Canadian Adult Education: The Educator's Guide to School-Based Interventions on Independent

Learning

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Abstract

Students do not always know how or when to ask for help and they may lack the skills to initiate work on their own without guidance, otherwise known as "independent learning". Independent learning is a skill that leads to school success and it is proposed that improvements of independent learning would also reduce the engagement of risky behaviors. Therefore, the proposed research examined whether implementing a novel intervention on independent learning would improve independent learning strategies, overall academic performance, and reduce risky behaviors, among adult education students. Students receiving the intervention were compared to a control group receiving no intervention. No improvements of independent learning were observed after the intervention. In addition, the results revealed no improvements in academic performance in both groups at post-test. However, significant interaction effects in academic performance were observed between the groups. Finally, risky behaviors significantly increased in both groups. This perhaps indicates that the continued exposure to unhealthy environments may contribute to the initiation of risky behaviors among adult education students. Therefore, the results are explored and are discussed in relation to the current intervention.

Keywords: Self-regulated learning; Academic performance; Adult education; Intervention; Research to practice.

Résumé

Les élèves ne savent pas toujours comment et quand demander de l'aide et ils peuvent ne pas avoir les compétences nécessaires pour entreprendre des travaux eux-mêmes s'ils n'obtiennent pas de l'aide, autrement connu comme «l'apprentissage par autorégulation». L'apprentissage par autorégulation est une compétence qui mène à la réussite scolaire et il est suggéré que l'amélioration de l'apprentissage indépendant permettrait également de réduire le développement de comportements à risque. Par conséquent, la recherche proposée a évaluée si la mise en œuvre d'une nouvelle intervention sur l'apprentissage indépendant améliorerait les stratégies d'apprentissage indépendant, le rendement scolaire en général et la réduction des comportements à risque, et ce chez les élèves adultes. Les étudiants recevant l'intervention ont été comparés à un groupe témoin ne recevant aucune intervention. Aucune amélioration de l'apprentissage par autorégulation n'a été observée après l'intervention. De plus, les résultats n'ont révélés aucune amélioration dans le rendement scolaire chez les deux groupes au post-test. Cependant, les effets d'interaction sont significatifs en ce qui concerne le rendement scolaire observé entre les groupes. Enfin, les comportements à risque ont significativement augmentés dans les deux groupes. Cela suggère que l'exposition continue à un environnement malsain peut contribuer à l'initiation des comportements à risque chez les élèves adultes. Par conséquent, les résultats de l'intervention actuelle sont explorés et discutés.

Mots-clé: Processus d'apprentissage par autorégulation; Performance académique; Éducation des adultes; Intervention.

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Canadian Adult Education: The Educator's Guide to Effective School-Based Interventions on Independent Learning

Academic performance is multifaceted and is influenced by the ability to learn independently, attend to and focus on tasks, be persistent, and regulate temperament and emotions (Al-Hendawi, 2012). Moreover, motivation, peer-relationships, and socioeconomic status, are additional factors that have been associated with school performance (Effeney, Carroll, & Bahr, 2013). However, some students, independent of these factors, still struggle with basic school work, particularly when it involves completing assignments on their own (Chang, Wall, Tare, Golonka, & Vatz, 2014). There are many students who do well within the classroom but are unable to maintain the same performance at home (Chang et al., 2014). Chang et al. (2014) found that a negative attitude toward homework was associated with poor academic performance, whereas positive attitudes toward homework were linked to greater performance. Although this may be an important factor, students with positive outlooks still have difficulty engaging in school work. This problem transcends previously studied factors and is a result of lacking the skills to initiate work without guidance, otherwise known as self-regulated or independent learning (Zimmerman, 2002). As students progress through high school and into higher education, subject matter becomes more complex and homework assignments become more demanding. Accordingly, independent learning becomes increasingly important and students develop strategies to become academically independent and self-sufficient. The problem, however, is that school-based interventions are commonly designed to improve independent learning and academic performance among typically achieving students (Zimmerman, 2002). Research in the effects of these interventions across at-risk students who engage in risky behaviors is lacking (Auerbach et al., 2010). As such, the proposed research will

examine whether implementing a novel intervention in adult education school classrooms will improve independent learning strategies, increase overall academic performance, and reduce risky behaviors when compared to a control group receiving no intervention.

Literature Review

Bandura (1991) introduced the term self-regulated learning (SRL or independent learning interchangeable) which refers to self-directive processes and self-beliefs. These processes include self-regulatory strategies such as planning, goal setting, behavioral self-motivation, cognitive self-motivation, time management, and concentration (Effeney, Carroll, & Bahr, 2013; Shell & Soh, 2013; Schmitz & Wiese, 2006). Self-regulated students are more engaged in their learning, they commonly sit toward the front of the classroom, voluntarily offer answers to questions, and seek out additional resources when needed to master content (Zumbrunn, Tadlock, & Roberts, 2011). Self-regulated learning is not only a result of mental ability or academic performance, it is also a process through which self-motivation, self-evaluation, and self-monitoring, reinforces healthy autonomous habits which may improve academic performance (Zimmerman, 2008). In fact, self-regulated learners perform better on academic tests and on measures of students' performance and achievement (Zimmerman, 2008). The problem is that few students naturally do this well and teachers do not know how to effectively implement self-regulated learning strategies into their classroom because it is not part of their curriculum (Perry, Vandekamp, Mercer, & Nordby, 2002).

