33

Part IV Commentary: Outcomes of Engagement and Engagement as an Outcome: Some Consensus, Divergences, and Unanswered Ouestions

Michel Janosz

Abstract

The well-respected engagement scholar, Michel Janosz, shared his thoughts on the chapters in Part IV of this volume. His commentary articulated the areas of agreement and disagreement across scholars regarding the conceptualization of engagement and views on engagement as a process or outcome. He argued for the consideration of (1) the contexts of engagement and understanding the relations between engagement in the classroom and engagement in school; (2) systematic study of the roles of emotional, cognitive, and behavioral engagement; (3) investigation of the relation of engagement with other aspects of psychosocial and neurobiological development; and (4) exploration of engagement within a categorical and person-centered approach in addition to the predominant dimensional and variable-oriented perspective.

the learning situation.

Introduction

 $M. Janosz(\boxtimes)$

One extraordinary evolutionary skill of mankind is its capacity to learn. If, at one time, learning was a matter of basic survival, we can still be struck by the fact that knowledge and skills acquisition continues to be, nowadays, one of the most powerful determinants of health and wellbeing (Heckman, 2006; Muennig, 2007). The benefits of learning are indisputable, but they come with a price: effort. To develop new skills

The amount and the quality of the effort put into school learning activities vary between students. Some students are less engaged than others. How important is that? Is there a *price* to pay for disengaging from school? This is one of the two fundamental questions eminent scholars have been invited to address in this chapter of the book. The second is about influencing student engage-

ment. What organizational and educational

actions affect student engagement? In deciding to

tackle this question, the authors shared their

and acquire new knowledge, individuals must

consciously mobilize and devote some of their physical and psychological (cognitive, emo-

tional) energy; they must engage themselves in

School Environment Research Group and School of Psychoeducation, University of Montreal, Montreal, Canada

e-mail: Michel.janosz@umontreal.ca

understanding of what are the determinants of engagement and how we can influence them.

Hence, while the first issue refers to the outcomes of engagement, the second concentrates on engagement as an outcome.

In this chapter, I highlight some major convergences and divergences in authors' responses to these questions and share some of the thoughts they inspire. As this book illustrates, the recent mobilization of the scientific community over the construct of engagement has led to the emergence of fundamental theoretical and methodological debates (e.g., definition of engagement, difference between engagement and motivation, measures of engagement). Although most authors of this chapter have shared their views on these important topics, I will only briefly comment on those since others have been specifically invited to do so. I propose instead to underline some conceptual and methodological issues that emerged from the reading of these enlightening texts. Because the systematic study of student engagement is still young, it is easier to identify the unexplored territories, the unanswered questions. This task is also made much easier and stimulating when authors do a superb job of reviewing the state of the knowledge in their area. Thus, in revisiting the chapters in this book, I will argue that our comprehension of the relations between the determinants and outcomes of engagement would benefit from (1) taking into account the contexts of engagement and understanding the relations between engagement in the classroom and engagement in school; (2) studying more systematically the specific roles of emotional, cognitive, and behavioral engagement; (3) investigating the relation of engagement with other aspects of psychosocial and neurobiological development; and (4) exploring engagement within a categorical and person-centered approach in addition to the predominant dimensional and variable-oriented perspective.

Engagement in Learning Activities and Engagement in School

Some researchers study student engagement in relation to learning activities in the classroom. Others address engagement within the broader context of school. Engagement in *both* contexts

has been shown to predict different aspects of school success. Nevertheless, we think that student engagement in school is not merely an aggregate version of classroom engagement. Not only is the operationalization of engagement changing according to the context, but I believe that engagement in school encompasses a different reality than engagement in the classroom or, even more circumscribed, in learning activities. For that reason, I think we can expect differences in the outcomes and determinants of engagement, which in turn, can have implications for intervention.

