Factors that Influence School Dropout: A Global Concern

By

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Abstract

Across the globe, the percentage of students that drop out of school has reach epidemic proportions; therefore, a review of empirical research studies (reporting research instruments, procedures, analysis, design, limitations, and results) that focuses on the factors that impact school dropout was deemed necessary. The studies that met the identified search criteria are from both developed and developing countries. With the dropout rate reaching pandemic proportions in some areas of the world, the authors surmise a look at current international research that may prove beneficial in reducing the number of students that prematurely end their formal education without a diploma. We discuss international dropout statistics, intervention programs, and limitations. Thirty-four articles from thirteen countries fit the criteria for this paper. Primary and secondary themes are discussed indicating the decision to drop out is complex and a result of many factors, including learning problems, lack of motivation, and choosing the wrong vocational track. Also, program suggestions included combining universal primary preventive strategies for at-risk students providing alternative education pathways.

Keywords: Dropout, drop out, early school leaving, school engagement, academic graduation

1. Introduction

Factors that influence school dropout: A review of international research

Approximately every nine seconds in the U.S. a student becomes a dropout (Harlow, 2003). In addition, one-third of those who enter high school in the U.S. will *never* graduate (Martin and Halperin, 2006). Other countries report similarly alarming statistics. Each year, over 40,000 Canadian students drop out of school (Charity Intelligence Canada, 2008). While the dropout rate in Canada has decreased over the past two decades (Gilmore, 2010), approximately 10% of all students are not completing their high school education (Composite Learning Index, 2010). Additionally, one out of four Canadian dropouts is unable to work (United Press International, 2010). Potential job prospects for school dropouts the United Kingdom (U.K.) are equally as bleak. With one out of five students in the U.K. dropping out of school by age 16 (Paton, 2012), more 15-19-year-old individuals are either unemployed or not in schooling or training than in most other developed nations (Loveys, 2011).

As the current statistics (see Table 1) demonstrate, dropping out of school is a global phenomenon. Countries, both developed and undeveloped, are currently faced with a crisis: young adults are not completing their high school education. In *The State of the World's Children,* The United Nation Children's Fund (2005) estimates that, worldwide, over 120 million primary-age children are not in school. The importance of studying current research regarding school dropouts is reflected in the

following statement by Bert P. M. Creemers (2006), in *The importance and perspectives of international studies in educational effectiveness:*

> Globalization of the economy and the relation between economic growth and education brings to the fore an interest in education and the results of educational research, in particular comparisons between countries with respect to educational outcomes. This can be seen in the media attention paid to the publications about international studies on educational achievement. (p. 502)

In addition, familiarity with international literature on the subject can lead to new methodological approaches. Some educationalists have eschewed tried-and-true techniques for more innovative, and more personal, tactics. LisbethGrønberg (2015), in "enroll[ing] as a student at the car mechanic program at a vocational education and training school" (p. 514), embarked on a truly unusual field study, which "enabled a shift away from looking at the 'result' (dropout versus staying in) towards interrogating the process itself" (p. 515).

Through its survey of current international research, this paper seeks to explore the various ways of "interrogating the process" of the dropout phenomenon. The breadth and variety of the scholarship reviewed will expose the ways this epidemic is being attacked, and defined, by educationalists.

Table 1. International Dropout Rates

Country	Percentage(s)	Source(s)
Australia	25- 50	Smyth, E. (1999); Marks, G. N. (2007)
Brazil	3.9	United States Agency for International Development (2007)
Canada	10	Canadian Council of Learning (2005)
Europe	20	European Commission (2011)
Finland	6 - 9.5	Ministry of Education (2004); Grubb (2007)
Ireland	16	Department of Education and Science (2008)
Israel	7	American-Israeli Cooperative Enterprise (1996)
India	49.2	Ministry of Human Resource Development Bureau of Planning, Monitoring & Statistics (2014)
Mexico	5.3	Kattan&Székely (2014)
Netherlands	8.3	Kalmijn&Kraaykamp (2003)
South Africa	60	Wegner, Flisher, Chikobvu, Lombard & King, (2007)
Turkey	34	National Education Profile (2014)
United States	13.7	Laird, Debell, Kienzl, & Chapman, (2007)

Cost to Society

According to Harlow (2003), 75% of state prison inmates, and 59% of federal prison inmates in the U.S. are dropouts. U.S. Taxpayers pay over $24 billion annually, through crime and welfare benefits, to those who have prematurely terminated their educational career (Thorstensen, 2005). The National Education Association puts that number at an even greater total, stating that annual losses exceed $50 billion in federal and state income taxes for all 23 million of the U.S.'s high school dropouts ages 18 to 67 (National Education Association, 2006). The global statistics regarding the correlation between dropping out and costs to society mirror that of the U.S. In Canada, high school dropouts comprise 80% of the

prison population, and receive 85% of government welfare spending (Rogers, 2011). Similarly, school dropouts cost the Government of Australia over $2.6 billion annually (TeRiele, 2013).

Earnings

On average, dropouts earn less than high school diploma recipients and have far fewer chances for advancement in their employment. According to recent research, U.S. high school graduates, on average, earn almost $10,000 more per year than dropouts (National Dropout Prevention Center, 2007).Over the course of their lives, recent dropouts in the U.S. will earn $200,000 less than high school graduates, and over $800,000 less than college graduates (Focus Adolescent Services, 2000).A lack of a high school diploma can result in unemployment or employment out of necessity rather than a choice of career. In 2001, Sum, A. et al. reported the following employment rates of young adults in the U.S.: 55% of dropouts, 74% of high school graduates, and 87% of college graduates. Additionally, Canadian dropouts earn approximately 30% less than their peers who complete high school (Richards, 2009). The picture is clear:dropping out costs individuals their future potential earning power, and nations around the world stand to gain a great deal through effective dropout prevention programs.

