Ouellette (2006) found that vocabulary breadth predicted decoding skills and word recognition, whereas vocabulary depth contributed to word recognition via vocabulary breadth among Grade 4 children. These findings may reflect that the depth of vocabulary knowledge refines the extent of semantic representations along with the increment of vocabulary size and ultimately benefits word recognition. Given the age range of our participants (i.e., children in Grades 2 and 3), we were particularly interested in testing the direct relationship between oral vocabulary with focus on depth of vocabulary knowledge and word recognition and the indirect relationship between oral vocabulary and sentence comprehension via word recognition.

Apart from oral vocabulary, semantic processing skills is another important aspect of oral language skills. In the framework proposed by Seidenberg and McClelland (1989), single word pronunciation (i.e., word recognition) can be captured by processes that establish mappings between orthographic and phonological representations via a set of hidden units. A phonological process (also phonological pathway), is responsible for mappings between orthographic and phonological representations and a semantic process (also semantic pathway) deals with mappings between semantic, phonological, and orthographic representations (Plaut, McClelland, Seidenberg, & Patterson, 1996). Nation and colleagues have provided substantial evidence for semantic correlates of reading abilities and reading disabilities (Nation, Clarke, Marshall, & Durand, 2004; Nation & Snowling, 1998a, 1998b; Nation &

Snowling, 1999; Nation & Snowling, 2000; Nation & Snowling, 2004). For example, in a longitudinal study by Nation and Snowling (2004), semantic processing skills measured with a semantic fluency test and a synonym judgment task were found to be a concurrent and a longitudinal predictor of both word recognition and reading comprehension after controlling for phonological processing skills. It is worthy to note that as the effect of word recognition was not controlled in this study, it was possible that a considerable proportion of the variance in reading comprehension explained by semantic skills may also be explained by word recognition. Thus, it appears that semantic skills, especially the skill of discriminating subtle differences in word meanings, contribute to word recognition via the semantic pathway in the framework proposed by Seidenberg and McClelland (1989). In other studies, vocabulary knowledge has been shown to be linked to irregular word recognition (Nation & Snowling, 1998b; Ouellette, 2006). The research evidence reviewed here is suggestive of the view that semantic skills exert influence on the semantic pathway (i.e., connecting semantics to orthography), which is consistent with the perspective of computational models of reading (Plaut, McClelland, Seidenberg, & Patterson, 1996) and developmental models of reading (Share, 1995) that highlight the role of semantics in orthographic learning and word learning.

Given the important role of vocabulary knowledge for developing semantic representations and retrieving word meanings in the early stage of reading development, we included measures of oral vocabulary and semantic discrimination to examine their contributions to word recognition and sentence comprehension. We expected a direct role of vocabulary knowledge in predicting word recognition and a less important role in sentence comprehension after controlling for the effect of word recognition. Also, we argued that vocabulary knowledge may have a distinct relation to word recognition and may contribute to sentence comprehension indirectly via the effect on word recognition.

Relations of Syntactic Skills to Word Recognition and Reading Comprehension

In previous research, syntactic skills were demonstrated to contribute significantly to text-level reading comprehension in many studies (Demont & Gombert, 1996; Muter et al., 2004; Plaza, 2001; Plaza & Cohen, 2003; Willows & Ryan, 1986). Moreover, unique contributions of syntactic skills were also found to sentence comprehension (Chang, Lieven, & Tomasello, 2008; Kidd, Lieven, & Tomasello, 2006). These findings suggest that syntactic skills may contribute to reading comprehension indirectly via the effects on sentence comprehension. Among various syntactic skills, there is also substantial evidence in support of the significant role of word order skills in reading comprehension. For example, Tunmer and colleagues (1988) found that word order skills (i.e., processing between-constituent (e.g., VOS, VSO, and SOV) and within-constituent order (e.g., word order for an article and a noun) assessed at Grade 1 predicted word decoding and reading comprehension at Grade 2. As word order provides the information about the basic structure of a sentence, it was reasonable to expect a significant role of word order in sentence comprehension in the present study.

In regard to the relationship between syntactic skills and vocabulary knowledge, the role of oral language skills in syntactic development has been emphasized in research investigating the relationship between metalinguistic awareness and early reading development (Bowey, 2005; Chaney, 1994; Menyuk & Chesnick, 1997; Smith

& Flusberg, 1982). Metalinguistic skills (e.g., phonological awareness, morphological awareness, and syntactic awareness) refer to the ability to reflect on explicitly the structural features of spoken language (e.g., how individual phonemes comprise a word and how constituent words are grouped into an utterance) (Chaney, 1994; Tunmer, Herriman, & Nesdale, 1988). Metalinguistic skills develop separately from and later than basic oral language skills (e.g., speaking and listening a spoken language) before formal schooling (Tunmer, Herriman, & Nesdale, 1988). Evidence in support of this view comes from studies which showed that oral language skills were a powerful predictor of metalinguistic awareness in preschoolers (Chaney, 1994). Chaney (1994) identified factors most crucial in early literacy development and found that 3-year-old children's oral language skills (i.e., oral receptive and expressive language) predicted their metalinguistic awareness (i.e., phonological, morphological, and syntactic awareness) which was associated with emergent literacy (i.e., knowledge about print concepts). It appears that syntactic awareness of preschoolers enables them to develop more sophisticated syntactic skills (e.g., manipulating sentence structures and detecting syntactic errors in sentence comprehension) during formal reading instruction. Smith and Flusberg (1982) reported that the skill of manipulating grammatical morphemic variation was related to vocabulary knowledge and the skill of manipulating word order for imperative sentences was related to both vocabulary knowledge and listening comprehension. This set of findings suggest that children develop the grammatical concept of word class with the expansion of vocabulary knowledge, which helps to acquire grammatical structures that are important for the acquisition of word order rules which in turn contribute to sentence comprehension. Given that vocabulary knowledge is fundamental for the acquisition of syntactic skills, we expected a mediation effect of syntactic skills on the relationship between vocabulary knowledge (and also other language skills such as oral narrative skills) and sentence comprehension in the present study.

Relations of Oral Narrative Skills to Reading Comprehension

Narrative text (e.g., short stories and traditional tales) is the form of reading materials that may be exposed to children most frequently. Evidence for the important role of narrative knowledge for comprehending the meanings of a text came from the research investigating children's ability to produce stories. Children with better knowledge about the conventional features of stories (e.g., beginning, body, and ending of a story) were found to produce more coherent stories and perform better in reading comprehension tasks (Paris & Jacobs, 1984), whilst children with inadequate knowledge about text structures and genres suffered from failure in reading comprehension (Perfetti, 1994). Moreover, children with normal decoding skills but impaired comprehension skills were shown to have impairments in constructing stories due to their impoverished knowledge about the structural features of a story (Cain, 2003; Cain & Oakhill, 1996). The relationship between oral narrative skills and reading comprehension found in these studies suggests that knowledge about the features of narrative texts provides a useful discourse context for text comprehension rather than sentence comprehension. In the present study, we expected that oral narrative skills contributed to sentence comprehension indirectly via the effects on syntactic skills as from a developmental point of view, the acquisition of syntactic skills, particularly the acquisition of advanced syntactic word order skills, is influenced by the development of oral narrative skills (Gombert, 1992; Menyuk & Chesnick, 1997; Miao & Zhu, 1992).

Next, we will introduce the characteristics of the Chinese orthography and review studies investigating the relationship between these language skills and reading comprehension.

Relations of Language Skills to Word Recognition and Reading Comprehension in Chinese

The Chinese writing system contrasts with the alphabetic writing systems primarily on the mapping principle. There is no direct script-sound relation in Chinese at the sub-lexical level. Research has demonstrated a less important role of phonological processing skills in Chinese word reading and reading comprehension. In a longitudinal study, Tong, McBride-Chang, Shu, and Wong (2009) found that orthographic and morphological skills predicted Chinese word reading and reading comprehension concurrently and longitudinally, whereas phonological awareness at kindergarten failed to explain unique variances in word reading and reading comprehension at Grade 1. It appears that the lack of reliable script-sound relation in Chinese results in readers that rely on a semantic pathway (i.e., mappings between orthography, semantics, and phonology) rather than phonological pathway (i.e., mappings between orthography and phonology) for word recognition.

Chinese orthography is also described as a morpho-syllabic writing system (DeFrancis, 1989; Mattingly, 1984). The majority of Chinese words are bisyllabic or multisyllabic (Taylor & Taylor, 1995) and many words share a same morpheme. For example, 飯桌 /faan6 zoek3/ “dining table” and 木桌 /muk6 zoek3/ “woody table” share the morpheme 桌 /zoek3/ “table” and hence they are semantically related. Given the characteristics of semantic compounding in Chinese word formation, vocabulary knowledge, especially semantic discrimination is important for understanding word meanings. This has been demonstrated in So and Siegel’s study (1997) in which semantic processing skills (judging meanings of similar words and sentences) predicted word recognition among Chinese students from Grades 1 to 4.

Chinese is also described as a noninflected language as it neither inflects nouns for case, gender, and number, nor inflects verbs for tense and subject-verb agreement (Li & Thompson, 1981; Tsang & Stokes, 2001). Word order is the most significant single syntactic device for Chinese sentence interpretation (Chang, 1992). However, the semantic-driven nature of Chinese may partly determine a rather loose word order system in Chinese as compared to English. The canonical word order for Chinese sentences is Subject-Verb-Object (SVO). An example of SVO order is given as 我打破了花瓶 “I hit break PERF (perfective aspect) vase”. SOV and OSV order are allowed in Chinese sentences. SOV and OSV order usually appear in Ba and Bei sentences, respectively (Matthews & Yip, 1994). For example, the SVO sentence 我打破了花瓶 “I hit break PERF (perfective aspect) vase” can be converted to a Ba sentence 我把花瓶打破了 “I ba vase hit break PERF (perfective aspect)” or a Bei sentence 花瓶被我打破了 “Vase bei I hit break PERF (perfective aspect)”. Apart from the between-constituent order (i.e., SVO, SOV, and OSV), within-constituent order (i.e., word order in multi-attribute and multiadverbial) reflects the relations between head noun/verb and modifiers and was examined here for the reason that different attributes and adverbials are important in substantiating the main construct of syntactic process in Chinese sentence reading. In Chinese, the placement of adverbs is often in the pre-predicate position after the topic and before the verb in the sentence (Li & Thompson, 1981).