Outcomes and Contexts of Engagement

Some authors address student engagement in the context of the classroom and learning activities (Gettinger & Walter, 2012; Guthrie, Wigfield, & You, 2012; Wolters & Taylor, 2012). For example, Gettinger and Walter referred to engagement as the time a student is involved or participates in the classroom. With a similar definition, Guthrie et al. (2012) restricted their analysis of engagement to reading activities. Interestingly, these authors tend to concentrate on the role of behavioral and cognitive dimensions of engagement while recognizing the emotional component of it (see also Wolters & Taylor). In any case, they all demonstrate that behavioral and cognitive engagement in learning activities strongly predicts achievement and learning competencies.

Other authors tackle engagement at the school level. Behavioral (attendance, participation in extracurricular activities, misbehavior, mobility) and emotional engagement (identification to school, belongingness, student-teachers and peer relations, emotions accompanying learning tasks) seem to be the most frequent aspects studied in regard to school engagement (Brooks, Brooks, & Goldstein, 2012; Griffiths, Lilles, Furlong, & Sidwha, 2012; Rumberger & Rotermund, 2012). A recent overview of longitudinal studies (Rumberger & Lim, 2008) indicated that student engagement, and especially behavioral engagement, is one of the strongest predictors of persistence and school dropout. Longitudinal studies show that academic achievement and engagement are among the strongest predictors of school dropout (Alexander, Entwisle & Kabbini, 2001; Battin-Pearson et al., 2000; Janosz, LeBlanc, Boulerice, & Tremblay 2000; Rumberger & Rotermund, 2012).

In sum, being engaged during learning activities makes a significant difference in how much is learned and how well intellectual skills are developed. Being engaged or not in school makes a difference in how long a student will persist in their schooling career.

Nevertheless, the specific contribution of the different dimensions of engagement is much less known and demonstrated empirically. It is my contention that in order to advance our comprehension of student engagement, we need to better understand to what extent emotional, cognitive, and behavioral engagement have separate and cumulative impacts on student outcomes and the potential meditational or transactional processes involved. In fact, theoretical elaboration and empirical demonstration of the relations between emotional, cognitive, and behavioral engagement are still lacking. For example, in a recent longitudinal study on engagement in school, Archambault, Janosz, Morizot, and Pagani (2009) demonstrated that cognitive and emotional engagement tended to evolve in synchronicity while behavioral engagement seemed to evolve differently, especially for students with low and unstable overall engagement (which are the students more at risk of dropping out; see Janosz, Archambault, Morizot, & Pagani, 2008). Furthermore, some recent studies propose that academic achievement and engagement mediate the influence of emotional and cognitive engagement on dropout (Archambault, Janosz, Fallu, & Pagani, 2009; Rotermund, 2010). Thus, while we can affirm that student engagement is a major determinant of school success, we have still a lot to learn on how the different dimensions are related to it.

The Nature of Engagement According to the Context

There appears to be a shared consensus about the fact that engagement is multidimensional and comprises a behavioral, cognitive, and emotional component (Fredricks, Blumenfeld, & Paris,

2004). Some researchers have proposed a fourth dimension labeled *academic engagement*, referring to things like time on task, credits earned, and homework completion (Appleton, Christenson, Kim, & Reschly, 2006; Reschly & Christenson, 2006). Although fundamental, we do not think that academic engagement should be considered along the same taxonomy since emotions, cognitions, and behaviors all refer to developmental aspects, while academic engagement refers the context to which engagement is linked (e.g., behavioral engagement in the classroom).

Defining and measuring engagement with rigor and tracing the boundaries of this construct with related concepts like motivation, grit (Duckworth, Peterson, Matthews, & Kelly, 2007), and self-regulation (see the challenging and critical thoughts of Wolters & Taylor, 2012) are undisputable critical issues (Appleton, Christenson, & Furlong, 2008). As the frontiers of student engagement are still a matter of scientific discussion, we would plead for the integration of an additional vector in the actual debate: the context of engagement. We can think of engagement (a) in the context of a specific academic learning activity (i.e., reading lesson); (b) in the context of the classroom, a setting strongly oriented toward academic learning but also providing socioemotional learning opportunities (in a more or less systematic way according to teachers' practices); and (c) in the context of school, which can be conceptualized as a more global educational environment providing many social learning opportunities in addition to stimulating intellectual development (Eccles & Roeser, 2011). We could even extend this nested conceptualization to engagement in learning activities in the community (see Wylie & Hodgen, 2012). As we move from specific learning activities to a more global educational environment, the educational setting (structure, practices) becomes less specific and constraining (in space and time) with regard to the learning it provides.