In developing countries, the consequences of leaving school before graduation can be even more dire. Das and Mukherjee (2007) note that, "incidence of school dropout and child labor are major problems for the modern day society, particularly in the developing countries" (p. 463). Their study uses data provided by the National Sample Survey Organization (NSSO), culled during a 1999-2000 survey on employment in India. Das and Mukherjee narrowed the scope of their work to "urban male children, as the incentives for education would be stronger for the urban male in the recent years when the workforce is being progressively introduced to new products, skills and opportunities" (p. 470). Unsurprisingly, a positive correlation was found not only between wages and schooling but between the parents' level of education and the likelihood that their sons would participate in child labor (p.483). In Italy, Mocetti (2012) found correlations both between the parents' academic performance and that of their children. Mocetti (2012) also found a relationship between the fathers' employment status and his child being held back in school:

The cultural capital available inside the family, measured by the parents' schooling, significantly reduces the failure rate for their children; for example, the probability of being held back a year for children of graduated parents is about one-tenth that of the children whose parents have only completed compulsory school. Further, being held back is correlated with fathers' employment status: the sons of blue-collar workers are about two times more likely to repeat a year than children of employees; for sons of temporary workers, the likelihood increases to around three (p. 197).

Case for Review

The current dropout rate in the United States is approximately 13.7% (Laird, Debell, Kienzl, & Chapman, 2007). In many urban areas, the school completion rate is much worse. The current dropout epidemic facing the educational system in the United States is not exclusive to the U.S. Countries around the world cite similar or worse dropout statistics. Like the U.S., these countries are attempting to address the issue through various interventions and research. Attention to these programs and their results is needed. There are, however, countries whose youth graduate at a higher rate than that of the U.S. This is not by accident, but by design. Addressing the programs implemented, and research conducted, by individuals in these countries would prove beneficial and imperative in the fight against the current school dropout rates that afflict the educational system of the United States.

A literature review of current international research regarding school dropouts was conducted to answer two research questions. First, what are countries with similar or worse school dropout statistics than the United States doing to combat high dropout rates? Second, what are countries with higher graduation rates than the United States doing to ensure that fewer students drop out?

The Term "Dropout"

Over the past few years, there has been much debate on how a school dropout should be defined. To some, a dropout is someone who prematurely and permanently leaves the educational process. To others, a dropout is someone who often misses school three or more days consecutively. In each of the international studies, researchers defined a dropout utilizing their criteria. Inconsistent definitions can make it difficult to synthesize findings comparatively, but should not distract readers from stand-alone results. Each article included limitations. Each study performed research using its definition of a dropout, but the bottom line remains unchanged, and the fate of so many adolescents worldwide needs to be altered.

2. Literature Search Process

The literature search process followed the five steps outlined in "*What are the five steps in conducting a literature review?*" in *Educational Research* (Creswell, 2005).

1) Identify key terms to use in your search for literature:

    Dropout, school and dropout, high school and dropout, at-risk students, dropout prevention, reentry, recovery, retrieval, school leaving, school failure, and school attrition.

2) Locate literature about a topic by consulting several types of materials and databases, including those available at an academic library and on the Internet at websites:

    Academic Search Primer, Web of Science, Science Direct, Nexis-Lexis, PsychINFO, and Expanded Academic.

3) Critically evaluate and select the literature for your review:

    For the 10-year period 1998-2008, the following criteria was utilized: (a) published in a peer-reviewed journal; (b) conducted outside of the United States (c) reported statistics pertaining to high, middle or elementary school dropouts; and (d) identified characteristics and/or trends of dropouts that can prove useful in the implementation of a dropout prevention intervention.

4) Organize the literature you have selected by abstracting or taking notes on the literature and developing a visual diagram of it:

    The articles were grouped by theme and then synthesized. Themes were developed to gain a better understanding of the results, and the potential for implementation, of the literature.

5) Write a review that reports summaries of the literature for inclusion in your research report:

    The literature review results summarized in two ways, (1) visual tables highlighting facts regarding each study and (2) a written synthesis describing, in greater detail, the studies, the methods, and the results.

The search produced a base of 34articles from 13 countries (Australia, Brazil, Canada, Denmark, Finland, India, Ireland, Israel, Mexico, Netherlands, South Africa, Turkey, United States). Table 1 provides individual dropout statistics for the countries previously listed. The settings of the studies ranged from public schools to private schools/programs, to residential settings. Information was gathered using a multitude of instruments and procedures. Both quantitative and qualitative data were studied.

Table 2. Review of Studies

Continent	Country	Source	Participants' Grade Level	Method	Results
Africa	South Africa	Porteus et al. (2000)	$1^{st} – 12^{th}$	Qualitative	Poverty is by far the greatest influence on a child being out of school
	South Africa	Wegner et al. (2007)	8th	Longitudinal	Boredom is a predictor of dropout among older students
Asia	India	Siddhu (2011)	8th	Mixed Methods	For both males and females, cost and distance were the two most prevalent factors impacting the decision to drop out of school. For males, the main reason was the desire to join the work force. For females, the main reason was distance and the fear of traveling alone.
	Israel	Rosenblum, Goldblatt, &Moin (2008)	$10^{th} – 12^{th}$	Qualitative	Among immigrant dropouts, perceived social support was significantly higher, and feelings of stress were significantly lower
	Turkey	Gumus (2014)	$3^{rd} – 12^{th}$	Longitudinal	Individual level variables (e.g., age, gender, parent education) impacts school participation in primary and secondary school. Community level variables (i.e., adult education, gender norms) more significantly impacted school participation in secondary school.
Australia	Australia	Marks (2007)	$9^{th} – 10^{th}$	Longitudinal	Academically weak students are far more likely not to complete their schooling
	Australia	Smyth &Hattam (2002)	Unknown	Qualitative	School cultures influence an individual's decision to leave school
	Australia	Mahuteau&Mavro maras (2014)	10th - PS	Longitudinal	Programme for International Student Assessment (PISA) standardized test scores can serve as an early dropout warning. In addition, low PISA scores and social disadvantages were connected.
Europe	Denmark	Nielsen (2016)	Unknown	Qualitative	School engagement was closely related to the drop-out process.
	Finland	Jahnukainen (2001)	$10^{th} – 12^{th}$	Quantitative	Alternative ways of schooling are needed to prevent certain students from dropping out
	Ireland	Smythe (1999)	$9^{th} – 10^{th}$	Quantitative	Policy intervention can reduce potential dropout and educational failure
	Netherlands	Beekhoven&Dekk	$7^{th} – 10^{th}$	Mixed Methods	Early school leaving is the result of multiple factors like choosing