Learning Skills

So, how do we encourage students to practice independent learning strategies if their instruction does not include the appropriate activities and their teachers are not trained to teach these techniques? By implementing interventions on meta-academic skills. The current study defines meta-academic skills as the skills that are not reading, writing, mathematics, or other substantively cognitive tasks, but rather skills pertaining to emotion regulation, executive functioning, independent learning, school adaptation and social skills. Meta-academic skills are

non-academic skills that aim to help students develop resilient skills against risk factors, such as poor social skills, dropout, and mental illness that lead to academic failure. In addition, metaacademic skills are necessary for success in school and are supposed to be cultivated during adolescence. However, these skills are not formally taught by high school teachers or formally learned through any specific curriculum, during this critical period. Therefore, when students reach adult education, they are unprepared and lack the fundamental skills to continue higher education, which leads to dropout, as currently examined among Canadian adult education students (Myers, 2006). Fortunately, there are researchers who train teachers in independent learning and who are determined to measure its effectiveness within experimental conditions among students with self-regulatory practices that the teachers model for them. Research suggests that creating classroom contexts for self-regulation and implementing school-based lessons are valuable approaches to learning that benefit a student's overall academic performance (Paris & Paris, 2001). Schmitz and Perels (2011) conducted a study on implementing selfregulated learning strategies to improve self-regulated learning among adolescent-students in Germany. The authors used standardized diaries as a self-monitoring tool to support the students' self-regulatory behaviors for a period of 49 days. The results of the pre-post experimental-control group comparison indicate group interactions for self-regulation and math tests and the diary variables showed a positive linear trend for self-regulation (Schmitz & Perels, 2011). Specifically, diary use is one of many self-monitoring tools used for SRL that show marked improvements in academic performance. This is consistent with Perels, Dignath, and Schmitz (2009) who used a pretest/post-test-control-group design study to evaluate the effectiveness of 9 lessons on self-regulation among adolescents. The results showed an increase in self-regulation competencies and mathematical performance among students in the experimental (SRL)

conditions. Despite variations in the SRL techniques used, these interventions have produced similar outcomes. Some studies have targeted academic performance by implementing goaloriented lessons that improve self-regulation (Gollwitzer & Sheeran, 2006), while others have examined instructional planning around assessment and feedback in relation to self-regulated learning (Frasier, Gese, & Vanek, 2014). The effectiveness of school-based SRL interventions across these studies support the premise that self-regulated learning is related to academic performance. However, because there is a growing body of empirical evidence in educational psychology that account for varied increases of academic performance, it is difficult to identify the specific factors that overrule self-regulation's effectiveness within the classroom context. Furthermore, the bulk of SRL research is heterogeneous with large variations in study design, academic levels, settings, outcome measures, and ages. There is an urgent need to better define future SRL research so as to measure standardized improvements in overall academic performance among students of specific age-groups, in specific settings, using robust study designs and methodology. For instance, research should extend the use of SRL strategies to assess the effectiveness of academic interventions in specific populations, such as students who engage in risky behaviors (Zimmerman, 2002).

Risky Behaviors

Risky behaviors have been found to decrease as students reach higher academic levels as their needs for instant gratification declines (de Water, Cillessen, & Scheres, 2014). However, Canadian youth between the ages of 15-24 years-old are an estimated 2 times more likely to engage in risky behaviors compared to adults over the age of 25 (Edgerton, Melnyk & Roberts, 2014). Furthermore, the mean ages for adult education programs in Quebec are 16-24 and so, Canadian adult education students may have more opportunities for risky behaviors and as such, are more likely to be at-risk for academic failure. This is where meta-academic skills benefit adult education students. These skills are not explicitly taught in schools, but are imperative for success because they act as protective factors against school deterrents, such as the engagement in risky behaviors (Auerbach et al., 2010). Risky behaviors, such as alcohol use and unprotected sex, may provide adolescents with temporary relief from negative affective states. However, individuals who are negatively reinforced due to the short-term relief risky behaviors provide, may have an increased propensity to continue using risky behaviors in the future. These maladaptive strategies to cope with stressful events or to adhere to peers may have profound effects that interfere with the individuals' functioning in school (Massey, Garnefski, & Gebhardt, 2009). In response to increased risky behaviors among adolescents, school-based interventions were designed to target learning skill deficits that reduce risky behaviors (Auerbach et al., 2010). Because it is typically assumed that these skills are self-acquired, and therefore are not taught, students often engage in risky behaviors and develop maladaptive survival skills such as skipping class, cheating, becoming dependent, and other strategies that lead to problems. The aim is to reduce or eliminate these behaviors by teaching students adaptive strategies using evidence-based interventions. In fact, school-based interventions have been shown to increase academic performance (Zimmerman, 2008). However, with research on school-based interventions still in its infancy, it will be important for future research to extend school-based interventions across adolescent populations who are more resistant to interventions (at-risk groups), over longer periods of time (when students' motivation is expected to wane), to assess the long-term effects of these interventions (foster life-long learners), and determine the optimal times of intervention (high school versus adult education).

Adult Learning

The field of adult education was proposed by Malcolm Knowles, in an attempt to distinguish it from pre-adult schooling. The concept is called andragogy and is defined as "the art and science of helping adults learn" (Knowles, 1980). The five assumptions underlying andragogy describe the adult learner as someone who has an independent self-concept and who can direct his or her own learning, has accumulated a reservoir of life experiences that is a rich resource for learning, has learning needs closely related to changing social roles, is problemcentered and interested in immediate application of knowledge, and is motivated to learn by internal rather than external factors (Merriam, 2001). One of the concepts we need to draw from the andragogical theory is that self-regulated learning is imperative for success among adult education students. Self-regulated learning requires adult education students to take ownership of their own learning, allowing them to learn effectively while juggling other aspects of their life. More specifically, SRL strategies such as planning, monitoring and managing learning are determinants of academic success and are imperative to lifelong learning (Boekaerts, 1997). Furthermore, as they mature, it is expected that adult education students naturally become more independent and self-regulated, contributing to greater school performance. However, Canadian adult education students are still at an increased risk of dropout and academic failure (Myers, 2006). Thus, it is proposed that adult learners in Quebec lack independent study skills. In fact, little research has been conducted on SRL or independent learning in adult education contexts (Berger, 2012). Accordingly, research on SRL in adult education schools is still in its infancy and we do not know whether and how students in adult education show SRL behaviors in schools. Therefore, the present study seeks to add and improve upon the growing number of studies that demonstrate overall positive but inconclusive findings about whether independent