I think that the multidimensionality of engagement is invariant, cross-sectional to the contexts, that there are always some emotions, cognitions, and behaviors involved when one is making efforts to learn. This does not imply, however, that the expression of engagement is

invariant. To the contrary, what can be considered as the expression of emotional, cognitive, and behavioral engagement may be quite context specific and, by extension, lead to the identification of different determinants and outcomes. Consider the example of belongingness. For many, belongingness (or bonding for social development researchers and criminologists) is an indicator of emotional/ psychological engagement (Appleton et al., 2006; Finn, 1989; Fredricks et al., 2004; Griffiths et al., 2012). For others, belongingness is more a basic psychological need that must be fulfilled in order to be motivated (Baumeister & Leary, 1995; Ryan & Deci, 2009). Thus, the sense of belongingness is conceptualized by some as a determinant and by others as a manifestation (or even an outcome) of engagement.

Especially for those studying engagement at a more molecular level (e.g., learning activity) (Gettinger & Walter, 2012; Guthrie et al., 2012), motivation is perceived as a determinant of engagement as it expresses, at least in part, the extent to which the learning situation (context, content) responds to the need for belongingness. Thus, sense of belongingness appears to be a determinant of engagement rather than an outcome. Emotional engagement in learning situations may reflect the affects involved during the activity (interest, boredom, happiness, sadness, anxiety). However, in the context of school, the sense of being related to others may be more than just a determinant. School is more than just an academic learning setting; it is a social learning environment, a life environment, and a socialization agent (Wentzel & Looney, 2007). School is also about social learning experiences occurring outside the classroom and between academic activities. In that sense, how one feels about others can be more easily conceived as part of the emotions elicited by being and going to school. This representation is echoed in theories of school dropout, where social integration or bonding is perceived as important determinants of school dropout rather than academic engagement (Tinto, 1994; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Participation in extracurricular activities is another example. Such conduct, by definition, can hardly be used as an indicator of behavioral engagement in the classroom. However, if school is viewed as a social learning environment as well as a setting for intellectual growth, using participation in extracurricular activities as an indicator of engagement seems more than appropriate.

In addition to distinguishing contexts of engagement, we also call for a better understanding of the relations between engagement in different settings. In Finn's model of engagement (1989), participation in extracurricular activities represents a deeper manifestation of engagement. This interesting stage-developmental approach has yet to be empirically tested however. Furthermore, there may be no necessary equivalence between engagement in school and engagement in specific learning activities (Davis & McPartland, 2012). For example, we can easily think of a student highly engaged in extracurricular activities without being deeply engaged in the classroom or in reading activities. Nonetheless, it would also be improbable for a student to be highly engaged in the classroom and not be engaged in school. Is student engagement in the classroom (partially) determined by their engagement in learning activities? Is engagement in school dependent on the level of engagement in the classroom and in learning activities? Conversely, can increased engagement at a broader level (school) have a positive impact on classroom engagement? Wylie and Hodgen (2012) expand even more the complexity of this issue by drawing our attention on the stability (depth and manner) of engagement in and out of school. Their results raise interesting questions about the transactional nature of engagement and the relative contribution of the individual and its educational environments (school, but also the family, peer group, community). This stability across contexts introduces also the possibility that student engagement is, in part at least, the manifestation of more stable personality traits.

Determinants, Intervention, and Contexts of Engagement

Although researchers address student engagement in several contexts, most of them share the idea that motivation, understood as a set of affects, attitudes, and intentions toward learning (values, aspirations, perceived competence/control, goals, etc.) (Wentzel & Wigfield, 2009), is the proximal determinant of engagement. There appears to be a consensus that motivation precedes engagement in the sense that the intensity and the quality of student self-mobilization (action) depends directly upon their values, goals, perceived competency/control, and expectancies regarding the learning activity or environment (school). This is not to say however that motivation ceases to exist when the action begins or that engagement does not impact on later motivation. This is presumably why some authors like Guthrie et al. (2012) prefer to talk of the relation between motivation and engagement as engagement processes.