		ers (2005)			the wrong vocational track, being uninterested in school, lack of support at home, and being bullied.
	Netherlands	DeWitte& Rogge (2013)	6th	Longitudinal	Motivation (i.e., peer and parent attitudes) was the biggest contributor to graduation.
	Netherlands	Kalmijn&Kraaykamp (2003)	9th – 10th	Quantitative?	Students from Mediterranean and Caribbean immigrant families are three times more likely to dropout than Dutch children.
	Netherlands	Witte &Cabus (2013)	10th – 12th	Longitudinal	Three policymeasures had significant negative impact on individual dropout decisions (a) "mentoring and coaching" (i.e., matchingstudents with a coach from public or private organizations), (b) "optimal track orprofession" (e.g., work placement), and (c) "dual track" (i.e., re-entering education).
North America	Canada	Anisef et al., 2010	9th	Longitudinal	Regardless of country of origin, students living in neighborhoods where high poverty exists are at the greatest risk for dropping out.
	Canada	Archaumbolt, Janosz, Fallu, &Pagani (2009)	7th – 9th	Longitudinal	Globalstudent disengagement was associated with eventual dropout over the short term. Only the behavioral dimension predicted dropout; student complianceand attendance forecasted dropout better than student willingness and effort to learn the basiccurriculum and how much pleasure was associated with school-related issues.
	Canada	Chinien& France (2001/2002)	7th-8th	Mixed Methods	After intervention, there was no significant gain in academic achievement, attitude toward school, or self-esteem for participants
	Canada	Lessard, Fortin, Butler-Kisber, &Marcotte (2014)	Unknown	Qualitative	Resilient students are better able to utilize their resources, ask for assistance, develop positive relationships, and make decisions.
	Canada	Terry (2008)	PS	Qualitative	Family and friends have profound influences on students' decision to drop out

Country	Authors	Grade	Methodology	Findings
Mexico	Solis, Rocha, & Brunet (2013)	$6^{th} - 12^{th}$	Qualitative?	The transition process of (a) choosing to take admissions exam, (b) options requested on the exam, (c) exam results, and (d) final choice to continue to high school is influenced at each phase by social origins, educational background, educational trajectory, and expectations to continue schooling.
Mexico	Valdez, Perez, Rodriguez, & Celaya (2008)	Unknown	Quantitative	Eighty-six percent dropped out of school between the first and third semester. The main reasons provided for dropping out was economic factors, failure in some subjects or unsatisfied with academic level reached, and lack of interest in what they were studying.
United States	Barile et al., 2012	10th	Longitudinal	School policies that provided students the opportunity to evaluate their teachers were positively associated with the TSR climate. The more positive the TSR climate, the lower the student dropout rate, even when controlling for prior and current student math achievement.
United States	Boone 2011	11th - PS	Qualitative	English Language Learners dropped out due to lack of a supportive network. Professionals may have benefited from cultural diversity training and encouragement to team with parents.
United States	Davis, Ajzen, Saunders, & Williams 2002	10th	Longitudinal	Actual graduation was primarily related to the long-range consequences of staying in school.
United States	Dunn, Chambers, &Rabren (2004)	PS	Longitudinal	Students with LD had a much higher probability of dropping out than students with ID. Of those that dropped out of high school, 23% reported they didn't have a supportive person during school.
United States	Fall & Roberts (2014)	10th	Longitudinal	Teacher and parental support positively affected self-perception and school engagement. Academic engagement and achievement in 10th grade predicted 12th-grade drop-out rates.

	United States	Franklin, Streeter, Kim, &Tripodi (2007)	10th	Quasi-Experimental Comparison Group	Students enrolled in an alternative school earned more credits and enrolled in post-secondary education more than those enrolled in typical public school setting. Seven out of fourteen students who did not graduate in four years completed graduation requirements within five years.
	United States	Renzulli& Park (2000)	8th	Longitudinal	Many gifted students that dropped out of high school were from low SES families, racial minority groups, had parents with low education levels and participated less in extracurricular activities.
	United States	Strom &Boster (2011)	PS	Qualitative	Positive messages may resonate more with students than negative messages. In addition, hearing a message one time may not be enough to impact a decision-making process. Students may perceive messages that help solve a problem as mostbeneficial in helping shape decisions to stay in school rather than emotional messages that convey sympathy.
	United States	Suh et al. (2007)	6th – 10th	Longitudinal	Academic failure, low socioeconomic status, and behavioral problems have a major impact on students' decision to drop out of school. Thirteen other predictors were found to be significant but student's expectation to be in school the next year was the most reliable predictor.
	United States	Werblow&Duesbery (2009)	10th	Longitudinal	The relationship between high school size and math achievement growth is small.Regarding math learning, small schools are not substantially better than the largest schools.
South America	Brazil	Graeff-Martins et al. (2006)	Unknown	Mixed Methods	Programs using universal primary preventative strategies can reduce dropout
	Brazil	Tramontina et al. (2001)	3rd – 4th	Mixed Methods	A positive association between conduct disorder (CD) and school dropout is evident

Written Synthesis

From the 34 articles found, seven primary themes emerged. Primary themes were findings reported by four or more studies. Also, secondary themes were results reported by two to three studies. In this section, we will synthesize the information classified as primary and secondary themes.