This arrangement is in some contra-distinction to English where some verbs are preverbal and some post-verbal. For example, “He very much likes football” (Chinese version) as compared with “He likes football very much” (English equivalent). Then relative clauses in Chinese are pre-modifying and are realized with the nominalizer (e.g., “dik1”) (Li & Thompson, 1981; Mathews & Yip, 1994).

The relationship between syntactic skills and reading comprehension has been established in some correlational studies. Yeung and colleagues (2011) reported that syntactic word order skills accounted for unique variance in both sentence and passage reading comprehension after controlling for the effects of word reading and other cognitive-linguistic skills. Chik, Ho, Yeung, and Chan et al. (2012) reported that syntactic skills of processing word order, connectives, and morphosyntactic structures measured at Grade 1 significantly predicted sentence comprehension measured at Grade 2 after controlling for the effects of phonological, orthographic, and morphological skills. However, word order no longer predicted sentence comprehension when morphosyntax and connective usage were considered. As suggested by the authors, this may be due to the overlap in tasks of word order and connective usage. In the present study, syntactic word order skills were postulated to contribute to sentence comprehension directly but not to word recognition. Research on oral narrative skills in Chinese children is scarce and therefore one of the aims of this study was to examine the role of oral narrative skills in sentence comprehension and its relevance to other language skills.

Despite the important role of language skills in word recognition and reading comprehension being upheld in recent Chinese studies, findings may not be conclusive. For example, Chik, Ho, Yeung, and Wong et al. (2012) found that oral vocabulary and word semantics made significant contributions to reading comprehension after controlling for word reading among children from Grades 1 to 3, but the contributions became non-significant with word reading controlled among children from Grades 4 to 5. Moreover, discourse skills contributed to reading comprehension consistently from Grades 1 to 5 even after controlling for word reading, whereas word order made no significant contribution to reading comprehension with the effect of word reading controlled across the grades. Given that reading comprehension was measured with sentence and passage comprehension scores combined in their study and therefore effects of the language skills failed to be separated from text comprehension to sentence comprehension (e.g., word order may play a more significant role in sentence reading than in passage reading). The present study was also to address this important issue.

In summary, in the present study we have included word recognition and various language skills that have previously been considered as important components of reading comprehension skill to investigate their relations with sentence comprehension.

Aims of the Present Study

The primary aim of the present study is to assess the relative contributions of the various language skills we have known to be related to word recognition and/or sentence comprehension skill in Chinese primary-age children. To address this aim, we used structural equation modelling (SEM) to examine the relationship among word recognition, language skills (i.e., vocabulary knowledge, syntactic skills, and oral narrative skills), and sentence reading comprehension in a sample of Chinese children in Grades 2 and 3. With reference to the SVR, we conceptualized sentence comprehension as determined by word recognition and syntactic skills. We have

focused on syntactic skills rather than language comprehension as suggested in the SVR due to the reason that language comprehension cannot fully reflect the importance of specific language skills such as oral vocabulary (Braze, Tabor, Shankweiler, & Mencl, 2007) and perhaps also syntactic skills. In addition, there may be less distributional variance in the construct of language comprehension to secure it to be a meaningful predictor of reading comprehension skill (Ouellette & Beers, 2010).

In the SEM model (see Appendix 5: Figure 1), vocabulary knowledge was hypothesized to make direct contribution to word recognition. Syntactic skills were postulated to contribute to sentence comprehension directly but not to word recognition. Vocabulary knowledge and oral narrative skills were hypothesized as two correlated constructs given that they were usually regarded as important aspects of oral language skills in previous studies (Chik, Ho, Yeung, & Wong et al., 2012; Yeung, Ho, Chan, Chung, & Wong, 2013) and we tested the indirect effects of these constructs on sentence comprehension via syntactic skills. Oral narrative skills were often conceptualized as passage-level comprehension related skills in previous research (Cain, 2003; Cain & Oakhill, 1996) and thus no direct relations between oral narrative skills and sentence comprehension were hypothesized here. We focused on the indirect effects of oral narrative skills on sentence comprehension via the effects of syntactic skills. Testing both the direct and indirect role of vocabulary knowledge and oral narrative skills in sentence comprehension is a unique feature of this study as this has been less examined in previous studies. A second SEM model in which the same paths were hypothesized except for that from vocabulary knowledge to sentence comprehension was also specified to test its direct contribution to sentence comprehension (see Figure 2) given that vocabulary knowledge was found to be a strong correlate of discourse-level reading comprehension (Carroll, 1993).

Method

Participants

Junior elementary graders (i.e., Grades 2 and 3 children) were included in this study for the reason that they are in the early elementary stage of “learning to read” during which the recognition of Chinese characters and comprehension of sentences make up of most of their reading experience, both of which prepare them to move to the stage of “reading to learn” (starting at Grade 4). Eighty-five Grade 2 and 3 children, aged from 7; 6 years to 9; 7 years ($M_{age} = 8; 7$ years, $MIQ = 116$), were recruited from local primary schools to take part in the current study. All of the participants had at least average word reading performance as defined by having achieved a scaled score of at least 9 or above on the standardized Chinese Word Reading, a subtest of the Hong Kong Test of Specific Learning Difficulties in Reading and Writing (HKT-SpLD, scaled score mean of the test = 10, 1 $SD = 3$) (Ho, Chan, Tsang, & Lee, 2000). The HKT-SpLD is a standardized assessment tool developed to identify Hong Kong primary school students with dyslexia by assessing their literacy and cognitive functioning.

Measures

A number of language and reading measures were administered to the participants. The nonverbal intelligence test, syntactic word order, synonym judgment, and Chinese sentence comprehension were administered in groups. Word definition, oral sentence construction, story production, and Chinese word reading were

administered individually.

General reasoning ability. The Raven's Standard Progressive Matrices was used to measure the children's nonverbal intelligence. It is a standardized test which contains five sets of 12 items each. Each item comprises one target visual matrix with a missing part. The children were asked to select the most appropriate piece from six to eight alternatives to fill in the missing part. Scoring criterion was based on the local norm established by the former Hong Kong Education Department in 1986.

Vocabulary knowledge. Vocabulary knowledge was measured with a word definition and a synonym judgment task.

Word definition. An oral word definition task was used to measure children's expressive vocabulary. The validity of the task has been tested across languages in previous research (Ouellette, 2006; Wise, Sevcik, Morris, Lovett, & Wolf, 2007; Xiao & Ho, 2014; Yeung, Ho, Chan, & Chung, 2016). Following the procedures in Ouellette's study (2006), we focused on the depth of oral vocabulary among Chinese children by examining their understanding of the semantic category and unique characteristics of a word. There were seven items in the task. In each item, the child was orally presented a word and then required to explain its meaning orally. All the words were frequently encountered by primary school children in their daily life (e.g., 禮物 "gift" and 游泳 "swim"). One practice trial and feedback were given to the child before the testing trials. Three points were given for responses suggesting the semantic category and unique characteristics of a word. Two points were given for responses suggesting either the semantic category or unique characteristics of a word. One point was given for responses explaining relevant rather than unique characteristics of a word. For example, the response 禮物係送俾人嘅物品 "Gifts are objects being presented to others" was given three points as it explained the unique characteristics (i.e., the "present") and semantic category (i.e., the "object") of the concept "gift". The response 禮物係送俾妳慶祝妳生日嘅 "Gifts are presented to you for birthday celebration" was given two points as only the unique characteristic (i.e., the "present") of the "gift" was mentioned. The response 禮物係包嘅好靚嘅包裝入便嘅 "Gifts are wrapped in a beautiful package" was given one point as only the relevant characteristics (i.e., the "wrapped in a beautiful package") were mentioned. The children's responses were marked by two well-trained undergraduate students with psychological background. Discrepancies between the two scorers were settled by discussion until 100% agreement was obtained.

Synonym judgment. Following Nation and Snowling's studies (1998b, 2004) and, a synonym judgment task modeled after the task assessing word semantics in the study by Chik, Ho, Yeung, and Wong et al. (2012) and used in our previous study (Xiao & Ho, 2014) was used here to measure children's semantic processing skills (i.e., the skill of discriminating subtle differences among semantically similar words). There were 12 items in the task. In each item, there were one target word and three words of the same word class (i.e., nouns, verbs, or adjectives). All the words were selected from Chinese textbooks for Grades 1, 2, and 3 students in Hong Kong. Among the three words in each item, only one shared one morpheme and had similar meaning with the target word and the other two shared one morpheme but had different meanings with the target

word. For example, the word 旅客 “traveler” had similar meaning with the target word 遊客 “tourist”, while 遊戲 “game” and 乘客 “passenger” shared one morpheme with the target word respectively but they were semantically different from the target word. One practice item and feedback were given to the children before the testing items. All items were presented orally to the children. In order to reduce children’s memory load, printed test items were also provided to the participants. The children were asked to circle the word semantically similar to the target word in each item. One point was given for a correct response.

Syntactic Skills

A syntactic word order test was used to assess children’s understanding of some rules of basic sentence structures. This test was the same as that used in our previous study (Xiao & Ho, 2014) and similar to the syntactic measures used in other studies on reading development among Chinese children (Chik, Ho, Yeung, and Chan et al., 2012; Ho et al., 2012; Yeung, Ho, Chan, & Chung, 2016).

Simple declarative sentence structure subtest. The subtest was developed to measure the skill of processing the canonical SVO word order. There were six sentences in the subtest. Each sentence was comprised of three to six words and/or phrases with an incorrect word order. For example, the scrambled sentence 熱愛-爸爸-運動 “likes Dad sports” should be reorganized to 爸爸熱愛運動 “Dad likes sports”. The children were asked to reorganize the words and/or phrases to form a meaningful sentence in each item. One practice item and feedback were given to the children before the testing items. Partial scoring was applied in the subtest. Every two consecutive phrases being arranged in a correct order were given one point, yielding a maximum score of 21 for the subtest (i.e., one item consisting of three phrases with two embedded consecutive phrases, two items consisting of four phrases with three embedded consecutive phrases, two items consisting of five phrases with four embedded consecutive phrases, and one item consisting of six phrases with five embedded consecutive phrases).