learning training improves academic performance among at-risk populations (Zimmerman, 2008) and whether targeting learning skill deficits will help reduce risky behaviors (Auerbach et al., 2010). If the findings can establish the effectiveness of independent learning among adult education students using robust research methodology and well-defined outcomes, it may motivate other researchers to adopt similar approaches and may provide fresh insight into ways of improving quality of instruction for these more difficult populations.

Research Questions

These observations have been used to support and formulate testable research questions:

- 1. To what extent will there be changes in independent learning post-intervention compared to pre-intervention?
- 2. To what extent do students in the intervention group differ from students in the control group in independent learning?
- 3. To what extent do risky behaviors change post-intervention compared to preintervention?
- 4. To what extent do students in the intervention group differ from students in the control group in risky behaviors?
- 5. Last, to what extent do academic grades and academic competence differ between groups, at pre- and post-intervention?

Academic competence is defined as specific skill domains contributing to two dimensions of the construct: academic skills and academic enablers (DiPerna & Elliott, 2000). Academic Skills are basic and complex skills that are central parts of academic curricula in schools, such as reading, mathematics, and critical thinking. On the other hand, Academic Enablers are attitudes and behaviors that allow students to benefit from classroom instruction, such as interpersonal skills, academic motivation, study skills, and classroom engagement.

Method

Participants

Students. Participants included 115 students at pre-test data collection. However, there was a 65.22% participant attrition at post-test due to school dropout, absence, or early completion of courses. A t-test comparison analysis was conducted to determine the differences between the participants who dropped out and those who did not drop out (see Results). Thus, 40 active participants completed pre- and post-intervention questions. Of those, 50% were males between the ages of 17 and 42 (M = 20.771, SD = 4.953), recruited from four classrooms in one English-language adult education school in the Greater Montreal Area. The sample was consisted of Caucasian (40%) and reported South-Asian (17.5%), Black-Canadian (12.5%), Filipino (7.5%), Arab (2.5%), Latin-American (2.5%), Native (2.5%) or Chinese (2.5%) cultural ethnicity (see Table 1). The majority of participants reported English (62.5%) or French (15%) as their mother tongue, while 7.5% reported "other" as their first language. Students from the adult education school were chosen because the effectiveness of in-school intervention for adult education students is very limited. Last, students in the sample were assigned either to an intervention (N = 17) or control (N = 23) group through convenience sampling.

Exclusion criteria. An exclusion criterion for language was attained whereby having participants respond to whether they spoke English fluently or not. Any "no" answers conservatively indicated participants would not be able to fully engage in the intervention sessions and they were excluded from data analyses.

Teachers. Five teachers who taught Math, Biology, and History were recruited to participate in the study. Three teachers from Math and Biology classrooms expressed interest in implementing model lesson plans during the school day as part of the general curriculum and

were assigned to the intervention groups. After two weeks of lesson plan implementation, one teacher dropped out of the study due to a large student dropout in their classroom. Two other teachers from Math and History classrooms who were not interested in implementing the program served as the control groups.

Procedure

Teachers and principals from approved school boards were contacted to obtain permission to train teachers in independent learning and to obtain permission to collect data during class time. Informed consent forms were handed out during class time by teachers. The consent forms were completed before starting the study. The present study has been approved by the ethical review committee of McGill University (UH2006-063-2).

Two teachers were trained in self-regulated learning prior to beginning the study. They were then instructed to implement a 10-week intervention program on independent learning and they were given activity sheets to be handed out to their students in their respective classrooms. The intervention groups partook in the 10-week program. Students in the intervention groups attended a series of 8 sessions over the course of 10 weeks (i.e., one session per week, with an extra week at the beginning and at the end to administer standardized tests). Each session lasted approximately 20 minutes. All sessions were scheduled during the regular school day; usually Thursday mornings. The comparison groups attended their regular school program only.

Intervention

The intervention program entitled, McGill Learning Skills (MLS) was developed by the principal investigator (Mark-Damyan Edwards) based on the theoretical construct of self-regulated learning and school-based implementation intentions (Gollwitzer, & Sheeran, 2006; Paris & Paris, 2001). Increasing self-regulated learning has been shown to increase self-regulated

strategies and improve academic performance among students (Zimmerman, 2008). The MLS is a school-based intervention which aims to increase self-regulated learning and academic performance. It consists of a series of 10 sessions including an introductory and concluding session. During the introductory session, students were introduced to the concept of homework responsibility and of monitoring homework using journals/diaries. The concluding session served as a review period of all the strategies learned over the course of the intervention with a brief introduction on group work. The remaining sessions each focused on strategies that foster greater self-regulated learning: organization, creating a study space, time management, planning, goal setting, attention and concentration, seeking help, and self-motivation (refer to *Lesson Plans* in Appendices).

Session 1. This session was used to collect pre- test data from the consenting students. Consenting students completed a demographic questionnaire, Risky Behavior Questionnaire (RBQ-A), Academic Competence scale (ACES), and the Meta-Academic Questionnaire (MAQ). These measures are described following the procedure section. Researchers also provided the teachers with journals for each student which contained the required material and worksheets to be used in the lessons. Journals of consenting students were collected at the end of the intervention.