Primary Themes

As mentioned previously, primary themes were key findings common in more than four studies. The primary themes consisted of reasons participants gave for choosing to dropout of school early or participants' reports of effective interventions. Presented in alphabetical order the five primary themes were (a) academic achievement, (b) adult education and long-range expectations, (c) engagement, (d) social support, and (e) poverty and cost of education.

Academic achievement

Six studies related to academic achievement (Chinien& France 2001/2002; Fall & Roberts, 2014;Kalmijn and Kraaykamp, 2003; Mahuteau&Mavromaras, 2014;Marks, 2007; and Valdez, Perez, Rodriguez, & Celaya, 2008). The study conducted by Chinien and France (2001/2002) was different from the other three studies. This study was an intervention study where researchers hoped to improve students' academic achievement. The study focused on forty-five students and eleven teachers in a junior high school setting. Their goal was to instruct the teachers on how to implement the Cognitive Based Instruction System (CBIS) via seven full days of training. The teachers would then instruct the students on utilizing CBIS in an attempt to enhance their students' meta-cognitive skills, enabling them to become less frustrated, and ultimately stay in school. Throughout the school year, each student received 20 hours of training in CBIS. The results of the CBIS project were not positive: no significant gain in academic achievement, attitude toward school or self-esteem existed.

The remaining four studies (Fall & Roberts, 2012; Kalmijn and Kraaykamp, 2003; Marks, 2007; and Valdez, Perez, Rodriguez, & Celaya, 2008) revealed that academic achievement greatly impacted participants' decisions to stay or not to remain in school. Fall and Roberts (2012) examined the self-system model of motivational development (SSMMD) to explain student dropout, specifically how school engagement, academic achievement, self-perception, and social context (teacher and parental support) interact to affect the decision to drop out. Fall and Roberts (2012) analyzed data from ELS:2002-2004, statistics gathered by the National Center for Education Statistics. They analyzed data from 14,781 students, specifically examining measures for parental and teacher support, self-perception/perceived control, school engagement, and academic achievement in 10th grade, and drop out data from a follow-up survey. The SSMMD model revealedthat academic engagement and achievement (as measured in 10th grade) predicted dropping out of school in 12th grade.

Kalmijn and Kraaykamp (2003) studied data from over nineteen thousand students who entered secondary school in the Netherlands in 1989. Statistics Netherlands provided data gathered during the first-year classes of 381 secondary schools. The authors analyzed the determinants of dropout and something they refer to as "downward mobility." Downward mobility is the following of a route of "downward mobility" when there is failure at school, as opposed to just simply dropping out. The study focuses on both native Dutch and immigrants (mainly Mediterranean and Caribbean). The results indicate that Mediterranean and Caribbean immigrants are three times more likely to drop out of secondary school, but Dutch children are more liable to experience downward mobility.

Mahuteau and Mavromaras (2014) conducted this study to analyze what factors in Australia determine early school dropouts. The researchers looked at standardized test scores from the Australian Programme for International Student Assessment (PISA) along with its longitudinal continuation, the Longitudinal Survey of Australian Youth (LSAY) data for this study. This study was conducted using 7,299 students PISA scores (2006) along with their LSAY data (2006) over the period of 5 years (15 years old-19 years old). The study determined that the PISA scores can serve as an early warning indicator for the likelihood

of dropouts. The study also showed that low PISA scores and social disadvantages are connected, and both play crucial roles in early dropouts both directly and indirectly.

Marks (2007) study utilized longitudinal data based on the Organization for Economic Co-operation and Development's (OECD) 2003 Program for International Student Assessment (PISA) study. Researchers evaluated data from 12,551 fifteen-year-olds. Socioeconomic status, standardized test scores, attitudes towards school and school-leaving rates were measured. The author defines school dropout as having left school before September of year twelve. Results revealed academically weak students are far more likely not to complete school.

Valdez, Perez, Rodriguez, and Celaya (2008) researched the contextual factors which impact each decision to drop out of school. This study conducted in Mexico surveyed 147 high school students. The results indicated one of the main reasons for students' drop out decision was failure in some subjects. Ninety-three percent of the participants were not satisfied with the academic level they reached and did not plan to resume their studies.

Adult education and long-range expectations
Four studies reported findings related to the importance of adults conveying expectations for staying in school (Davis, Ajzen, Saunders, & Williams 2002; Gumus, 2014; Renzulli& Park, 2000; andSuh et al., 2007). Davis, Ajzen, Saunders, & Williams (2002) conducted a longitudinal study that explored how well a questionnaire on planned behavior, completed in their sophomore year by 166 African-American students in the Midwestern part of the U.S., predicted graduation from high school. Researchers recruited students from a large, urban high school and participants (n=166) completed a questionnaire in the first part of the school year for four consecutive years. The questionnaire addressed the components of the theory of planned behavior with the following constructs: intention to complete high school, ability to control whether or not they would stay in school, how they felt about their intention, and subjective norms. Beliefs surrounding the constructs were also measured using a Likert scale (i.e., "Completing the school year will better prepare me to go to college."). Data analysis suggests that actual graduation from high school was related primarily to beliefs about long-range consequences of staying in school (p.817). Davis and colleagues suggest interventions focused on showing short-term benefits (e.g., seeing your friends) and long-term benefits (e.g., better-paying jobs) of school.