BaBei sentence structure subtest. The subtest was developed to measure the skill of processing the noncanonical SOV and OSV word order. There were ten simple declarative sentences in the subtest. For example, the sentence 妹妹弄壞了洋娃娃 “Sister has damaged the doll” should be transformed to the Ba sentence 妹妹把洋娃娃弄壞了 “Sister ba doll damage break PERF (perfective aspect)”. The children were asked to transform five sentences into Ba sentences and the other five into Bei sentences. Two points were given for correct writing of ba or bei construction and no omission errors in a sentence. One point was given for correct writing of ba or bei construction with omission errors in a sentence.

Multiple modifiers subtest. The subtest was developed to measure the skill of processing the multiattributive and multiadverbial order. There were 24 incomplete sentences (11 for multiattributive and 13 for multiadverbial filling, respectively) in the subtest. In each item, three to five words and/or phrases were provided to fill in the missing attributives or adverbials. For example, the incomplete sentence 開幕儀式在 _____ 禮堂裡舉行 “The opening ceremony was held in _____ hall” was missing with three attributives. 我們學校 “our school”, 能容納很多人的 “could

contain many people”, and 漂亮的 “beautiful” were provided to fill in the blanks. The reorganized sentence should be 開幕儀式在我們學校能容納很多人的漂亮的禮堂裡舉行 “The opening ceremony was held in the beautiful hall which could contain many people in our school” according to the relatively fixed multiattributive order in Chinese: possessive phrase + classifier phrase + relative clause + adjective/noun/verb + head noun, (Yip & Rimmington, 2004). The children were asked to reorganize the given words and phrases and then use them to complete the sentence in each item. One practice item and feedback were given to the children before the testing items. Similar partial-scoring procedure used in the subtest of simple declarative sentence structure was applied here. Two consecutive phrases being arranged in a correct order were given one point, yielding a maximum score of 60 for this subtest. Specifically, the maximum score for the 11 multiattributive items was 28 (six items with three consecutive phrases, four items with four consecutive phrases, and one item with five consecutive phrases) and the maximum score for the 13 multiadverbial items was 32 (eight items with three consecutive phrases, four items with four consecutive phrases, and one with five consecutive phrases).

All words of the items were chosen from Chinese textbooks for Grades 1, 2, and 3 students in Hong Kong and only simple sentences were constructed for the three subtests. All items in the three subtests were presented orally to the participants. In order to reduce children’s memory load, printed test items were also provided to them. The children were asked to write down the number sequence denoting the correct word order of a sentence in each item in the simple declarative sentence structure and multiple modifiers subtests and write down the Ba and Bei sentences in the BaBei sentence structure subtest.

Oral Narrative Skills

Oral narrative skills were measured with an oral sentence construction and a story production task.

Oral sentence construction. This task was adapted from the oral sentence construction task in the study by Yeung, Ho, Chan, and Chung (2016) and it was designed to assess children’s ability to use connectives to construct complex sentences. There were eight items in the task. In each item, a picture and a pair of conjunctions were presented to the children. The child was asked to use the pair of conjunctions (e.g., 如果 “if” and 就 “then”) to orally construct a compound sentence to describe the picture. In order to reduce children’s memory load, the pair of conjunctions was printed on the upper right corner of the picture. The general idea of the picture (e.g., “the picture is describing the relationship between raining and wet ground”) was also provided to the children as a prompt. One practice item and feedback were given to the children before the testing items. Two points were given for responses using the given conjunctions to connect the two clauses in a compound sentence logically and describing the picture appropriately. One point was given for responses connecting the two clauses in a compound sentence logically but describing the given picture inappropriately. The children’s responses were marked by two well-trained undergraduate students with psychological background. Discrepancies between the two scorers were settled by discussion until 100% agreement was obtained.

Story production. The story production task used in our previous study (Xiao &

Ho, 2014) was adopted to assess children's ability to construct a story. In this task, the child was asked to tell a story about a family picnic based on a given picture. The experimenter introduced the task by saying, "I want you to tell me a story based on this picture. You are encouraged to tell the story in detail". Whenever the child stopped to give no response, the experimenter encouraged him/her to say something more and asked the question "Have you finished?" until the child answered "Yes". A maximum of two points were given to sentences describing the preparation and purposes of the picnic or trip. A maximum of two points was given to sentences describing the scene (e.g., the view and the food) and a maximum of seven points were given to describing the behaviors of persons. Another maximum of seven points were given to sentences describing possible events taking place in the picnic. Finally, a maximum of two points were given to sentences describing the ending of the story. The children's responses were marked by two well-trained undergraduate students with psychological background. Discrepancies between the two scorers were settled by discussion until 100% agreement was obtained.

Chinese word reading. Word recognition was measured with a standardized word reading test in the present study. The Chinese Word Reading subtest of the Hong Kong Test of Specific Learning Difficulties in Reading and Writing (HKT-SpLD) (Ho et al., 2000) was used to measure children's word reading skills. The HKT-SpLD was a standardized test with local norms on reading and reading-related cognitive skills. In this test, the child was asked to read aloud 150 Chinese two-character words arranged in ascending order of difficulty. The test was discontinued when a child failed to read 15 words consecutively. One point was given for correctly reading both characters in a word.

Chinese sentence comprehension. The cloze format assesses discourse-level comprehension across adjunct sentences based on word associations (Shanahan, Kamil, & Tobin, 1982) and has been shown to be related to accurate and efficient word recognition (Paris, Carpenter, Paris, & Hamilton, 2005; Stahl & Hiebert, 2006) and skills of constructing a mental representation of a text (Tolar, Barth, Francis, Fletcher, Stuebing, & Vaughn, 2011). Therefore, sentence comprehension was measured with a cloze task which required children to select the best fitting word in light of context among three options. In this task, children needed to decode individual words accurately and then select the option most appropriate for the missing part of a sentence with reference to the sentential context. Following the procedures of the cloze sentence task in previous studies (Chik, Ho, Yeung, and Chan et al., 2012; Yeung, Ho, Chan, & Chung, 2016), the Chinese sentence comprehension task used in the study by Xiao and Ho (2014) was adopted to measure children's sentence comprehension skill. It was a cloze task with 21 items. In each item, there was a sentence with a missing word. The children were asked to read the sentence on their own and select an appropriate word from three choices to complete the sentence. One point was given for correctly completing a sentence.

An example item:

我們要懂得_____對錯。

We need to _____ what is right from what is wrong.

①差別[difference] ②區別[differentiate] ③特別[special]

In Chinese, the meanings of 差別[difference] and 區別[differentiate] are similar.

Participants may not be able to select the right word to fill in the blank if they didn't know the syntactic knowledge that 區別[differentiate] should be followed by a noun and 差別[difference] should be followed by a verb. Therefore, the cloze task tapped the cognitive processes involved in sentence comprehension, namely, word recognition in which many sub-lexical cognitive processes are involved (e.g., decode phonological, orthographic, and semantic representations) and syntactic processing (i.e., combine the decoded individual words into clauses and sentences guided by syntactic knowledge) (Silva & Cain, 2015).

Results

Descriptive Statistics

Table 1 (Appendix 1) presents descriptive statistics for the measures used here. The internal reliabilities of most of the measures were satisfactory with reliability coefficients ranging from .69 to .90, except for the synonym judgment task with a coefficient of 0.51.

Interrelationships among Various Measures

Table 2 (Appendix 2) presents the matrix of partial correlation coefficients between various measures after controlling for the effects of age and IQ. For vocabulary knowledge, the word definition and synonym judgment tasks both correlated significantly with Chinese word reading ($r = .22, p < .05$ and $r = .35, p < .01$), whereas only the synonym judgment task correlated significantly with Chinese sentence comprehension ($r = .33, p < .01$). They also correlated significantly with some of the syntactic and oral narrative measures ($.22 \leq \text{all } rs \leq .41, p < .05$). For syntactic skills, the three syntactic subtests correlated significantly with one and another ($.24 \leq \text{all } rs \leq .29, p < .05$). Moreover, simple declarative sentence structure correlated significantly with Chinese word reading and Chinese sentence comprehension ($r = .26, p < .05$ and $r = .36, p < .01$). Multiple modifiers correlated significantly with Chinese word reading ($r = .30, p < .01$). For oral narrative skills, the oral sentence construction task correlated marginally with the story production task ($r = .21, p = .06$). Results of the correlation analyses reveal a moderate association of vocabulary knowledge and syntactic word order skills with reading abilities, and a weak link between oral narrative skills and reading performance.

Unique Contributions of Word Recognition and Language Skills to Sentence Comprehension

Multiple regression analyses were performed to examine the unique contributions made by word recognition and language skills to sentence comprehension. Results show that age and IQ accounted for 23% of the variance in sentence comprehension when entered in the first step as control of background variables ($\Delta R^2 = .23, p < .001$), and Chinese word reading along with other language skills accounted for additional 21% of the variance when entered in the second step ($\Delta R^2 = .21, p < .01$). Given the unique contributions to sentence comprehension made by word recognition and language skills, SEM was conducted to further examine the interrelationships among these variables.

Modeling the Relationship among Language Skills, Word Recognition, and Sentence Comprehension

Principal component analysis. Principal component analysis (PCA) was performed to validate whether the seven language measures (i.e., word definition, synonym judgment, simple declarative sentence structure, BaBei sentence structure, multiple modifiers, oral sentence construction, and story production) fell into the proposed language domains (i.e., vocabulary knowledge, syntactic skills, and oral narrative skills). Table 3 (Appendix 3) presents the results of PCA with three factors. Results show that the measures fell into their respective domains with two exceptions. The word definition task loaded primarily on the factor of oral narrative skills and slightly on the factor of vocabulary knowledge.