Session 2. Teachers distributed the journals to the class and delivered the lesson material. The first lesson introduced concepts of record keeping using a journal, understanding the benefits of school work, and introducing the idea of student responsibility when completing work. The focus of these lessons was to allow the students to consider these concepts for the first time, and recognize their own potential to influence and change them. Worksheets and discussions reinforced the principle ideas behind these concepts. **Session 3.** The second lesson introduced study space and learning types. The study space strategy taught was identifying effective places in which students learn. Students also described their own study space and described how they can modify or change them. In addition, students were asked to identify the type of learning that suits them best, and share ideas with classmates.

Session 4. The third lesson introduced the concept of creating a personal schedule. The schedule strategies taught were creating a personal schedule to complete schoolwork, organizing non-academic commitments, and self-monitoring. Students provided examples of their schedule or routine before and after school (weekday and weekends), identified the benefits of having an organized schedule, and were then asked to create new schedules using the calendar worksheet provided to them.

Session 5. This lesson introduced the concept of using the agenda to foster organization and planning. The agenda strategies taught were: writing down tasks, completing tasks, and checkmark appropriate tasks. Students discussed the benefits of organizing schoolwork, how to use the agenda, and becoming aware of added responsibilities.

Session 6. The fifth lesson was an extension of the previous lesson and further introduced the concept of planning. The planning strategies taught were: writing tasks in agendas, prioritizing tasks, breaking down tasks into smaller parts, and checkmark completed tasks. Teacher and students referred to two mock cases outlined in the lesson plan worksheets and worked together to plan study schedules for the cases.

Session 7. This lesson was used as a recap of some of the self-regulated learning strategies the students were taught. The learning strategies included in this lesson were: checking the materials needed, prioritizing materials, dividing time, removing distractors, setting goals, using manipulatives, self-talk, and monitoring behaviors.

Session 8. This lesson introduced the concept of attention to detail and concentration. The attention and concentration strategies taught were: note-taking, using verbal cues, minimizing distractors, setting reminders, reviewing answers, and systematic relaxation techniques. Students participated in a systematic relaxation activity: tensing and releasing fists (muscle relaxation) and closing eyes and listening to heart beat (anxiety reduction).

Session 9. Lesson 8 introduced the concept of independent initiation and asking for help. The help strategies taught were: completing as much work as possible, taking initiative to do research on difficult questions, guessing answers, rating their ability to complete a task, calling classmates or siblings to look over tasks, and asking a teacher for help.

Session 10. Researchers collected post-test data from consenting students. Students were asked to complete the RBQ-A, ACES, RSCA, and the MAQ. Teachers returned the completed Journals, worksheets, and a feedback handout to the Principle Investigator.

Measures

Academic Performance. Academic performance was measured by collecting data on student performance on actual classroom tasks and assignments and by collecting data on the Academic Competence Evaluation Scales. The three general categories of tasks and assignments included: in-class work and homework, essays and reports, and quizzes and tests. Students' performance on these three types of assignments was collected at pre-test data collection and then again at post-test data collection where students' performance was averaged throughout the 10-week intervention to generate one summary score.

Academic Competence Evaluation Scales (ACES; DiPerna & Elliott, 2000). This standardized, functional assessment tool is an effective means of determining how the student

functions in the classroom and measures their academic competence. This scale is made up of 68 items scored on a 5-point Likert scale, ranging from '*never*' to '*almost always*'. Academic competence is divided into two domains: Academic Skills or Academic Enablers. Academic Skills are basic and complex skills that are central part of academic curricula in schools, such as Reading, Mathematics, and Critical Thinking. On the other hand, Academic Enablers are attitudes and behaviors that allow students to benefit from classroom instruction, such as interpersonal skills, academic motivation, study skills, and classroom engagement. Internal Consistency estimates for the Academic Skills domain is $\alpha = .94$ whereas internal consistency for Academic Enablers is $\alpha = .96$. Overall, higher scores indicate greater academic competence.

Demographic Survey. The Demographic survey was created by the McGill Connections Lab to quickly and easily acquire demographic information from the students. There are a total of 18 questions. The following information was acquired using this survey: Name, date of birth, gender, parent's current marital status, description of living situation, number of people in household, parents level of education, parents employment status, language, country of birth, ethnic background, work status, and approximate overall grade in school (refer to *Demographic Questionnaire* in Appendices).

Risky Behaviors Questionnaire – **Adolescent (RBQ-A; Auerbach & Gardiner, 2012)**. The RBQ-A is a 20 item self-report measure that assesses the frequency of engagement in risky behaviors. Example of questions include: "Have you bullied or threatened a peer(s)?", "Have you destroyed property (other than your own)?", and "Have you used illegal drugs?" Subscales assessed engagement in the following subgroups of behaviors: (2) unsafe sexual practices; (2) aggressive and/or violent behaviors; (3) rule-breaking; (4) dangerous, destructive, and/or illegal behaviors; (5) self-injurious behaviors; and (6) alcohol and/or drug use. Respondents reported

their engagement in such behaviors over the past month using the following scale: *never*, *1 time per month*, *2 to 4 times per month*, *2 to 3 times per week*, *or 4 times or more per week*. Overall, higher scores indicate greater risky behaviors. Cronbach's alpha reliability estimates range from .81 to .84 across administrations, indicating strong internal consistency.