A study by Gumus (2014) examined community-level factors that affect school participation in both primary and secondary schools in Turkey. Gumus used data from the Turkey Demographic and Health Survey (TDHS, 2008) and included children aged 8-17 (n=6440). Gumus examined the relationship between school participation and individual-level variables (age, gender, household information, parental education, etc.) and community-level variables (gender roles, urbanization, poverty, and average education). The results of the analysis confirmed previous studies (e.g., Tomul, 2008) that indicate a high correlation between individual-level variables and participation in school in expected ways; for example, children with low SES, participate in school less than children with adequate means. Community-level variables seem only to affect children in secondary schools. Cultural contexts, like adult education and gender norms, were more significantly correlated with school participation than economic contexts. Similarly, Sue et al. (2007) conducted a longitudinal study that targeted sixth through tenth-grade students in the United States. They found that expectations for students to be in school the next year were the most reliable and significant predictor.

Renzulli and Park (2000) conducted a study to obtain comprehensive information about gifted high school dropouts and to examine factors related to gifted students' dropout behavior. Researchers used nationally representative longitudinal data in the U.S.; the Dropout and Student questionnaires of the National Education Longitudinal Study of 1988 (NELS:88). Renzulli and Park (2000) used data collected from 25,000 eighth-grade students, their parents, teachers, and school administrators. Of those 25,000 students, 12,625 participated in all four rounds of questionnaires. Researchers examined personal and

educational factors that are related to the decisions to drop out of school by gifted students. Results revealed that many gifted dropouts had parents with low levels of education.

Engagement.
Five studies reported engagement or the lack of engagement predicted dropout rates at the secondary level (Archaumbolt, Janosz, Fallu, & Pagani, 2009; Fall & Roberts, 2014;Nielsen, 2016;Valdez, Perez, Rodriguez, & Celaya, 2008; and Wegner et al., 2007). Two of these studies were previously mentioned with the academic achievement theme (Fall & Roberts, 2007 and Valdez, Perez, Rodriguez, & Celaya, 2008) while three studies only reported results related to engagement (Archaumbolt, Janosz, Fallu, &Pagani, 2009; Nielsen, 2016;and Wegner et al., 2007).

As mentioned previously, Fall & Roberts (2012) and Valedez et al. (2008) linked school engagement to academic achievement and increased dropout rates. First, Fall & Roberts (2012) specifically examined how school engagement, academic achievement, along with self-perception and social context interact to affect the decision to drop out. Results confirmed that teacher and parental support positively affected self-perceptions and school engagement; perceived control positively affected academic engagement; and academic engagement positively affected students' achievement. Second, Valdez and colleagues (2008) reported that lack of interest or engagement contributed to particpants' decisions to drop out of school.

Similar findings were reported in three studies conducted in Canada, Denmark, and South Africa (Archambault et al. 2009; Nielsen, 2016; and Wegner et al., 2007). First, Archambault and colleagues (2009) sought to discover what contribution, if any, school engagement had on students' decision to drop out. They conducted a longitudinal study with 11,827 French-Canadian high school students to evaluate behavioral, affective, cognitive factors of engagement. They measured concepts closely related to different facets of engagement like school attendance and discipline; feelings about school; interest in academic work; and willingness to learn language arts and mathematics. They found that global disengagement was a significant factor in student dropout. Behavioral factors alone predicted dropout when behavioral, affective, and cognitive factors were examined. That is, student compliance and attendance forecasted dropout better than student willingness and effort to learn the basic curriculum.

Second, Nielsen (2016) conducted a study to support the idea that school engagement is a key concept when trying to understand the dropout process. Danish students (n=160) completed interviews enrolled in 8 different Vocational Education and Training (VET) systems. Through the interview process, students reported that school engagement impacted their decision to drop out of school.

Finally, Wegner and colleagues (2007) collected data on leisure boredom and high school dropout in South Africa. Their goal was to investigate whether leisure boredom predicted high school dropout. Leisure boredom is the perception that optimal arousal is not satisfied by leisure experiences. A cohort of 308 grade eight students (all grade eight students in Cape Town, South Africa) completed a self-report questionnaire. The Leisure Boredom Scale (LBS) comprised part two of the questionnaire. The LBS, containing sixteen items, measured individual perception differences of boredom in leisure. The students received follow-up questionnaires at two yearly intervals. 281 students completed the study. At the second follow-up, over 50% (149) of the remaining 281 students had dropped out. In children over the age of fourteen, leisure boredom was an effective predictor of dropout, but not so in younger children. The results of this study demonstrate leisure boredom as a successful tool to identify those who are more likely to drop out of school.

Social support. Six studies reported social support received from family and friends is crucial for preventing dropout decisions (Barile et al., 2012;DeWitte& Rogge, 2013; Graeff-Martins et al., 2006; Rosenblum, Goldblatt, &Moin, 2008;Solis, Rocha, & Brunet, 2013; Strom &Boster, 2011; and Terry, 2008). Whenparticipants' friends have higher academic aspirations, participants were less likely to drop out of school. Peer and parental support impact student motivation and motivation is the biggest

contributor to obtaining a diploma.Social support preferred and most helpful in helping shape students' decisions to stay in school was messages that helped solve a problem rather than emotional messages conveying sympathy.

A study by Barile and colleagues (2010) suggests that the relationship between teachers and students may affect the decision to drop out of school. The study investigated how teacher evaluation policies that lead to teacher rewards correlate with the teacher–student relationship climate (TSRC) and how the TSRC affects student academic outcomes. Barile and colleagues used data from the Educational Longitudinal Study of 2002. Participants included 7,779 public high school students from 431 schools whose demographics represented the makeup United States schools. The study included the following measures: policy status (evaluation of teacher performance and rewards); teacher-student relationship climate; math achievement; student dropout; and multiple covariates (SES, the aspirations of friends and parents, and race/ethnicity). Barile and colleagues (2010)reported schools that allow students evaluations of their teachers have a better TSR climate. Further, a positive TSRC does offer protection against student dropout. Students that perceived their friends' as having higher academic aspirations were more likely to report a more positive TSR climate and were less likely to drop out of school by their senior year than those that reported that their friends had low academic aspirations. Similarly, parents' academic expectations for their child were negatively associated with the students' odds of dropping out of school. Schools with higher proportions of students identifying as Black or African Americanexhibited lower TSR climate ratings.