Structural equation modeling. The three language constructs validated in the PCA were used to explore their relations to word recognition and sentence comprehension in SEM models. As multiple measures were used for language skills in this study, a two-step approach was used to perform structural equation modeling (Anderson & Gerbing, 1988). The first step was to test the measurement model for language skills using confirmatory factor analysis (CFA) with the aim to test the construct validity of the language measures. In Model 1 (Appendix 5), vocabulary knowledge was measured with the word definition and synonym judgment tasks; syntactic skills were measured with the simple declarative sentence structure, BaBei sentence structure, and multiple modifiers subtests; and oral narrative skills were measured with the oral sentence construction and story production tasks (Figure 1: Appendix 5). As results of PCA shows that the word definition task loaded primarily on the factor of oral narrative skills, an alternative CFA model was proposed with this task being conceptualized as a measure of oral narrative skills rather than vocabulary knowledge (see Model 2 in Figure 2: Appendix 6). The second step was to examine the structural model in which the three language constructs (i.e., vocabulary knowledge, syntactic skills, and oral narrative skills) were connected to word recognition or sentence comprehension. Specifically, vocabulary knowledge or synonym judgment was postulated to have a significant effect on word recognition which in turn contributed to sentence comprehension; syntactic skills were postulated to have significant effects on sentence comprehension; and both vocabulary knowledge or synonym judgment as well as oral narrative skills were postulated to contribute to syntactic skills directly (Figures 1 & 2: Appendix 5 & 6).

To evaluate the goodness of fit of each model to the data, we reported the model chi-square statistic associated with the p value, the non-normed fit index (NNFI), the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and the Akaike's information criterion (AIC). The model chi-square test provides an estimate of the overall good fit of a model (a nonsignificant value of the chi-square statistic indicates a good fit) and it is sensitive to sample size (a value below 2 resulting from dividing a chi-square value by its degrees of freedom indicates a good model fit (Maruyama, 1998)). NNFI and CFI indices equal to or above .95 indicate a good fit (Bentler & Bonnet, 1980; Hu & Bentler, 1999). RMSEA values below .05 indicate a good fit (Cudeck & Browne, 1992). AIC values indicate a better fit when it is smaller (Browne & Cudeck, 1992). Results of CFA show an overall good fit of the measurement model in Models 1 (Appendix 5) and 2 (Appendix 6), respectively, namely, χ^2 (11, $N =$

85) = 12.05, $p = .36$ ($\chi^2/df = 1.10$), NNFI = .97, CFI = .98, RMSEA = .03, and AIC = 46.05 for Model 1 (Figure 1: Appendix 5), as well as χ^2 (8, $N = 85$) = 5.65, $p = .69$ ($\chi^2/df = .71$), NNFI = 1.07, CFI = 1, RMSEA = 0, and AIC = 31.65 for Model 2 (Figure 2: Appendix 6). All of the factor loadings of the indicator variables on their respective latent factors were significant. Table 4 (Appendix 4) presents the fit indexes of the structural models tested in Models 1 and 2. Model 1 shows an overall good fit to the data, χ^2 (4, $N = 85$) = 4.37, $p = .36$ ($\chi^2/df = 1.09$), NNFI = .99, CFI = 1, RMSEA = .03, and AIC = 26.37. All standardized path coefficients were significant. Indirect effects tested in Model 1 were also significant, including the significant indirect effects of vocabulary knowledge on sentence comprehension via word recognition and syntactic skills (standardized coefficient for the indirect effects = $.52 \times .35 + .37 \times .3 = .29$) and the significant indirect effect of oral narrative skills on sentence comprehension via syntactic skills (standardized coefficient for the indirect effect = $.3 \times .3 = .09$). Model 2 shows a poor fit to the data, χ^2 (4, $N = 85$) = 18.06, $p = .0012$ ($\chi^2/df = 4.52$), NNFI = .71, CFI = .88, RMSEA = .21, and AIC = 40.06. All standardized path coefficients were significant except for that between synonym judgment and oral narrative skills. Indirect effects tested in Model 2 were also significant, including the significant indirect effects of synonym judgment on sentence comprehension via word recognition and syntactic skills (standardized coefficient for the indirect effects = $.46 \times .37 + .22 \times .29 = .23$) and the significant indirect effect of oral narrative skills on sentence comprehension via syntactic skills (standardized coefficient for the indirect effect = $.46 \times .29 = .13$). As the overall fit of Model 1 was better than that of Model 2, Model 1 was used for further analysis.

In order to test whether vocabulary knowledge made directly contribution to sentence comprehension, an alternative structural model was proposed with the same hypothesized paths and an added path from vocabulary knowledge to sentence comprehension (Figure 3). Model 3 (Appendix 7) shows an overall good fit to the data, χ^2 (4, $N = 85$) = 4.07, $p = .25$ ($\chi^2/df = 1.36$), NNFI = .98, CFI = .99, RMSEA = .07, and Akaike's information criterion (AIC) = 28.07. All standardized path coefficients were significant except for that from vocabulary knowledge to sentence comprehension. As the overall fit of Model 3 was as good as that of Model 1, $\Delta\chi^2$ (1, $N = 85$) = .3, $p > .05$, Model 1 was the preferred parsimonious model (the AIC value for the first model was smaller than that of the alternative model) to conceptualize the interrelationships among language skills, word recognition, and sentence comprehension in this study.

Discussion

Previous studies conducted in alphabetic languages tend to suggest a conclusion that phonological skills play a dominant role over language skills in reading development especially at the early stage. However, the role of phonological skills may have been overemphasized in early reading development (Bishop, 1991; Storch & Whitehurst, 2002), especially in a nonalphabetic language such as Chinese. The present findings confirm our expectation that word recognition and syntactic skills are two core skills to develop and contribute to sentence comprehension among Chinese children in early elementary school, with each making a sizable contribution. Our findings indicate that successful sentence comprehension in a nonalphabetic language (i.e., Chinese) depends on word recognition and syntactic skills which are affected by vocabulary knowledge and oral narrative skills, respectively. Both sets of language skills begin to develop early in Chinese children's lives and combine to support reading

comprehension in the early elementary grades. Thus, instead of the dominant role of phonological processing skills during the course of learning alphabetic languages, the importance of language skills in Chinese learning is upheld in the present study.

Unique Role of Vocabulary Knowledge in Chinese Word Recognition

The large body of research has demonstrated that children of alphabetic languages typically use phonologically analytic strategies to decode words and therefore phonological processing skills are important for reading development and reading impairment (Byrne & Fielding-Barnsley, 1995; Foorman, Francis, Shaywitz, Shaywitz, & Fletcher, 1997; Vukovic & Siegel, 2006). The distinct role of vocabulary knowledge in word recognition among Chinese children found in this study reiterates the importance of the linguistic component in the SVR model (Gough & Tunmer, 1986; Hoover & Gough, 1990). For the particular purpose of examining the role of vocabulary depth, the word definition task was designed to measure the knowledge about the semantic category and unique characteristics of a word. Moreover, vocabulary knowledge did not contribute to sentence comprehension beyond measures of word recognition and syntactic skills as tested in Model 3 (Appendix 7). This is consistent with Ouellette and Beers' study (2010) that oral vocabulary measured with vocabulary breadth and depth was found to make no significant contribution to reading comprehension beyond the contributions of phonological awareness, decoding, irregular word recognition, and listening comprehension in Grade 1 children. However, in the same study, oral vocabulary was reported to predict reading comprehension even when all these variables were taken into consideration in Grade 6 children and this pattern of results have been demonstrated in other previous studies (Ouellette, 2006; Ricketts, Nation, & Bishop, 2007; Tannenbaum, Torgesen, & Wagner, 2006). The different patterns of results obtained between children of lower grades and upper grades reflects an increased importance of vocabulary knowledge in explaining reading comprehension as children become more proficient readers.

Another finding that requires further discussion is the lack of a correlation between the assessments of vocabulary knowledge. We used two different measures (i.e., word definition and synonym judgment) to test children's understanding of vocabulary knowledge. It seems that the two forms of assessments are tapping into different aspects of vocabulary knowledge. This possibility may be supported by the finding that both word definition and synonym judgment loaded on a same factor (see Table 3: Appendix 3). However, apart from the small but substantial factor loadings on vocabulary knowledge, the word definition task also loaded on oral narrative skills. This is not surprising given that in the word definition task the children were required to explain words' meanings which relies heavily on oral expression skills (e.g., using precise phrases and sentences to define a word). In contrast with the semantic fluency task in which children were required to generate as many examples as possible for a given category (Nation & Snowling, 1998b), the synonym judgment task appears to tap children's understanding of subtle meaning differences among words. On top of knowing the pronunciation of individual words, understanding word meaning differences is essential for getting at the exact meaning of a word which in turn facilitates the understanding of a sentence. This is especially important for children at higher grades when they have acquired a bigger pool of vocabularies with more semantically similar words. Children may first learn the meaning of a word, then they gradually learn more about the form (e.g., pronunciation and spelling) and function of

the word. In this developmental sequence, both vocabulary breadth and vocabulary depth are acquired by children (Miao & Zhu, 1992; Nation & Webb, 2011). Therefore, oral vocabulary and semantic discrimination might be two distinctly different components of vocabulary knowledge.

Unique Role of Syntactic Skills in Chinese Sentence Comprehension

Consistent with previous findings (Chik, Ho, Yeung, & Chan et al., 2012; Yeung, Ho, Chung, & Chan, 2012), sentence comprehension was predicted by word recognition and syntactic skills in this study. This finding confirms and extends the SVR that reading comprehension at the sentence level is determined by two broad components of word recognition and language processing (i.e., syntactic processing in this study) in a nonalphabetic language and how language skills are involved in these two processes. When reading a sentence, the semantic clarity of individual words and syntactic complexity of the sentence both influence the comprehension. Vocabulary or syntactic knowledge alone is not sufficient for successful comprehension. Instead, syntactic processing interacts with semantic processing during the course of sentence reading. Thus, the access of meanings from single printed words (i.e., word recognition) and the organization of sentence constituents are always important for sentence comprehension. Taken together, our data and findings from previous studies tend to suggest that the automatization of the lower level process of word recognition leaves more mental resources available for higher level processes in sentence comprehension such as syntactic processing (Perfetti & Hart, 2002).