This shared perspective introduces another important point of convergence with regard to intervention: (1) to increase student school success (e.g., competencies, achievement, graduation), we must increase engagement; (2) to increase engagement, we must increase motivation; and (3) to increase motivation, we must provide the organizational conditions and educational practices known to sustain or increase student's motivation. The paper from Guthrie et al. (2012) is particularly exemplary of that perspective and offers a substantial demonstration of the validity of this pathway of change at the classroom. To these principles, Gettinger and Walter (2012) bring to our attention that the quantity of engaged time is determinant for success; that engagement is not only determined by individual motivation and learning skills but also by organizational and educational practices (e.g., classroom management and instructional strategies) that maximize the quantity of quality time for learning (time effectively used for learning). For her part, Deakin Crick (2012) focuses on the other side of the coin: the quality of engagement. She argues convincingly that deep engagement generates better and sustained student outcomes, and that it is closely linked to the foundation of identity. Brooks et al. (2012) further develop the socialconstructivist view, partially introduced by Deakin Crick, by showing how motivation and engagement are profoundly influenced by the feedback the student receives and interprets from their schooling experience. This perspective also recognizes the active role the student has and must have to become and be engaged, a point of view insufficiently shared in the engagement research field according to Wolter and Taylors (2012). Nonetheless, in my opinion, the most powerful and challenging implication of this latter perspective is to be more critical about the dominant vision of teachers as transmitters of knowledge and students as receptacles of the teachers' words. The benefits of asking teachers to become supportive guides of responsible and active learners should certainly be tested empirically and more systematically.

In sum, whatever specific theoretical background researchers adhere to, most of them recognize that to increase motivation and engagement, we must privilege age-appropriate interventions, educational environments, and learning situations that respond to fundamental individual needs: to feel secure and respected, be active and autonomous, experience success, feel competent and have control over the outcome (success) of a learning task or situation, be related to others, understand the meaning and value of the effort demanded, etc. (Deci & Ryan, 2002; Eccles & Roeser, 2010).

To complete this commentary, I would like to highlight two aspects I think have received insufficient attention and that may provide new insights on the determinants/outcomes of engagement and for intervention: understanding the relation of engagement with other aspects of the biopsychosocial development and tackling engagement within a more person-oriented approach.

Student Engagement and Biopsychosocial Development

As there is a necessity to clarify the definition and conceptual boundaries of student engagement, I also think we should move toward understanding how it is linked to other aspects of children and adolescent development. Manifestations of lack of engagement could express difficulties in other spheres of development and not be the direct or sole consequence of lack of motivation. Rumberger and Rotermund (2012) remind us that

40 years ago, Bachman and his colleagues asked themselves whether school dropout was a symptom of social maladjustment or a problem of its own (Bachman, Green, & Wirtanen, 1971). They showed that many young people who dropped out of school had problems in several other spheres of their development, as part of a general deviance syndrome (Jessor & Jessor, 1977). Student lack of engagement may also be the manifestation of other causes than lack of motivation. For example, taken individually, behaviors used to measure school behavioral (dis)engagement (skipping school, not responding to teachers, not doing homework, etc.) could likewise be used as indicator of externalizing problem behaviors or even delinquency. Griffiths et al. (2012) do a very good job of reminding us of the correlates of engagement with other types of difficulties in adolescence (e.g., substance use, mental health). We should also think of students with attention deficit disorder or with executive functions vulnerabilities (Blair, 2002). These students most probably manifest symptoms (lack of attention, poor self-regulation) that could be easily interpreted as cognitive disengagement. What about students with depression or drug abuse problems?

Thus, many scenarios of relationships are plausible and not mutually exclusive: disengagement could be a cause or a risk factor for psychosocial maladjustment; disengagement concurrent psychosocial difficulties could be the consequence of the same underlying cause (e.g., ADHD); school motivation may (partially) mediate the influence of socioemotional or neurobiological problems on engagement; and moreover, we could explore the potential moderating influence (protective role) of engagement over the relationship between biopsychosocial early difficulties and later adjustment problems like dropout, criminality, etc.