A study by De Witte and Rogge (2013) examined individual and institutional factors that affect students' decisions to dropout as well as the differences between the rates of dropout for different secondary education classes. The researchers analyzed data from the Dutch VOCL focused on students in the Netherlands (n=17,697) from 1993 cohort. The data tracks students from their first year of secondary education (approximately age 11) until they leave school (either with or without a diploma), and collects data on classes, academic records, student attitudes, parental attitudes, and socioeconomic variables. Environmental factors like peer and parental support affect student motivation, and motivation is the biggest contributor to obtaining a diploma. De Witte and Rogge suggest that by the time a student enters secondary education, interventions may no longer be effective.

Graeff-Martins et al. (2006) studied the effect of interventions on school dropout. Of the ten elementary schools with the highest dropout rate, researchers randomly selected one school to serve as the sample school and a second school to act as a control group. Based on the matching characteristics students (n=40) from each school were randomly selected. The sampled school received universal interventions, including workshops with teachers; informative letters to parents; school meetings between parents and school officials; modifications of the school environment; telephone helpline; and implementation of the program, "The advantages of staying in school." In addition to the universal interventions, at-risk students also received a mental health assessment and referral to resources available in the community, if necessary. The school that served as the control group did not receive any of the above interventions or the assessment. The researchers point to a lack of encouragement by teachers to stay in school as one of the barriers to the implementation of the program. The results were clear: programs combining universal primary preventive strategies to at-risk students can be implemented to reduce school dropout.

Rosenblum, Goldblatt, &Moin, (2008) studied the hidden dropout phenomenon among immigrant high school students. The authors cite irregular school attendance (hidden dropout) as the first possible stage of school dropout among Ethiopian immigrants. Throughout the course of this study, the authors attempted to identify the relative significance of various factors leading to hidden dropouts. The results were unexpected: among the hidden dropout group, the perceived social support was significantly higher, and feelings of stress were significantly lower.

Solis, Rocha, and Brunet (2013) investigated the transition from junior high to high school and a large

number of dropouts that occur during this time. Researchers divided the transition process into four successive phases: (a) the decision to take or not to take the general admissions exam for public high schools, (b) the options students request on the examination, (c) the test results, and (d) the final choice to continue. Results revealed that the family's educational trajectory and expectations for schooling impacted each phase.

Strom and Boster (2011) conducted a qualitative study in the United States where they foundpositive messages from adults resonate more with students than negative messages. Also, they found that hearing a message one time may not be enough to impact the decision-making process. Finally, they suggest that students perceive messages that help solve a problemmostbeneficial in helping shape decisions to stay in school rather than emotional messages that convey sympathy.

Terry, M. (2008) conducted a study of two Canadian adult literacy programs. The researcher's purpose was to determine thefactors that led dropouts to participate in these programs. During the interview process, the individuals exposed an array of factors for having dropped out of school as teenagers or young adults. The researcher grouped influential groups of people into one of four categories: parents, siblings, in-school peers and out-of-school peers. It is important to note that the individuals sampled in this study voluntarily gave their responses about the influence of others on their decision to leave school. The findings of this study demonstrate the profound impact of families and friends on high school students' decisions to drop out.

Poverty and cost

 Five studies reported that living in povertyor the cost of education as reasons students dropped out of school (Anisef et al., 2010; Porteus et al., 2000;Renzulli& Park, 2000; Siddhu, 2011;and Valdez, Perez, Rodriguez, & Celaya, 2008). Anisef and colleagues (2010) studied how the high rate of poverty affects participants decision to drop out of secondary school by analyzing data collected by the Toronto District School Board (TDSB) including economic status, whether the student was first or second generation immigrants, and other factors related to immigrant students (e.g., where the student is from, when they arrived in Canada). They also looked at socioeconomic factors like gender, ethnicity, nationality, family makeup, and socioeconomic status to a name a few. The researchers utilized a longitudinal research design that includes data collected from a 9th-grade cohort from 2000 to 2006. From a sample of 16,249 students, 26% had dropped out of school by the end of the 6th year. The study found that regardless of country of origin, students in neighborhoods where most families are living in poverty are at the greatest risk of dropping out.

Porteus and colleagues (2000) analyzed the factors underlying school non-attendance in three poor, marginalized communities in South Africa. Through a grueling door-to-door visitation procedure, researchers identified sixty-seven out-of-school individuals, ages five through seventeen; who fit the school leaver criteria. Results of this study indicated poverty is, by far, the greatest influence on a child being out of school in South African society.

Renzulli and Park (2000) determined that many gifted dropouts were from low-SES families and racial minority groups. Also, indicated in the study was that Hispanic and Native American students were more likely to drop out of school, while White gifted students were less likely to drop out of school than any other ethnic group. Forty-eight percent of gifted dropouts were in the lowest SES quartile, while three and a half percentwere in the highest SES quartile.

Siddhu (2011) conducted a study of the transition from primary school to secondary school in rural India, due to the significance of dropouts before students reach secondary schooling. Within this study, researchers identified specific factors (i.e., cost, distance to the nearest secondary school, membership in marginalized social groups, and being a female) that might be a predictorof student dropouts during the transition period. The samples in this study consisted of 8th graders (n=701) from 17 schools within the

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district. Results revealed key factors in dropping out were cost and distance. The most common factor for both boys and girls was cost. Out of the sample group, 130 students dropped out during the study (Male = 41; Female = 89). Although other factors were found to cause students to drop out of school, one of the main reasons reported by Valdez and colleagues (2008) was economic costs.

Secondary Themes
As mentioned previously, secondary themes were key findings common in two to three studies. Secondary themes included suggestions for ways to reduce dropout rates (a) alternative education pathways, and (b) improved school cultures.