Results of CFA show that the canonical SVO order for simple declarative sentences, the noncanonical SOV and OSV order for Ba and Bei sentences, and word order for multiple modifiers are important components of word order skills in Chinese. Among the three types of word order skills, only the canonical SVO order was correlated with sentence comprehension, and the noncanonical SOV and OSV order was correlated with neither word recognition nor sentence comprehension (see Table 2: Appendix 2). Given that only simple sentences were included in the Chinese sentence comprehension test, these results reveal that SVO order has a distinct relation with the understanding of simple sentences, whereas SOV and OSV order are more related to the understanding of noncanonical sentence types (e.g., Ba and Bei sentences and complex sentences with relative clauses). As compared to the between-constituent order (i.e., SVO, SOV, and OSV), the within-constituent order for multiple modifiers may be difficult to acquire. In one of our studies, Chinese dyslexic children were found to perform less well in processing multiple modifiers than SVO, SOV, and OSV sentences (Xiao & Ho, 2014). The non-significant correlation between multiple modifiers and sentence comprehension suggests that the participants in this study may also have similar difficulties in processing such complicated word order at the early stage of reading development. In addition, the significant correlations between multiple modifiers and word recognition may be caused by considerable shared variance between these two measures given that they both tapped morphological knowledge.

In line with our expectation, vocabulary knowledge was shown to contribute to syntactic word order skills directly and to sentence comprehension indirectly via syntactic word order skills. The acquisition of syntactic knowledge is a crucial component of early language development (Simms & Crump, 1983). Li and colleagues (Li, Bate, Liu, & MacWhinney, 1992) found that Chinese children as young as 28 to 44 months old are able to use both word order and animacy strategies to identify the agent

of a sentence. Miao and Zhu (1992) found that children as early as one year old are able to babble words denoting people, objects, and actions; and children from one and a half years to two years old begin to produce modifier-free and complete simple sentences with SV, VO, and SVO order. The awareness of word order at early stage provides a foundation for acquiring advanced word order skills. The word learning experience in formal schooling consolidates the word order skills, which in turn contribute to sentence comprehension.

Role of Oral Narrative Skills in Chinese Sentence Reading Comprehension

Consistent with our expectation, oral narrative skills measured with the oral sentence construction and story production tasks contributed to sentence comprehension via the effects on syntactic skills in this study. The oral sentence construction and story production tasks tapped some aspects of discourse skills (i.e., knowledge about the structures of compound sentences and narrative texts). The knowledge about story structure is important for understanding a text as it helps to build a mental model of the situation represented in the text (Cain & Oakhill, 1996; Oakhill, Cain, & Bryant, 2003). Yeung and colleagues found that syntactic word order and discourse skills (i.e., processing sentence order) contributed significantly to text comprehension (Yeung, Ho, Chan, Chung, & Wong, 2013). However, given that sentence comprehension was not examined in their study, the unique contribution of discourse skills to sentence comprehension remained untested. Nevertheless, our findings along with Yeung et al.'s (Yeung, Ho, Chan, Chung, & Wong, 2013) suggest that discourse skills may have a distinct role in text comprehension rather than in sentence comprehension.

In addition, our findings also suggest that oral language skills (i.e., vocabulary knowledge and oral narrative skills) contribute directly to linguistic capacities (i.e., syntactic word order skills) and ultimately facilitate sentence processing. This finding supports the view that oral language skills exert an influence over the development of reading comprehension via influencing the development of metalinguistic skills (e.g., syntactic awareness) (Tunmer & Herriman, 1984; Tunmer, Herriman, & Nesdale, 1988) and linguistic skills (e.g., advanced syntactic word order skills). Oral narrative tasks (i.e., oral sentence construction and story production) in the present study tapped primarily the knowledge about basic grammatical structures and sentence types in Chinese and such knowledge plays a role in the normal course of syntactic development especially the acquisition of syntactic word order skills (depending on the understanding of the relationship among grammatical structures and sentential components). It appears that the relationships among oral language, linguistic skills, and reading comprehension are more complex than previously postulated. More studies are needed to include measures of both sentence and text comprehension to address this issue.

Theoretical and Educational Implications of the Present Study

Several implications for theoretical considerations and education stem from our findings. With respect to theoretical considerations, our results are consistent with those in the literature in showing that reading comprehension at the sentence- and discourse-level is determined by the two constructs (i.e., the decoding and linguistic constructs) in the SVR. In particular, our finding that word recognition was a significant predictor of sentence comprehension in Chinese Grade 2 and 3 children who had received formal

literacy instruction for 2 or 3 years is consistent with previous evidence showing that the influence of word recognition on reading comprehension is affected by the transparency of the orthography of the language that has to be acquired (Florit & Cain, 2011). For readers of Chinese, the development of word recognition skill in reading comprehension progresses at a slower rate and takes a more prolonged time as Chinese is a more opaque orthography (Joshi, Tao, Aaron, & Quiroz, 2012). Our results also have implications for better conceptualizing the components of language and reading comprehension in the SVR. As pointed out by Ouellette and Beers (2010), the all-encompassing nature of language comprehension obscures the identification of the most relevant aspects of oral language in reading. The present finding that syntactic skills predicted significant sentence comprehension, along with previous evidence that greater correlations were found between measures of language and discourse-level reading comprehension that control for style, vocabulary, length, etc. (Hoover & Gough, 1990; Vellutino, Tunmer, Jaccard, & Chen, 2007) may suggest that syntactic skills might be more relevant to sentence comprehension, while text comprehension might be more reliant on comprehension monitoring skill, text integration skill, and story structure knowledge (Cain, & Oakhill, 1996; Oakhill, Cain, & Bryant, 2003). Although the validity of the SVR in Chinese has been tested by Yeung and colleagues in a 3-year longitudinal study conducted in Chinese children from Grade 1 to Grade 3 (Yeung, Ho, Chan, & Chung, 2016), the complex relations between syntactic skills and sentence comprehension as well as oral narrative skills and text comprehension across development were not tested in their study. Further studies are needed to investigate the shared and additional variance accounted for by syntactic skills (and other language skills) and language comprehension in reading comprehension at both sentence and discourse level by incorporating measures of various language skills and measures of sentence and text comprehension across languages that differ in orthographies. In addition, our finding that word recognition was predicted by vocabulary knowledge also suggests an inclusion of a semantic contribution to word recognition rather than to reading comprehension in the SVR, which is not consistent with what the SVR is usually conceptualized as. Semantic area is normally seen as part of language comprehension. Therefore, it may be important to not see word recognition and language comprehension as entirely independent components of the SVR.

From a practical point of view, our findings have implications for assessment and instruction. Firstly, it is important to note that our data may suggest the sensitivity of sentence comprehension tests in the assessment of comprehension skills at early elementary grades which have been focusing on children's text-level reading skills (Kendeou, Papadopoulos, & Spanoudis, 2012). Secondly, the main educational implication of our findings is to enable teachers to understand what they need to teach about reading comprehension within a broad curriculum at the early stage of learning to read Chinese. The language skills examined here could usefully be taught to children to foster their development of comprehension skills. Specifically, knowledge about basic word order rules (e.g., canonical SVO order and non-canonical OSV and SOV order) can be taught at early grades. Advanced word order skills (e.g., processing word order for multiple modifiers) are not suggested to be taught until students are able to process basic word order effectively. To improve syntactic word order skills, knowledge about vocabulary and narrative structures is a must and thus particular attention should be paid to it given the findings that semantic and oral narrative skills contributed to syntactic word order skills directly. Whether these skills should be taught

independently or as part of an integrated training of reading skills, require further research.

One major limitation of the present study was the small sample size for the SEM analyses (Kline, 2016; Wolf, Harrington, Clark, & Miller, 2013). The present findings are needed to be replicated in future studies of large sample size.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Andreassen, R., & Braten, I. (2010). Examining the prediction of reading comprehension on different multiple-choice tests. *Journal of Research in Reading*, 33(3), 263-283.
- Bentler, P.M., & Bonnet, D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- Best, R. M., Floyd, R. G., & McNamara, D. S. (2008). Differential competencies contributing to children's comprehension of narrative and expository texts. *Reading Psychology*, 29(2), 137-164.
- Bishop, D. V. M. (1991). Developmental reading disabilities: The role of phonological processing has been overemphasized. *Mind & Language*, 6(2), 97-101.
- Bishop, D. V. M., & Snowling, M. J. (2004). Developmental dyslexia and specific language impairment: Same or different? *Psychological Bulletin*, 130(6), 858-886.
- Bowey, J. A. (2005). Grammatical sensitivity: Its origins and potential contribution to early word reading skill. *Journal of Experimental Child Psychology*, 90(4), 318-343.
- Braze, D., Tabor, W., Shankweiler, D. P., & Mencl, W. E. (2007). Speaking up for vocabulary: Reading skill differences in young adults. *Journal of Learning Disabilities*, 40(3), 226-243.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods & Research*, 21(2), 230-258.
- Byrne, B., & Fielding-Barnsley, R. (1995). Evaluation of a program to teach phonemic awareness to young children: A 2- and 3-year follow-up and a new preschool trial. *Journal of Educational Psychology*, 87(3), 488-503.
- Cain, K. (2003). Text comprehension and its relation to coherence and cohesion in children's fictional narratives. *British Journal of Developmental Psychology*, 21(3), 335-351.
- Cain, K., & Oakhill, J. (1996). The nature of the relationship between comprehension skill and the ability to tell a story. *British Journal of Developmental Psychology*, 14(2), 187-201.
- Carroll, J. B. (1993). *Human cognitive abilities: A survey of factor-analytic studies*. New York, NY: Cambridge University Press.
- Catts, H. W., Fey, M. E., Zhang, X., & Tomblin, J. B. (1999). Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading*, 3(4), 331-361.
- Chaney, C. (1994). Language development, metalinguistic awareness, and emergent