Meta-Academic Questionnaire (MAQ; Clyde & Shaw, 2015). This questionnaire was developed by the McGill Connections Lab to determine if students benefit from provided lessons and workshops (refer to *Meta-Academic Questionnaire* in Appendices). Students are assessed on a number of concepts and skills, which include: theories of intelligence, effort, academic selfconcept, and persistence and goal setting. It is a 36-item measure scored on a 5-point Likert scale ranging from '*strongly disagree*' to '*strongly agree*'. The 36 items are summed to obtain a total score for independent learning. Overall, higher scores indicated greater independent learning. Cronbach's alpha reliability is .88 across administrations, indicating strong internal consistency.

Data Analysis

A repeated measures ANOVA analysis was conducted using the Statistical Package for the Social Sciences (SPSS version 21) at the p < .05 significance level to identify differences between the intervention groups and the control groups on the RBQ-A, ACES, MAQ, and academic performance scores, before and after the intervention. Group identification (intervention or control) was entered as the predictor variable. Academic performance, risky behaviors, self-regulated learning, and academic competence were entered as outcome variables. Furthermore, a t-test analysis was conducted to identify pre-test differences in academic performance, RBQ-A, ACES, and the MAQ, between the participants who dropped out and those who did not drop out.

Results

Data Integrity

Prior to testing the hypothesis, a power analysis was conducted with G*Power to determine an acceptable sample size for adequate power (Faul, Erdfelder, Lang, & Buchner, 2007). The assumed population effect size for a repeated measures, within-between interaction ANOVA, was r = .25, N = 36; power $(1 - \beta) = .95$; $\alpha = .05$. Then, a missing data analysis was performed to ensure the assumptions for normality were met. Missing values over 5% included the Risky Behavior Questionnaire (RBQ-A) at pre-test (20%) and the Meta-Academic Questionnaire at both pre-test (15%) and post-test (10%). Given the small sample size (N = 40), an Expectation-Maximization (EM) imputation method was performed on the dataset. Next, an analysis of descriptive characteristics measuring the mean, standard deviation, skewness, kurtosis, and standard error was used for the ACES, the RBQ-A, and the MAQ (see Table 1). An absolute value cut-off score of z = 3.2 for skewness was used to determine the normality of the distribution for each variables and were calculated using Microsoft Excel (statistic/SD error). Variables that were not normally distributed included: age and RBQ-A at pre-test (see Table 1). Therefore, transformations were conducted on the RBQ-A at pre-test.

An independent samples t-test was conducted to compare pre-test means and standard deviations of academic performance, RBQ-A, ACES, and MAQ, of the participants who dropped out and those who did not drop out. The results reveal no significant differences between participants who dropped out (M = 66.79, SD = 17.524) and participants who did not drop out (M = 69.23, SD = 19.532) at-pretest in academic performance, t = .641, p = .523. The results also reveal no significant differences between participants who dropped out and those who did not drop out at pre-test in self-regulated learning (MAQ), t = .261, p = .794. In contrast, significant

differences were found between participants who dropped out (M = 13.789, SD = 10.932) and participants who did not drop out (M = 8.375, SD = 7.737) at-pretest in risky behaviors, t = -2.527, p = .013. This indicates that those who dropped out were more likely to engage in risky behaviors compared to those who remained in school. In addition, significant differences were observed between participants who dropped out (M = 108.000, SD = 18.175) and participants who did not drop out (M = 84.925, SD = 46.088) at-pretest in reported academic skills, t = -3.764, p < .001. Last, significant differences were observed between participants who dropped out (M = 138.592, SD = 26.204) and participants who did not drop out (M = 113.125, SD =59.792) at-pretest in reported academic enablers, t = -3.106, p < .001.

A one-way repeated measured analysis of variance (ANOVA) was conducted to compare the effect of (IV) group identification on the (DV) participants' academic performance, risky behaviors, academic competence, and their independent learning. Participants were divided into two groups (control and intervention) based on their participation in the McGill Learning Skills (MLS) program (N = 40). Furthermore, preliminary analysis was performed to ensure that all assumptions for the test were met, including spherecity, linearity, and homogeneity of covariance.

Research Question 1

Equality of Covariance was met between the control group and the treatment group for independent learning (i.e., Meta-Academic Questionnaire; MAQ), p = .110. Both groups combined did not increase significantly in the MAQ from pre-test to post-test, F = 3.083, p = .087, $\eta^2 = .075$, $\beta = .402$.

Research Question 2

There was no significant interaction between the two groups, F = 2.998, p = .092, $\eta^2 = .073$, $\beta = .393$. These results suggest that the control group's reports of their Meta-Academic skills did not significantly differ from the intervention group.

Research Question 3

The results indicate that the covariance matrix is the same between the control group and the treatment group for the Risky Behaviors Questionnaire (RBQ-A), given Box's test of Equality of Covariance, p = .850. Contrary to the hypothesis, control group ($M_{pre} = 9.054$, $M_{post} = 12.087$) and the intervention group ($M_{pre} = 7.456$, $M_{post} = 8.706$) combined significantly increased in RBQ scores from pre-test to post-test, F = 40.067, p < .001, $\eta^2 = .513$, $\beta = 1.000$.

Research Question 4

There were no significant interactions between the control group and the intervention groups in the RBQ-A, F = 1.572, p = .218, $\eta^2 = .040$, $\beta = .231$. These results suggest that the control group's incidences of risky behaviors did not significantly differ than the intervention group, or vice versa.