Alternative education pathways
Three studies suggested that students enrolled in alternative education pathways completed high school; it just took them longer (Beekhoven&Dekkers, 2005;Franklin, Streeter, Kim, &Tripodi, 2007; and Jahnukainen, 2001). Beekhoven and Dekkers (2005) set out to highlight reasons boys in the lower secondary vocational track in the Netherlands left school very early in their educational careers. Researchers presented, four of the seventeen participant responses in a case study format. Interviews were conducted in their homes using a prescribed list of topics on four categories: the school, student, family, and peers. Case one is of Turkish origin and lives with his mother. The wrong choice of vocational track led him to leave school. Participant three, diagnosed with ADHD, disliked elementary school. He found it uninteresting and left school to become a carpenter. Overall findings from this study demonstrate numerous factors contributing to a boy's leaving school, including learning problems, an unsafe school culture and choosing the wrong vocational track.

Franklin, Streeter, Kim, &Tripodi (2007) examined a public alternative school's methods for preventing student dropout through solution focused brief therapy (SFBT) programs. SFBT is a framework that utilizes students' strengths and resources to build problem solving skills. Franklin and colleagues used a quasi-experimental design to compare at-risk youth enrolled in an alternative school with an SFBT-based dropout prevention program to their counterparts in a typical public school. Researchers recruited participants (n=46) from the public alternative school in Austin, Texas, and the researchers attempted to provide a control group (n=39) from a public high school in Austin, but the comparison sample was unable to provide one-to-one match for all characteristics. However, a chi-square analysis found no significant differences between the two groups. Results showed that students at the solution-focused alternative school earned more credits and enrolled in post-secondary education more often than the control group. The researchers found that the SFAS students' curriculum was self-paced and that many of these students had jobs and children. While it took them longer than the typical four years, seven out of the fourteen who did not graduate with their class did graduate the following year suggesting attendance may not be a significant indicator of student outcomes. The SFAS students earned more credits despite low attendance. The researchers suggest further research on solution-focused alternative schools as a means to prevent student dropout.

Jahnukainen (2001) presented follow-up results from two programs working with at-risk youth to prevent students from dropping out in Finland. The two programs, Creating Your Own Career and The 10th Form, cater to similar clients at different stages of their academic career. Creating Your Own Career is accessed during the last years of high school, while The 10th Form services students after completion of compulsory schooling. The 10th Form strives to give additional services to at-risk youth who may be lacking in one or more academic or social school. Creating Your Own Career is modeled after similar alternative education programs in Berlin and New York. Researchers sampled 45 students from Creating Your Own Career and 97 students from The 10th Form. No control group was utilized. Results indicate that alternative ways of schooling are needed, at least for a small portion of comprehensive age pupils, who become disaffected with academic work.

School cultures

Two studies point out the importance of a culturally responsive and individualized school culture (Boone, 2011; and Smyth &Hattam, 2002). Boone (2011) extended the literature on why English learners decide to drop out of school by examining the context in which they drop out. Boone used qualitative narrative interviews to explore the reasons participants dropped out of school and to extract themes based on these stories. His participants (n=8) were aged from 16 to 56, but had shared school experiences in California; they were all at one time an English learner and participated in English learner programs. Additionally, they all had either dropped out of school or considered dropping out. Boone confirmed that decisions to drop out were linked to alienation (i.e., Newmann et al., 1992), poor English skills and poor grades (i.e., Wood, 1994), and disciplinary issues (i.e., Rumberger& Lim, 2008).Therefore, he suggested that school faculty complete professional development focused on cultural diversity to improve the school's culture and tolerance of English learners.

Similarly, Smyth and Hattam (2002) investigated the relationship between the culture of the school and the decision to leave school early. Using "Voiced Research" (a way of characterizing the bringing-to-life of perspectives that would otherwise be excluded, muted or silenced by dominant structures and discourses), Smyth and Hattam conducted interviews with 209 students (made up of dropouts and students at-risk to drop out). Three school cultures were identified: (a) an *aggressive* culture with a hierarchical organization structure that demands compliance of policies and employs overacting and paranoid teachers; (b) a *passive*culture with an unstructured organization where inadequacies exist in time management, teacher skills, and commitment to excellence which results in misteaching, ineffective classroom practices, and boring curriculum; and (c) an *active*culture of independence for teachers and students that leads to students feeling valued and treated as adults which acknowledges the importance of alternative education pathways. The authors note that most schools exist between two cultures. These school cultures did, in fact, play a role in an individuals' decision to leave school.

3. Remaining Studies

The remaining three studies reported five key factors (i.e., behavior, disability, and resilience) impacting dropout rates that are important to mention but did not have more than one study substantiate those same findings. First, behavior was linked to decisions to dropout as Tramontina et al. (2001) evaluated the association between Conduct Disorder (CD) and school dropout. A sample of students from third and fourth grade (elementary school) in Porto Alegre, Brazil was selected to participate in a case-control study. The sample group (n=44) and the control group (n=44) included current students. Even though Brazilian law states that children must attend elementary school, there is no governing body to enforce this law. Lack of enforcement results in many children not attending elementary school. A child psychiatrist determined a Conduct Disorder label existed in an interview with one parent. The evaluation administered was the Schedule for Affective Disorders and Schizophrenia for School-Age Children (SADS-E). School dropout is prevalent among elementary students in this area of the country. The results of this study demonstrate an association between CD and school dropout.