Underlining the importance of these issues without referring to the recent work of Skinner, Kinderman, and Furrer (2009) would be an incomplete comment. Throughout this chapter, we have used the expressions *engagement* and *disengagement* interchangeably, as if one was the contrary

of the other. This polarized or dimensional view is certainly widely shared in the present literature on student engagement. Recently however, Skinner et al. (2009) challenged this vision and demonstrated that disengagement, or what they prefer to call disaffection, is best measured and conceived as a related but separate construct. This perspective suggests, for example, that (very) low engagement is not exactly the same thing as being disengaged (see also Griffiths et al., 2012). This proposition reminds how positive and warm student-teachers relations are not the opposite of negative and conflicting relations (Jerome, Hamre, & Pianta, 2009). One implication of this finding is that we should verify to what extent (emotional, cognitive, behavioral) engagement is related to the same determinants and outcomes as disengagement/disaffection.

Unraveling the existence and strength between engagement and psychosocial adjustment is important for intervention and targeted prevention efforts. If motivational and engagement difficulties are not so much affected by weaknesses in the educational environment than by other determinants (family, peers, community, neurobiological development), then interventions should focus on these other targets as well. For example, we could easily assume that the intervention plan should not be the same for a student with a lack of cognitive engagement that has, or not, an attention deficit disorder or for a student with a lack of behavioral engagement that has, or not, a drug abuse problem.

We are certainly in need of more comprehensive longitudinal studies, beginning in early childhood, to help us disentangle the relations between engagement, motivation, and other biopsychosocial aspects of the child and adolescent development. This can be done by examining the potential direct and indirect (mediating and moderating) relations between variables, including all the appropriate controls. Well-designed intervention studies can also be very instructive of the relative importance of different factors and meditational processes involved (Lacourse et al., 2002). Another approach would be to adopt a person-centered perspective.

A Person-Centered Approach in the Study of Engagement

The vast majority of studies of student engagement examine how isolated aspects of human experience are related (e.g., the relation between self-efficacy and engagement or student-teachers relations and engagement). These studies provide us with extremely valuable information, especially when having a longitudinal design. Nonetheless, a complementary approach to the study of human development is trying not to isolate specific aspects but rather to better capture its multidimensionality and diversity (see Bergman & Trost, 2006; Cairns, Bergman, & Kagan, 1998). For example, in a longitudinal and replication study using cluster analyses, Janosz et al. (2000) showed that the dropout population was quite heterogeneous. In both longitudinal samples, approximately 40% of high school dropouts previously reported high levels of school motivation and showed similar, and sometimes even better, behavioral and psychological profiles than the average graduate (labeled quiet dropouts). Another 40% (maladjusted dropouts) had experienced severe levels of school and psychosocial difficulties. Two other interesting profiles emerged: the disengaged dropout (10%), strongly unmotivated while in school yet showing no socioemotional difficulties and getting average grades; and the low-achiever dropout (10%), disengaged in addition to experiencing academic failure yet not showing any externalizing problem behaviors. This study illustrates that by looking at profiles of individuals, we may more easily identify how engagement and other aspects of development tend to associate and the prevalence of such interactions. A typological and person-oriented approach may also be very useful to plan differential interventions and programs, more closely suited to student needs, to the extent that actions are taken to prevent the potential iatrogenic effects of labeling or, paraphrasing Brooks et al. (2012), mindsetting negatively the educators.

Some recent studies of student engagement, like the one of Wylie and Hodgen (2012), are now combining person-oriented and longitudinal

approaches (Archambault, Janosz, et al., 2009; Janosz et al., 2008). Indeed, recent statistical developments, stimulated by the power increase of personal computers, now permit researchers to examine how different groups of students, characterized by different levels or types of engagement and other concomitant individual or contextual characteristics, evolve over time (Muthén, 2004; Muthén & Muthén, 2008). This method increases our capacity to study quantitative and qualitative differences in the development of student engagement, integrating a person-oriented perspective.