Research Question 5

The results indicate that the covariance matrix is the same between the control group and the treatment group for Academic Grades, given Box's test of Equality of Covariance, p = .177. Both groups combined did not significantly improve or reduce in academic scores from pre-test to post-test, F = 1.711, p = .199, $\eta^2 = .043$, $\beta = .247$. Furthermore, there was an interaction effect between groups, whereas students in the intervention group reported overall greater academic grades ($M_{pre} = 76.00$, $M_{post} = 74.176$) than the control group ($M_{pre} = 64.22$, $M_{post} = 70.696$) at pretest and post-test, F = 5.442, p = .025, $\eta^2 = .125$, $\beta = .623$. However, tests of between-subjects effects revealed non-significant findings, F = 1.864, p = .180, $\eta^2 = .047$, $\beta = .265$. To determine whether the groups differed at pre-test, a t-test was run to compare academic performance in the control and experimental groups. The results revealed the intervention group, M = 76.00, SD =22.383, did not significantly differ from the control group, M = 64.22, SD = 15.820, at pre-test; t= 1.953, p = .058. This indicates that the effect of treatment differed as a function of time.

Next, Equality of Covariance was met between the control group and the treatment group for the Academic Skills in the Academic Competency Scale for Children and Adolescents (ACES), p = .096. Furthermore, both groups combined increased significantly for Academic Skills from pre-test to post-test, Wilk's Lambda = .824, F(1, 38) = 8.100, p = .007, $\eta^2 = .176$, $\beta =$.792. However, there was no significant difference between the two groups, Wilk's Lambda = .971, F(1, 38) = 1.132, p = .294, $\eta^2 = .029$, $\beta = .179$. These results suggest that the control group's reports of their Academic Skills did not significantly increase more than the intervention group. Next, Equality of Covariance was met between the control group and the treatment group for the Academic Enablers in the ACES, p = .251. Both groups combined increased significantly for Academic Enablers from pre-test to post-test, F = 150.818, p < .001, $\eta^2 = .799$, $\beta = 1.000$. However, there was no significant interaction between the two groups, F = 2.442, p = .126, $\eta^2 =$.060, $\beta = .331$. These results suggest that the control group is reports of Academic Enablers did not significantly increase more than the intervention group.

Discussion

Academic performance is a multifaceted construct that is influenced by multiple factors, such as independent learning, academic competence, and risky behaviors (Al-Hendawi, 2012; Auerbach, 2010, Zimmerman, 2008). Therefore, researchers develop school-based interventions with the aim of improving factors designed to improve school functioning. Unfortunately, there are several issues with the feasibility and effectiveness of improving skills that are non-cognitive in nature (i.e., not intellectual, reading, written language, or mathematics in nature) that are both essential to student success and complementary to effective instruction. Specifically, there is a growing body of empirical evidence in educational psychology that account for varied increases of academic performance, therefore, it is difficult to identify the specific factors that overrule one factor from another's effectiveness within the classroom context (Frasier, Gese, & Vanek, 2014). Further, the efficacy of a consultation model, wherein school teachers implement the model lesson plans during the school day as part of the general curriculum, needs to be evaluated. The bulk of self-regulated learning research is heterogeneous with large variations in study design, academic levels, settings, outcome measures, ages, and lesson implementation instruction (Travers, Sheckley, & Bell, 2003). Therefore, there is a need to better define future research so as to measure standardized improvements in overall academic performance among students of specific age-groups, in specific settings, and with different teachers, using robust study designs and methodology.

Independent Learning

The major aim of the present study was to examine whether independent learning or selfregulated learning (SRL) would improve among at-risk populations and then to examine those changes between groups. Based on the results, no reported changes in independent learning were shown after the intervention as obtained by the self-report questionnaires. Furthermore, compared to a control group receiving no intervention, no improvements in independent learning were obtained. There was a large attrition rate in the current study and the results indicate that there were no significant differences in independent learning between those participants who dropped out and those who did not drop out. This is consistent with previous findings that have stated that self-regulated learning strategies are determinants of academic success and enrollment (Boekaerts, 1997). The students selected for the current study are at a higher risk of academic failure and dropout and are already lacking the meta-academic skills necessary for success. Given that self-regulated learning requires adult education students to take ownership of their own learning, the current intervention was designed to allow students to learn effectively while juggling other aspects of their life. However, the intervention was not successful in doing so with the participants who remained in the study. Perhaps those students who dropped out would have benefitted from the intervention, but it is too late to determine. Furthermore, perhaps the intervention did not work due to external factors that deterred student's abilities to learn strategies. Factors include risky behaviors, which are detrimental to learning and academic success (Auerbach et al., 2010). A summary of risky behaviors is provided below. With research on self-regulated learning still in its infancy, this study may provide a starting point for future research to improve self-regulated learning in adult education programs while controlling for attrition and other factors that may be detrimental to the learning process.

Risky Behaviors

Adult students continuously explore their newly-acquired independence with a majority often partaking in a wide range of risky-behaviors, such as frequent and excessive alcohol use, illegal drug use, cigarette smoking, and gambling (St-Pierre, Temcheff, Gupta, Derevensky, &

Paskus, 2013). Additionally, Canadian youth between the ages of 15-24 years-old are an estimated 2 times more likely to engage in risky behaviors compared to adults over the age of 25 (Edgerton, Melnyk & Roberts, 2014). In light of the current adult education programs in Quebec, Canada, which commonly enroll dropout or returning students between the ages of 16-24, research on the effectiveness of interventions designed to increase independent learning and academic performance among these populations is non-existent. Furthermore, since executive functions, social skills, learning and language skills are imperative for academic success and act as protective factors against risky behaviors (Claro, Boulanger, & Shaw, 2015), the current study analysed whether the intervention designed to increase independent learning and academic performance, would in turn, significantly reduce risky behaviors.