Second, variables that affect students with learning disability (LD) and intellectual disability (ID) and their decision to drop out of school were studied by Dunn, Chambers, &Rabren (2004). Participants were former students in Alabamaschools and half dropped out of high school. Dunn and colleagues (2004) were especially interested in how demographics and the perception of the high school experience affect the decision to drop out. The researchers also collected data on the reasons students with disabilities gave for dropping out and if the perception of their high school is similar to their peers who chose to dropout. Data from the Alabama Tracking system was analyzed for all participants and provided the following results. Results indicated students with LD had a much higher probability (.58) of dropping out than students with ID (.37). Fifty-three percent of both groups experienced not being able to take classes that they wanted to take, including career, training, and vocational classes. With that in mind, the researchers suggest that teachers honor the differences in students' perceptions of their high school experience by gathering information regarding these opinions and account for them in counseling and program

planning. They further suggest that teachers emphasize how high school can prepare students for their future goals.

Finally, Lessard, Fortin, Butler-Kisber, &Marcotte (2014) conducted a study to determine the factors that set apart students at risk to dropout and resilient students in Canada.   The researchers recruited participants from a longitudinal study (n=808) and identified students at risk (n=80) and resilient students (n=60). Data was collected using open-ended questions in a face to face interview. The team then condensed transcripts from the interviews using a method by Labov and Welestsky (1967) to determine similar themes that emerged from the interviews. The results suggest that resilient students are better able to utilize their resources, ask for assistance when needed, have positive relationships, and planning/decision-making skills. Additionally, resilient students have support systems to help them through.

4. Discussion

Preventing students from choosing to dropout of school can be essential to the future economic future of any country. The findings from these 34 studies could impact future research and policy change. This study's purpose was to explore articles for common themes related to reasons students choose to dropout of school before graduation. Here we present limitations of this review, implications of findings, and directions for future research.

5. Limitations of Review

The main limitations of review revolve around the disparities in the educational systems of different countries. Some countries have separate vocational and educational diplomas, making it difficult to compare vocational school dropouts from one country to basic educational dropouts of another. Second, studies often calculated dropout rates differently. Some countries keep data on students beginning early in their school career and follow through to completion (usually around 18 years of age). However, other countries do not keep data on students who have dropped out; therefore, they only calculate data on currently enrolled students. Lastly, the cultural, economic, and societal differences make it difficult to compare statistics from one country to another.

6. Implications of Findings

Despite the limitations of this survey, several themes emerge. Regardless of geography, some general factors (circumstantial, economic, institutional, etc.) increase the likelihood that students will not finish schooling. In both developed and developing countries, some socioeconomic determinants come into play. It is clear, from the studies cited, that the education and the earnings of parents have a substantial impact on their children's academic performance. It is implied, too, that schools in more affluent areas – or those receiving funding for additional programs and student support – improve students' chances of graduating.

The decision to dropout is a complex one. Cultural influences vary with each country; and even among individuals in the same area, contributors do not lend themselves to generalization. Among students, however, some seemingly universal elements emerge. These include student attitudes toward their coursework and their institution, the treatment they receive at the hands of their peers, and their willingness to engage academically.

Future Research
The above findings provide implications for further research. Future studies, prompted by this review, should be conducted in the United States, to explore institutional and socioeconomic factors; especially

investigating dropout rates among disadvantaged minorities, such as those in the inner city or on Indian Reservations. In light of the international data, a correlation may be obtained between the earning potential, academic record of parents, and the likelihood that their children will finish high school.

A nation of immigrants, the inhabitants of the United States hail from every region of the inhabited world. A treatment of the obstacles immigrant children, documented and undocumented, face in completing high school could prove an essential study. Additionally, research into the attitudes of different immigrant populations toward education may provide fertile ground for research.

Student engagement should also be measured. Archambault's "six concepts" (school attendance and discipline, liking school, interest in academic work, and willingness to learn language arts and mathematics) are a useful template to this end. In addition, future research should take into account the role of technology in preventing dropouts. The incorporation of laptops and tablets into the classroom has radically altered the national approach to pedagogy. Researchers must account for and review how technology has impacted student engagement. The leisure boredom scale could be used to determine how many students dropout due to sheer boredom.

Researchers should also investigate: (a) the influence family and friends have on the decision to dropout; (b) preventive strategies addressing at-risk students, and (c) measures taken to determine whether or not procedures implemented in other countries are replicable in the United States with similar results. Lastly, the school culture could be studied so that changes can be made to improve the social support provided to students to inhibit students from leaving school before they graduate.

7. Conclusion

The research that is being conducted in the United States, while invaluable, is not the only means to the solution. Early school leaving is the result of many factors, including learning problems, lack of motivation and choosing the wrong vocational track. Analyzing and replicating current international research in the U.S. may provide further information regarding potential predictors of dropout decisions (a) academic achievement (e.g., academically weak students are far more likely not to complete school); (b) adult education and long range expectations (e.g., adult education and gender norms, were more significantly correlated with school participation and expectations for students to be in school the next year was the most reliable and significant predictor); (c) engagement (e.g., leisure boredom is a predictor of dropout among older students); (d) social support (e.g., families and friends have a profound influence over high school students' decisions to dropout); and (e) poverty and cost (e.g., regardless of country of origin, students in neighborhoods where most families are living in poverty are at the greatest risk of dropping out). Also, we may look for answers related to prevention strategies in current international research. For example, we can explore alternative education pathways (e.g., alternative ways of schooling are needed, at least for a small proportion pupils, who become easily disaffected with academic work). Furthermore, prevention strategies could investigate professional development efforts to improve school cultures (e.g., passive, aggressive or activecultures influence an individual's decision to leave school or provide programs combining universal preventive strategies for at-risk students).

The dropout rate in the United States has reached epidemic proportions. In some major cities, only half of all students are graduating. In some countries, the statistics regarding dropouts are worse, while other countries cite far better graduation results for their youth. A closer look at the research conducted outside the United States is essential. We can learn from both the positive and the negative. Studies in the United States have identified characteristics of dropouts, determined the decision-making process of the dropout, and created dropout prevention programs. Some of it is working, and some of it is not. The need to look at research being conducted abroad is crucial, now more than ever.

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