Conclusion

With the growing recognition that engagement is a multidimensional construct comes the scientific duty of verifying more systematically if the dimensions of engagement share the same determinants or lead to the same outcomes. This task is only beginning. Reviewing the authoritative chapters of this book, I have first come to suggest that, since the nature of engagement is not independent of the context to which it refers, we should try to answer the causes and consequences questions by distinguishing the distinct however nested contexts of engagement: the learning activity, the classroom, and the school environments. Second, because of the importance of schooling in social development and the multiple nonschool factors that may interfere or facilitate student engagement, I proposed that we expand our understanding of determinants and outcomes of engagement to biopsychosocial aspects of development. Third, as the study of engagement is largely dominated by a dimensional and variable-centered perspective, which tends to mask the heterogeneity of trajectories toward engagement/disengagement, I suggested we approach more often the study of engagement within a person-centered perspective.

The quality and quantity of effort a student put in school greatly influence the benefits of schooling. Learning will be better, and the probabilities of pursuing higher education or integrating the workforce with success will be higher. As a whole, the quality of life will be superior. Increasing our understanding of the modifiable precursors of engagement is thus a key issue toward increasing the education level of the population, especially for the most vulnerable children of the society.

References

- Alexander, K. L., Entwisle, D. R., & Kabbini, N. S. (2001). The dropout process in life course perspective: Early risk factors at home and school. *Teachers College Record*, 103, 760–882.
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45, 369–386.
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology*, 44, 427–445.
- Archambault, I., Janosz, M., Fallu, J.-S., & Pagani, L. S. (2009). Student engagement and its relationship with early high school dropout. *Journal of Adolescence*, 32, 651–670.
- Archambault, I., Janosz, M., Morizot, J., & Pagani, L. (2009). Adolescent behavioral, affective, and cognitive engagement in school: Relationship to dropout. *Journal of School Health*, 79, 408–415.
- Bachman, J. G., Green, S., & Wirtanen, I. D. (1971). Youth in transition, vol. III: Dropping out: Problem or symptom? Ann Arbor, MI: Institute for Social Research, The University of Michigan.
- Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of early high school dropout: A test of five theories. *Journal of Educational Psychology*, 92, 568–582.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Bergman, L. R., & Trost, K. (2006). The person-oriented versus variable-oriented approach: Are they complementary, opposites, or exploring different worlds? *Merrill-Palmer Quarterly*, 52, 601–632.
- Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57, 111–127.
- Brooks, R., Brooks, S., & Goldstein, S. (2012). The power of mindsets: Nurturing engagement, motivation, and resilience in students. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 541–562). New York: Springer.

- Cairns, R. B., Bergman, L. R., & Kagan, J. (Eds.). (1998).
 Methods and models for studying the individual.
 Thousand Oaks, CA: Sage.
- Davis, M. H., & McPartland, J. M. (2012). High school reform and student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 515–539). New York: Springer.
- Deakin Crick, R. (2012). Deep engagement as a complex system: Identity, learning power and authentic enquiry. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 675–694). New York: Springer.
- Deci, E. L., & Ryan, R. M. (Eds.). (2002). Handbook of self determination theory research. Rochester, NY: University of Rochester Press.
- Duckworth, A. L., Peterson, C., Matthews, M., & Kelly, D. (2007). Grit: Perseverance and passion for longterm goals. *Journal of Personality and Social Psychology*, 92, 1087–1101.
- Eccles, J. S., & Roeser, R. W. (2010). An ecological view of schools and development. In J. L. Meece & J. S. Eccles (Eds.), Handbook of research on schools, schooling, and human development (pp. 6–22). New York: Routledge.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, 21, 225–241.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59, 117–142.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59–109.
- Gettinger, M., & Walter, M. J. (2012). Classroom strategies to enhance academic engaged time. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement (pp. 653–673). New York: Springer.
- Griffiths, A.-J., Lilles, E., Furlong, M., & Sidwha, J. (2012). The relations of adolescent student engagement with troubling and high-risk behaviors. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement (pp. 563–584). New York: Springer.
- Guthrie, J. T., Wigfield, A., & You, W. (2012). Instructional contexts for engagement and achievement in reading. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 601–634). New York: Springer.
- Heckman, J. J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 312, 1900–1902.
- Janosz, M., Archambault, I., Morizot, J., & Pagani, L. (2008). School engagement trajectories and their differential predictive relations to dropout. *Journal of Social Issues*, 64, 21–40.
- Janosz, M., LeBlanc, M., Boulerice, B., & Tremblay, R. E. (2000). Predicting types of school dropouts: A typological