- literacy skills of 3-year-old children in relation to social class. *Applied Psycholinguistics*, 15(3), 371-394.
- Chang, F., Lieven, E., & Tomasello, M. (2008). Automatic evaluation of syntactic learners in typologically-different languages. *Cognitive Systems Research*, 9(3), 198-213.
- Chang, H.-W. (1992). The acquisition of Chinese syntax. In H.-C. Chen & O. J. L. Tzeng (Eds.), *Language processing in Chinese. Advances in psychology: Volume 90* (pp. 277-311). Oxford, UK: North-Holland.
- Chik, P. P.-M., Ho, C. S.-H., Yeung, P.-S., Chan, D. W.-O., Chung, K. K.-H., Luan, H., Lo, L.-Y., & Lau, W. S.-Y. (2012). Syntactic skills in sentence reading comprehension among Chinese elementary school children. *Reading and Writing: An Interdisciplinary Journal*, 25, 679-699.
- Chik, P. P.-M., Ho, C. S.-H., Yeung, P.-S., Wong, Y.-K., Chan, D. W.-O., Chung, K. K.-H., & Lo, L.-Y. (2012). Contribution of discourse and morphosyntax skills to reading comprehension in Chinese dyslexic and typically developing children. *Annals of Dyslexia*, 62(1), 1-18.
- Coleman, J. (1998). Cognitive reality and the phonological lexicon: A review. *Journal of Neurolinguistics*, 11(3), 295-320.
- Coltheart, M., Rastle, K., Perry, C., Langdon, R., & Ziegler, J. (2001). DRC: A route cascaded model of visual word recognition and reading aloud. *Psychological Review*, 108(1), 204-256.
- Cudeck, R., & Browne, M. W. (1992). Constructing a covariance matrix that yields a specified minimizer and a specified minimum discrepancy function value. *Psychometrika*, 57, 357-369.
- DeFrancis, J. (1989). *Visible speech: The diverse oneness of writing systems*. Honolulu, HI: University of Hawaii Press.
- Demont, E., & Gombert, J. E. (1996). Phonological awareness as a predictor of recoding skills and syntactic awareness as a predictor of comprehension skills. *British Journal of Educational Psychology*, 66(3), 315-332.
- Ehri, L. (2005). Learning to read: Theory, findings and issues. *Scientific Studies of Reading*, 9(2), 167-188.
- Florit, E., & Cain, K. (2011). The simple view of reading: Is it valid for different types of alphabetic orthographies? *Educational Psychology Review*, 23, 553-576.
- Foorman, B., Francis, D., Shaywitz, S., Shaywitz, B., & Fletcher, J. (1997). The case for early reading intervention. In B. Blachman (Ed.), *Foundations of reading acquisition* (pp. 243-264). Hillsdale, NJ: Erlbaum.
- Francis, D. J., Fletcher, J. M., Catts, H., & Tomblin, B. (2004). *Dimensions affecting the assessment of reading comprehension*. Paper presented at the Pacific Region Education Lab Focus on Comprehension Forum, New York, NY.
- Garcia, J. R., & Cain, K. (2014). Decoding and reading comprehension: A meta-analysis to identify which reader and assessment characteristics influence the strength of the relationship in English. *Review of Educational Research*, 84(1), 74-111.
- Goff, D. A., Pratt, C., & Ong, B. (2005). The relations between children's reading comprehension, working memory, language skills, and components of reading decoding in a normal sample. *Reading and Writing*, 18, 583-616.
- Gombert, J.E. (1992). *Metalinguistic Development*. New York, London: Harvester-

- Wheatshaf; Chicago, IL: University of Chicago Press.
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7(1), 6-10.
- Ho, C. S.-H., Chan, D., Tsang, S.-M., & Lee, S.-H. (2000). *The Hong Kong test of specific learning difficulties in reading and writing*. Hong Kong: Hong Kong Specific Learning Difficulties Research Team.
- Ho, C. S.-H., Wong, Y.-K., Yeung, P.-S., Chan, D. W.-O., Chung K. K.-H., Lo, S.-C., & Luan, H. (2012). The core components of reading instruction in Chinese. *Reading and Writing: An Interdisciplinary Journal*, 25(4), 857-886.
- Hoover, W. A., & Gough P. B. (1990). The simple view of reading. *Reading and Writing: An Interdisciplinary Journal*, 2, 127-160.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Joshi, R. M., Tao, S., P. G., Aaron, & Quiroz, B. (2012). Cognitive component of componential model of reading applied to different orthographies. *Journal of Learning Disabilities*, 45(5), 480-486.
- Kendeou, P., Papadopoulos, T. C., & Spanoudis, G. (2012). Processing demands of reading comprehension tests in young readers. *Learning and Instruction*, 22(5), 354-367.
- Kendeou, P., Savage, R., & van den Broek, P. (2009). Revisiting the simple view of reading. *British Journal of Educational Psychology*, 79(2), 353-370.
- Kendeou, P., van den Broek, P., White, M. J., & Lynch, J. S. (2009). Predicting reading comprehension in early elementary school: The independent contributions of oral language and decoding skills. *Journal of Educational Psychology*, 101(4), 765-778.
- Kidd, E., Lieven, E., & Tomasello, M. (2006). Examining the role of lexical frequency in the acquisition and processing of sentential complements. *Cognitive Development*, 21(2), 93-107.
- Kirby, J. R., & Savage, R. S. (2008). Can the simple view of reading deal with the complexities of reading? *Literacy*, 42(2), 75-82.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York, NY: The Guilford Press.
- Language and Reading Research Consortium, & Chiu, Y. D. (2018). The Simple View of Reading across development: Prediction of grade 3 reading comprehension from prekindergarten skills. *Remedial and Special Education*, 39(5), 289-303.
- Levelt, W. J. M., Roelofs, A., & Meyer, A. S. (1999). A theory of lexical access in speech production. *Behavioral and Brain Sciences*, 22(1), 1-75.
- Li, C., & Thompson, S. (1981). *Mandarin Chinese: A functional reference grammar*. Berkeley, CA: University of California Press.
- Li, P., Bate, E., Liu, H., & MacWhinney, B. (1992). Cues as functional constraints on sentence processing in Chinese. In H. C. Chen & O. J.-L. Tzeng (Eds.), *Language processing in Chinese* (pp. 207-234). Amsterdam, Netherlands: North-Holland.
- Luna, B., Garver, K. E., Urban, T. A., Lazar, N. A., & Sweeney, J. A. (2004). Maturation of cognitive processes from late childhood to adulthood. *Child Development*, 75(5), 1357-1372.

- Maruyama, G. M. (1998). *Basics of structural equation modeling*. Thousand Oaks, CA: Sage Publications.
- Matthews, S., & Yip, V. (1994). *Cantonese: A comprehensive grammar*. London, UK: Routledge.
- Mattingly, I. G. (1984). Reading, linguistic awareness, and language acquisition. In R. V. J. Downing (Ed.), *Language awareness and learning to read* (pp. 9-26). New York, NY: Springer.
- Menyuk, P., & Chesnick, M. (1997). Metalinguistic skills, oral language knowledge, and reading. *Topics in Language Disorder*, 17(3), 75-87.
- Miao, X. C., & Zhu, M. S. (1992). Language development in Chinese children. In H. C., Chen & O. J.-L. Tzeng (Eds.), *Language Processing in Chinese* (pp.237-276). Amsterdam, Netherlands: North-Holland.
- Muter, V., Hulme, C., Snowling, M. J., & Stevenson, J. (2004). Phonemes, rimes, vocabulary, and grammatical skills as foundations of early reading development: Evidence from a longitudinal study. *Developmental Psychology*, 40(5), 665-681.
- Nation, I. S. P., & Webb, S. (2011). *Researching and analyzing vocabulary*. Boston, MA: Heinle.
- Nation, K., Clarke, P., Marshall, C. M., & Durand, M. (2004). Hidden language impairments in children: Parallels between poor reading comprehension and specific language impairment. *Journal of Speech, Hearing and Language Research*, 47(1), 199-211.
- Nation, K., & Snowling, M. J. (1997). Assessing reading difficulties: The validity and utility of current measures of reading skill. *British Journal of Educational Psychology*, 67(3), 359-370.
- Nation, K., & Snowling, M. J. (1998a). Individual differences in contextual facilitation: Evidence from dyslexia and poor reading comprehension. *Child Development*, 69(4), 996-1011.
- Nation, K., & Snowling, M. J. (1998b). Semantic processing and the development of word recognition skills: Evidence from children with reading comprehension difficulties. *Journal of Memory and Language*, 39(1), 85-101.
- Nation, K., & Snowling, M. J. (1999). Developmental differences in sensitivity to semantic relations among good and poor comprehenders: Evidence from semantic priming. *Cognition*, 70(1), B1-B13.
- Nation, K., & Snowling, M. J. (2000). Factors influencing syntactic awareness skills in normal readers and poor comprehenders. *Applied Psycholinguistics*, 21(2), 229-241.
- Nation, K., & Snowling, M. J. (2004). Beyond phonological skills: Broader language skills contribute to the development of reading. *Journal of Research in Reading*, 27(4), 342-356.
- Oakhill, J., & Cain, K. (2012). The precursors of reading comprehension and word reading in young readers: Evidence from a 4-year longitudinal study. *Scientific Studies of Reading*, 16(2), 91-121.
- Oakhill, J., Cain, K., & Bryant, P. E. (2003). The dissociation of word reading and text comprehension: Evidence from component skills. *Language and Cognitive Processes*, 18(4), 443-468.
- Ouellette, G. P. (2006). What's meaning got to do with it: The role of vocabulary in