Overall, the results show that the school-based intervention program (i.e., MLS) for atrisk adult education students did not reduce engagement in risky behaviors. Contrary to the initial hypothesis, risky behaviors significantly increased from pre- to post-test in both groups. Risky behaviors have been found to decrease as students reach higher academic levels as their needs for instant gratification declines (de Water, Cillessen, & Scheres, 2014). However, in adult education, it is proposed that students have more opportunities for risky behaviors and as such, are more likely to be at-risk for academic failure. Perhaps with longer exposure to this type of environment, adult education students become more habituated to unhealthy environments or feel more pressured to engage in risky behaviors. In support of this, Pinto and Mansfield (2011) have demonstrated that continued exposure to risky behaviors is associated with greater risky behavior initiation. Last, an alternative explanation is that the results revealed participants who dropped out significantly differed in reported risky behaviors than those who did not drop out. Due to the large attrition rate, it is possible that the selective attrition influenced the current results. Therefore, the results on risky behaviors should be interpreted with caution. Accordingly, with the increasing claim among researchers that self-regulated-driven interventions can contribute to the current discourse on independent learning and excelled academic performance (Travers et al., 2003; Zimmerman, 2008), the results of this study warrant further investigation regarding the role of risky behaviors in school functioning and may encourage further longitudinal study of the links and their directions between evidence-based interventions aimed to reduce risky behaviors among Canadian adult education students.

Academic Performance

Another aim of the current study was to observe changes in academic performance after the intervention. No significant changes in academic grades were observed post-intervention. However, there was an interaction effect between groups, whereas students in the intervention group reported overall greater academic grades then the control group. As described in the limitations below, the effect of treatment differed as a function of time possibly due to the convenience sampling that was conducted to recruit participants. In addition, both groups combined increased significantly in academic competence scores from pre-test to post-test. However, there was no significant difference between the intervention and control groups. Thus, the observed improvements in self-reported academic skills and enablers may be attributed to quality instruction by the teachers. The results do not support academic competence as a function of observable improvements in overall Academic Performance. This is consistent with the empirical literature where other researchers have defined the construct somewhat inconsistently. For example, several researchers have used academic competence interchangeable with terms such as academic performance and academic ability (DiPerna & Elliott, 2000). Therefore, interpretations of the present findings should be made cautiously.

Limitations

Several limitations of the current study should be noted. First, the findings document errors in sampling. The results for the comparison of means between participants who dropped out and those who did not drop out suggest that there were significant differences between both group's risky behaviors and academic competence. Specifically, students who dropped out reported higher risky behaviors than those who did not drop out, indicating that those in highest need tend to also be those who are the most difficult to reach. Furthermore, given the current sample was largely a convenience sample, teachers who participated in and applied the intervention were likely seeking additional help for their struggling students. This could account for the variation in academic competence between groups, especially since all classrooms consisted of different subjects taught by different teachers and at different levels.

Second, there was an issue with the sample size that also reflects barriers of implementation among adult education students. With 65% participant dropout, teachers also struggle to develop curriculum that address the constant ebb and flow of students in the program. Some students enter the adult education system in order to meet a specific competency or module from a subject and then leave. In addition, teachers and students reported that students in adult education are not given homework and they live a "carefree and independent life". Therefore it is necessary that interventions that are designed to improve skills that are not explicitly taught in schools, such as independent learning, are implemented among adult education students. The skills taught in these interventions are skills that are imperative for success and they act as protective factors against school deterrents, such as the engagement in risky behaviors. Therefore, future applications of the intervention should be completed using randomized sampling. Last, the length of time for which the interventions endured, the meta-

academic strategies applied, and the risky behaviors observed, was perhaps not adequate. For example, academic success when reinforced with interventions on self-regulated learning, can require a whole academic year before significant improvements are observed and are sustained among adult students in higher education (Broadbent & Poon, 2015). Therefore, future research would benefit from examining these factors across longer periods of time and across many more classrooms.

Implications

Notwithstanding its limitations, this study has contributed to knowledge about the science of implementing evidence-based interventions in Canadian adult education programs. Given the diverse nature of the students that exist in adult education classrooms, it makes it increasingly difficult for educators and researchers to create effective and sustainable interventions, especially when characteristics of populations that produce favorable or unfavorable intervention outcomes are rarely the focus of research (Shaw, Varona-Prevez, & Shah, 2014). Even though we should be cautious in the interpretation of the findings due to sampling and small sample size, the rigorous analyses of quantitative data provides us with relative confidence about the truth of our argument. Specifically, external factors, such as risky behaviors and motivation, must be considered as important variables in future intervention program research. This methodological approach would encourage the continued development of longitudinal interventions, enabling scholars to gain a functional and integrative understanding of how and why independent learning, risky behaviours and overall academic performance are correlated in diverse populations.

In conclusion, given the current study's emphasis on the important role of independent learning on academic performance and risky behaviors, it is hoped that the results also encourage educators and the educational psychology community to stop underestimating the value of metaacademic skills. As students progress through school, schoolwork becomes more difficult, the teachers become more demanding, and the tasks become more arduous. With mounting academic challenges, students need strategies to attain graduated independence and they need to become self-sufficient through the acquisition of proper tools of autonomy. If they are not taught, because it is typically assumed that these skills are self-acquired, students will engage in risky behaviors and develop maladaptive survival skills and other strategies that lead to problems. The aim is to reduce or eliminate these behaviors by teaching students adaptive strategies using evidence-based interventions. In light of the current results, future research can challenge the issues with dropout rates in Canadian adult education and design more effective interventions, targeting greater meta-academic skills and working closely with the academic institution, administration, and students, to identify those at highest risk of school failure. Lastly, researchers need to extend school-based interventions across populations who are more resistant to interventions over longer periods of time and assess the long-term effects of these interventions. Only then can educators and researchers begin to improve school functioning among students and reduce the engagement of risky behaviors.