- approach with two longitudinal samples. Journal of Educational Psychology, 92, 171–190.
- Jerome, E. M., Hamre, B. K., & Pianta, R. C. (2009). Teacher—child relationships from kindergarten to sixth grade: Early childhood predictors of teacherperceived conflict and closeness. Social Development, *18*, 915–945.
- Jessor, R., & Jessor, S. L. (1977). Problem behavior and psychosocial development: A longitudinal study of youth. New York: Academic.
- Lacourse, E., Côté, S., Nagin, D. S., Vitaro, F., Brendgen, M., & Tremblay, R. E. (2002). A longitudinal-experimental approach to testing theories of antisocial behavior development. Development Psychopathology, 14, 909-924.
- Muennig, P. (2007). How education produces health: A hypothetical framework. Teachers College Record, 109, 1-17.
- Muthén, B. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. Kaplan (Ed.), Handbook of quantitative methodology for the social sciences (pp. 345–368). Newbury Park, CA: Sage.
- Muthén, L. K., & Muthén, B. O. (2008). Mplus user's guide. Los Angeles, CA: Muthén & Muthén.
- Reschly, A., & Christenson, S. L. (2006). Research leading to a predictive model of dropout and completion among students with mild disabilities and the role of student engagement. Remedial and Special Education, 27, 276–292.
- Rotermund, S. L. (2010). The role of psychological antecedents and student engagement in a process model of high school dropout. Doctoral dissertation. Gevirtz Graduate School of Education, University of California, Santa Barbara, CA.
- Rumberger, R. W., & Lim, S. A. (2008). Why students drop out of school: A review of 25 years of research. Santa Barbara, CA: California Dropout Research Project. Retrieved December 20, 2010, from, http:// cdrp.ucsb.edu/dropouts/pubs_reports.htm#15

- Rumberger, R. W., & Rotermund, S. (2012). The relation between engagement and high school dropout. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement (pp. 491-513). New York: Springer.
- Ryan, R. M., & Deci, E. L. (2009). Promoting self-determined school engagement: Motivation, learning, and well-being. In K. Wenzel & A. Wigfield (Eds.), Handbook of motivation at school (pp. 171-195). New York: Routledge/Taylor & Francis Group.
- Skinner, E., Kinderman, T., & Furrer, C. (2009). A motivational perspective on engagement and disaffection: Conceptualization and assessment of children's behavioral and emotional participation in academic activities in the classroom. Educational and Psychological Measurement, 69, 493-525.
- Tinto, V. (1994). Leaving college: Rethinking the causes and cures for student attrition (2nd ed.). Chicago: University of Chicago Press.
- Wehlage, G. G., Rutter, R. A., Smith, G. A., Lesko, N., & Fernandez, R. R. (1989). Reducing the risk: Schools as communities of support. New York: Falmer Press.
- Wentzel, K. R., & Looney, L. (2007). Socialization in school settings. In J. E Grusec, & P. D. Hastings (Eds.), Handbook of socialization: Theory and research (pp. 382-403). New York: Guilford Press.
- Wentzel, K. R., & Wigfield, A. (Eds.). (2009). Handbook of motivation at school. New York: Routledge.
- Wolters, C. A., & Taylor, D. J. (2012). A self-regulated learning perspective on student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement (pp. 635–651). New York: Springer.
- Wylie, C., & Hodgen, E. (2012). Trajectories and patterns of student engagement: Evidences form a longitudinal study. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement (pp. 585-599). New York: Springer.