- word reading and reading comprehension. *Journal of Educational Psychology*, 98(3), 554-566.
- Ouellette, G. P., & Beers, A. (2010). A not-so-simple view of reading: How oral vocabulary and visual-word recognition complicate the story. *Reading and Writing*, 23, 189-208.
- Paris, A. H., & Paris, S. G. (2003). Assessing narrative comprehension in young children. *Reading Research Quarterly*, 38(1), 36-76.
- Paris, S. G., Carpenter, R. D., Paris, A. H., & Hamilton, E. E. (2005). Spurious and genuine correlates of children's reading comprehension. In S. G. Paris, & S. A. Stahl (Eds.), *Children's reading comprehension and assessment* (pp. 131-160). Mahwah, NJ: Erlbaum.
- Paris, S. G., & Jacobs, J. E. (1984). The benefits of informed instruction for children's reading awareness and comprehension skills. *Child Development*, 55(4), 2083-2093.
- Perfetti, C. A. (1994). Psycholinguistics and reading ability. In M. A. Gernsbacher (Ed.), *Handbook of psycholinguistics* (pp. 849-894). San Diego, CA: Academic Press.
- Perfetti, C. A. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading*, 11(4), 357-383.
- Perfetti, C. A., & Hart, L. (2002). The lexical quality hypothesis. In L. Verhoeven, C. Elbro, & P. Reitsma (Eds.), *Precursors of functional literacy* (pp. 189-213). Philadelphia, PA: John Benjamins.
- Plaut, D. C., McClelland, J. L., Seidenberg, M. S., & Patterson, K. (1996). Understanding normal and impaired word reading: Computational principles in quasi-regular domains. *Psychological Review*, 103(1), 56-115.
- Plaza, M. (2001). The interaction between phonological processing, syntactic awareness and reading: Longitudinal study from kindergarten to grade 1. *First Language*, 21(61), 3-24.
- Plaza, M., & Cohen, H. (2003). The interaction between phonological processing, syntactic awareness, and naming speed in the reading and spelling performance of first-grade children. *Brain and Cognition*, 53(2), 287-292.
- Ricketts, J., Nation, K., & Bishop, D. (2007). Vocabulary is important for some, but not all reading skills. *Scientific Studies of Reading*, 11(3), 235-257.
- Seidenberg, M. S., & McClelland, J. L. (1989). A distributed, developmental model of word recognition and naming. *Psychological Review*, 96(4), 523-568.
- Seigneuric, A., & Ehrlich, M. (2005). Contribution of working memory capacity to children's reading comprehension: A longitudinal investigation. *Reading and Writing*, 18(7-9), 617-656.
- Shanahan, T., Kamil, M., & Tobin, A. (1982). Cloze as a measure of intersentential comprehension. *Reading Research Quarterly*, 17(2), 229-255.
- Share, D. L. (1995). Phonological recoding and self-teaching: Sine qua non of reading acquisition. *Cognition*, 55(2), 151-218.
- Share, D. L., & Leikin, M. (2004). Language impairment at school entry and later reading disability: Connections at lexical versus supralexical levels of reading. *Scientific Studies of Reading*, 8(1), 87-110.
- Silva, M., & Cain, K. (2015). The relations between lower and higher level comprehension skills and their role in prediction of early reading comprehension. *Journal of Educational Psychology*, 107(2), 321-331.

- Simms, R. B., & Crump, W. D. (1983). Syntactic development in the oral language of learning disabled and normal students at the intermediate and secondary level. *Learning Disability Quarterly*, 6(2), 155-165.
- Smith, C. L., & Flusberg, H. T. (1982). Metalinguistic awareness and language development. *Journal of Experimental Child Psychology*, 34(3), 449-468.
- So, D., & Siegel, L. S. (1997). Learning to read Chinese: Semantic, syntactic, phonological and working memory skills in normally achieving and poor Chinese readers. *Reading and Writing: An Interdisciplinary Journal*, 9, 1-21.
- Speece, D. L., Roth, F. P., Cooper, D. H., & de la Paz, S. (1999). The relevance of oral language skills to early literacy: A multivariate analysis. *Applied Psycholinguistics*, 20(2), 167-190.
- Stahl, S. A., & Hiebert, E. H. (2006). The "word factors". In K. A. Stahl, & M. McKenna (Eds.), *Reading research at work* (pp. 403-424). New York, NY: Guilford.
- Storch, S. A., & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology*, 38(6), 934-947.
- Tannenbaum, K. R., Torgesen, J. K., & Wagner, R. K. (2006). Relationships between word knowledge and reading comprehension in their-grade children. *Scientific Studies of Reading*, 10(4), 381-398.
- Taylor, I., & Taylor, M. M. (1995). *Writing and literacy in Chinese, Korean and Japanese*. Philadelphia, PA: John Benjamins.
- Tolar, T. D., Barth, A. E., Francis, D. J., Fletcher, J. M., Stuebing, K. K., & Vaughn, S. (2011). Psychometric properties of maze tasks in middle school students. *Assessment for Effective Intervention*, 37(3), 131-146.
- Tong, X., McBride-Chang, C., Shu, H., & Wong, A. M.-Y. (2009). Morphological awareness orthographic knowledge, and spelling errors: Keys to understanding early Chinese literacy acquisition. *Scientific Studies of Reading*, 13(5), 426-452.
- Tsang, K K-S., & Stokes, S. F. (2001). Syntactic awareness of Cantonese-speaking children. *Journal of Child Language*, 28(3), 703-739.
- Tunmer, W. E., & Herriman, M. L. (1984). The development of metalinguistic awareness: A conceptual overview. In W.E. Tunmer, C. Pratt, & M.L. Herriman (Eds.), *Metalinguistic awareness in children: Theory, research and implications* (pp. 12-35). Berlin, Germany: Springer-Verlag.
- Tunmer, W. E., Herriman, M., & Nesdale, A. (1988). Metalinguistic abilities and beginning reading. *Reading Research Quarterly*, 23(2), 135-138.
- Tunmer, W. E., & Hoover, W. A. (1992). Cognitive and linguistic factors in learning to read. In P. B. Gough, L. C. Ehri, & R. Treiman (Eds.), *Reading acquisition* (pp. 175-224). Hillsdale, NJ: Lawrence Erlbaum.
- van den Broek, P. (1997). Discovering the cement of the universe: The development of event comprehension from childhood to adulthood. In P. van den Broek, P.W. Bauer & T. Bourg (Eds.), *Developmental spans in event comprehension and representation* (pp. 321-342). Mahwah, NJ: Lawrence Erlbaum Associates.
- van den Broek, P., Kendeou, P., Lousberg, S., & Visser, G. (2011). Preparing for reading comprehension: Fostering text comprehension skills in preschool and early elementary school children. *International Electronic Journal of Elementary Education*, 4(1), 259-268.

- Vellutino, F. R., Scanlon, D. M., Small, S. G., & Tanzman, M. S. (1991). The linguistic basis of reading ability: Converting written to oral language. *Text*, 11, 99-133.
- Vellutino, F. R., Scanlon, D. M., & Tanzman, M. S. (1994). Components of reading ability: Issues and problems in operationalizing word identification, phonological coding, and orthographic coding. In G. R. Lyon (Ed.), *Frames of reference for the assessment of -learning disabilities: New views on measurement issues* (pp. 279-329). Baltimore, MA: Brookes.
- Vellutino, F. R., Tunmer, W. E., Jaccard, J. J., & Chen, R. (2007). Component of reading ability: Multivariate evidence for a convergent skills model of reading development. *Scientific Studies of Reading*, 11(1), 3-32.
- Vukovic, R. K., & Siegel, L. S. (2006). The double-deficit hypothesis: A comprehensive analysis of the evidence. *Journal of Learning Disabilities*, 39(1), 25-47.
- Willows, D. M., & Ryan, E. B. (1986). The development of grammatical sensitivity and its relationship to early reading achievement. *Reading Research Quarterly*, 21(3), 253-266.
- Wise, J. C., Sevcik, R. A., Morris, R. D., Lovett, M. W., & Wolf, Maryanne. (2007). The relationship among receptive and expressive vocabulary, listening comprehension, pre-reading skills, word identification skills, and reading comprehension by children with reading disabilities. *Journal of Speech, Language, and Hearing Research*, 50(4), 1093-1109.
- Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample Size Requirements for Structural Equation Models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement*, 76(6), 913-934.
- Xiao, X.-Y., & Ho, C. S.-H. (2014). Weaknesses in semantic, syntactic and oral language expression contribute to reading difficulties in Chinese dyslexic children. *Dyslexia*, 20(1), 74-98.
- Yeung, P.-S., Ho, C. S.-H., Chan, D. W., & Chung, K. K.-H. (2016). A componential model of reading in Chinese. *Learning and Individual Differences*, 45, 11-24.
- Yeung, P.-S., Ho, C. S.-H., Chan, D. W., Chung, K. K.-H., & Wong, Y.-K. (2013). A model of reading comprehension in Chinese elementary school children. *Learning and Individual Differences*, 25, 55-66.
- Yeung, P.-S., Ho, C. S.-H., Chik, P. P.-M., Lo, L.-Y., Luan, H., Chan, D. W.-O., & Chung, K. K.-H. (2011). Reading and spelling Chinese among beginning readers: What skills make a difference? *Scientific Studies of Reading*, 15(4), 285-313.
- Yeung, P.-S., Ho, C. S.-H., Chung, K. K.-H., & Chan, D. W.-O. (2012). Modeling the relationships between cognitive-linguistic skills and writing in Chinese among elementary grades students. *Reading and Writing: An Interdisciplinary Journal*, 26(7), 1195-1221.
- Yip, P. C., & Rimmington, D. (2004). *Chinese: a comprehensive grammar*. New York, NY: Routledge.

Author Biography

Dr. Xiao-Yun Xiao is now a lecturer at the Education University of Hong Kong. Her main research areas are in Chinese language and literacy development and Chinese

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Prof. Connie Suk-han Ho is the Eugene Chuang Professor in Developmental and Educational Psychology and the Director of two Doctoral Educational Psychology programmes at the University of Hong Kong. Her research focuses mainly on the cognitive and genetic aspects of literacy learning and developmental dyslexia. She has been the founder and active researcher of the Hong Kong Specific Learning Difficulties Research Team since 1998. Prof. Ho's team has developed several sets of standardized assessment instruments for all professional psychologists and teachers in Hong Kong to identify students with dyslexia from preschool to tertiary levels. Her team has also developed the first evidence-based Chinese tiered intervention model for literacy instruction.

Appendix 1

Table 1

Reliabilities, Possible Maximum Scores, Means, Standard Deviations, and Ranges for Various Measures

Characteristics/ Measure	Reliability	Possible maximum score	<i>M</i>	<i>SD</i>	Range
Age (in months)	/	/	102.69	6.83	25
IQ (Raven's Progressive Matrices)	.88	/	116.12	11.58	45
Vocabulary knowledge					
Word definition	.86	21	17.20	2.65	11
Synonym judgment	.51	12	9.65	1.61	7
Syntactic skills					
Simple declarative sentence structure	.72	21	16.48	3.03	13
BaBei sentence structure	.90	20	18.78	1.76	10
Multiple modifiers	.69	60	39.92	4.96	23
Oral narrative skills					
Oral sentence construction	.83	16	14.64	1.33	5
Story production	.82	20	6.18	2.61	13
Chinese word reading	.70	150	118.79	14.06	58
Chinese sentence comprehension	.73	21	14.98	2.61	13

Note. Test-retest and split-half reliabilities were computed for the standardized measures of IQ and Chinese word reading. Interrater reliabilities were computed as Pearson's correlation coefficients for word definition, oral sentence construction, and story production. Cronbach alpha coefficients were computed for synonym judgment, the three subtests of syntactic skills (i.e., simple declarative sentence structure, BaBei sentence structure, and multiple modifiers), and Chinese sentence comprehension.

Appendix 2

Table 2

Matrix of Partial Correlation Coefficients between Various Measures after Controlling for the Effects of Age and IQ (n = 85)

	1	2	3	4	5	6	7	8	9
1. Word definition	-								
2. Synonym judgment	-.01	-							
3. Simple declarative sentence structure	.10	.28*	-						
4. BaBei sentence structure	.19	.02	.27*	-					
5. Multiple modifiers	.25*	.20	.29**	.24*	-				
6. Oral sentence construction	.22*	.05	.15	.17	.19	-			
7. Story production	.41** *	.09	.01	.03	.14	.21 ^a	-		
8. Chinese word reading	.22*	.35**	.26*	.17	.3**	.14	.19	-	
9. Chinese sentence comprehension	.11	.33**	.36**	.17	.18	.12	.14	.42***	-

* $p < .05$; ** $p < .01$; *** $p < .001$; ^{#a} $p = .06$.

Appendix 3

Table 3

Results of the Principal Component Analysis with Varimax Rotation for 7 Language Measures (n = 85)

Measure	Factor			Communality
	1 (Vocabulary knowledge)	2 (Syntactic skills)	3 (Oral narrative skills)	
Word definition	.17		.80	.67
Synonym judgment	.88		.13	.81
Simple declarative sentence structure	.66	.47		.66
BaBei sentence structure	.06	.87		.76
Multiple modifiers	.45	.46		.50
Oral sentence construction		.34	.53	.41
Story production	.13		.84	.74

Note. Loadings $\geq .30$

Appendix 4

Table 4

Model Fit Indexes

	χ^2	<i>df</i>	<i>p value</i>	χ^2/df	NNFI	CFI	RMSEA	AIC
Acceptable fit			> .05	< 2	$\geq .95$	$\geq .95$	< .05	
Model 1	4.37	4	.36	1.09	.99	.1	.03	26.37
Model 2	18.06	4	.0012	-	.71	.88	.21	40.06
Model 3	4.07	4	.25	1.36	.98	.99	.07	28.07
Model 1 and 3 comparison	$\Delta\chi^2 (1, N = 85) = .3, p > .05$							

Appendix 5

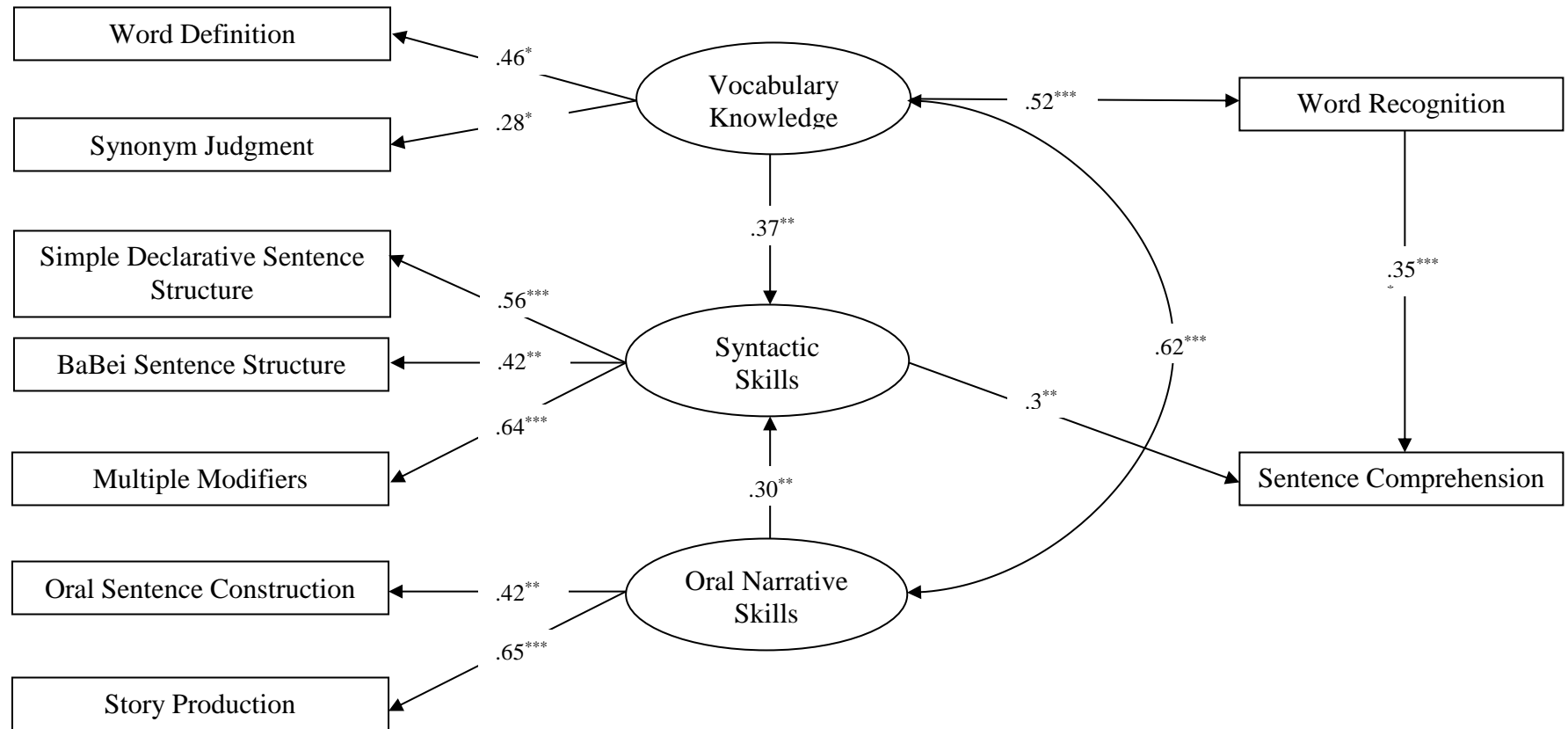


Figure 1: Model 1 of Language Skills and Sentence Comprehension in Chinese

* $p < .05$; ** $p < .01$; *** $p < .001$

Appendix 6

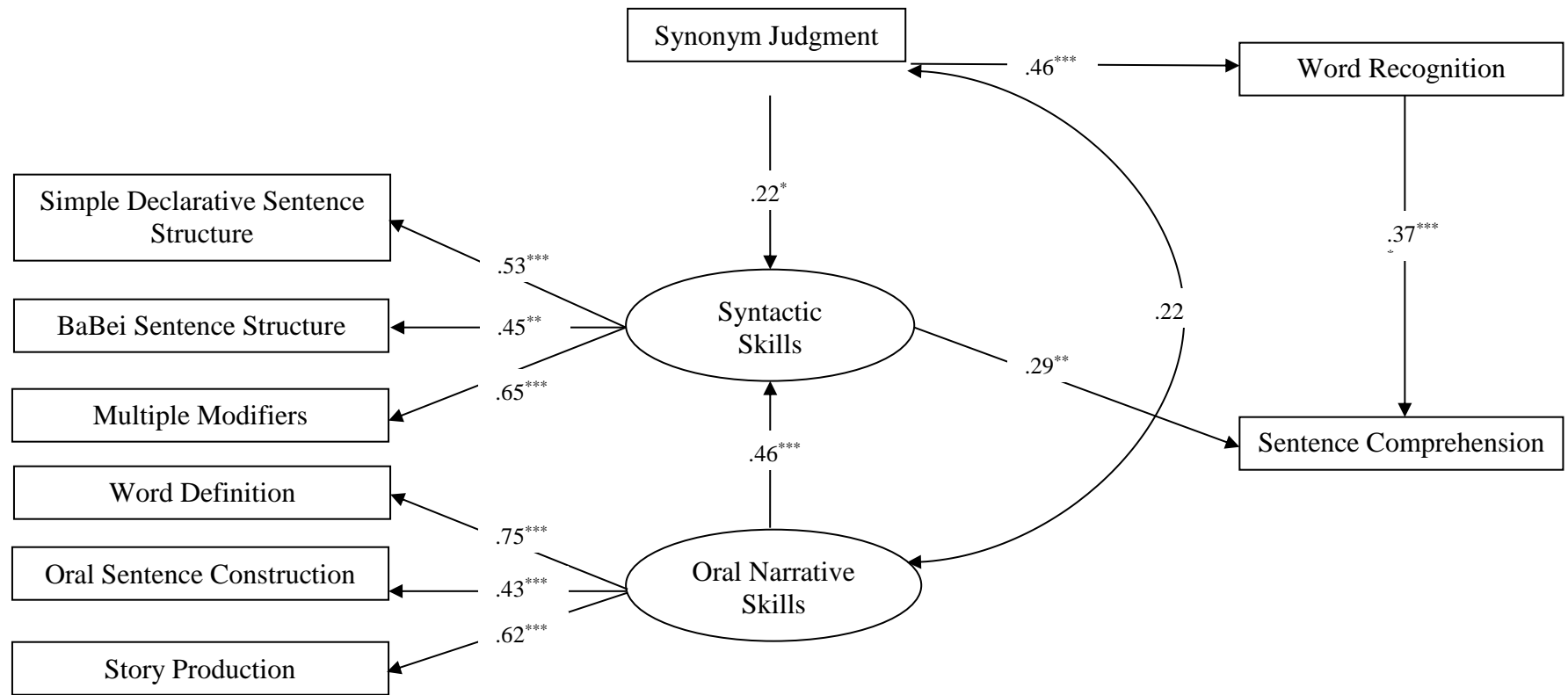


Figure 2: Model 2 of Language Skills and Sentence Comprehension in Chinese

* $p < .05$; ** $p < .01$; *** $p < .001$

Appendix 7