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Table 1

Frequency for Participant's Sex and Cultural Heritage

| Variable | N | Percent % | |
|-------------------|----|-----------|--|
| Sex | | | |
| Female | 20 | 50 | |
| Male | 20 | 50 | |
| Missing | 0 | 0 | |
| Total | 40 | 100.0 | |
| Cultural Heritage | | | |
| Arab | 1 | 2.5 | |
| Black | 5 | 12.5 | |
| Chinese | 1 | 2.5 | |
| Filipino | 3 | 7.5 | |
| Latin-American | 1 | 2.5 | |
| Native | 1 | 2.5 | |
| South Asian | 7 | 17.5 | |
| White | 16 | 40.0 | |
| Other | 5 | 12.5 | |
| Total | 40 | 100.0 | |

Descriptive Statistics for Age, Risky Behaviors, Academic Competence, Resilience, and Meta-Academic Skills scores at both pre- and post-test

| Variable | Ν | Percent % | М | SD | Skewness | SE Skewness | Kurtosis | SE Kurtosis |
|-------------------------|----|-----------|---------|--------|----------|-------------|----------|-------------|
| Age (years) | 35 | _ | 20.771 | 4.953 | 2.874 | .398 | 9.866 | .778 |
| Pre-Test | | | | | | | | |
| Academic Performance | 40 | _ | 69.23 | 19.532 | 991 | .374 | 1.823 | .733 |
| RBQ-A | 40 | _ | 8.375 | 6.898 | 1.774 | .374 | 4.009 | .733 |
| Academic Skills | 40 | _ | 84.925 | 46.088 | -1.094 | .374 | -1.93 | .733 |
| Academic Enablers | 40 | _ | 113.125 | 59.792 | -1.244 | 3.74 | .029 | .733 |
| MAQ | 40 | _ | 125.235 | 15.571 | 599 | .374 | 1.111 | .733 |
| Post-Test | | | | | | | | |
| Academic Performance | 40 | _ | 72.175 | 17.655 | -1.276 | .374 | 3.991 | .733 |
| RBQ-A | 40 | _ | 10.650 | 8.384 | 1.182 | .374 | .994 | .733 |
| Academic Skills | 40 | _ | 106.158 | 18.039 | -1.076 | .374 | 4.633 | .733 |
| Academic Enablers | 40 | _ | .007 | .001 | .747 | .374 | .876 | .733 |
| MAQ | 40 | _ | 130.056 | 18.725 | 122 | .374 | 492 | .733 |

Table 3

Within-subjects time effects in the intervention and control groups

| Measure | F | Df | Error | р | η^2 |
|-------------------|---------|----|-------|--------|----------|
| Academic Grades | 1.711 | 1 | 38 | .199 | .043 |
| RBQ-A | 40.067 | 1 | 38 | .000** | .513 |
| Academic Skills | 8.100 | 1 | 38 | .007** | .176 |
| Academic Enablers | 150.818 | 1 | 38 | .000** | .799 |
| MAQ | 3.083 | 1 | 38 | .087 | .075 |

Note. ** indicates significant values where p < .001.

Table 4

| Measure | F | Df | Error | р | η^2 |
|-------------------|-------|----|-------|-------|----------|
| Academic Grades | 5.442 | 1 | 38 | .025* | .125 |
| RBQ-A | 1.572 | 1 | 38 | .218 | .040 |
| Academic Skills | 1.132 | 1 | 38 | .294 | .029 |
| Academic Enablers | 2.442 | 1 | 38 | .126 | .060 |
| MAQ | 2.998 | 1 | 38 | .092 | .073 |

Interaction effects between the intervention and control groups

Note. * indicates significant values where p < .05

Appendices

Lesson Plans

Lesson 1 – Why do we do Schoolwork?

Materials: Lesson 1 Worksheet (Checklist)

Cahier/Journal

Skills to Build: Understanding the benefits of schoolwork (knowledge and learning skills) Introducing the idea of student responsibility of completing work

Vocabulary: Learning Skills (skills that we use to improve how we learn)

Contract (agreement between student and teacher to do something)

NOTE: Throughout all classes it is important to constantly engage the students by asking them to provide examples and participate in discussion. Provide yourself and each student with the Lesson Worksheets. Filling out the worksheets should not always be silent, individual work. They should be completed as a class with each student providing their own personal examples.

LESSON PLAN

Part 1: Get student opinions on why we do schoolwork – practical sense

• What are the benefit of doing schoolwork (e.g., reinforces what we learn during the day, gives students extra time to practice, improves grades) – teacher can write down short-form answers on white/blackboard

Part 2: Another benefit to doing schoolwork: Introduce idea that students also develop learning skills while doing schoolwork. Learning skills are the skills that each student has to do in order to improve their ability to learn. Ask students to give examples of learning skills such as time management (creating schoolwork schedule), organizational skills (agenda planning, goal setting), concentration skills (setting up appropriate work space), and working independently. All

of these examples will be taught in the next few weeks so that students complete homework consistently.

Part 3:

Introduce responsibility.

Ask students what *responsibility* means (e.g., completing a job you have been assigned, completing something on time). Reinforce the idea that part of their job as a student is to complete coursework and succeed.

Contract. Sometimes we sign a paper so that there is an agreement between two people on something that needs to be done. In this case, we have a checklist.

Have each student use the Lesson 1 worksheet checklist as a guide for what they will learn in the upcoming lessons.

Activity: Journal.

The best method to increase how well you can do schoolwork on your own is to monitor your work habits. One way we will do this is we will keep journal accounts of our work habits throughout the next 10 weeks. At the end of any day you attend classes, I would like you to write a short paragraph on how long you studied that day/night, what kinds of breaks you took, what types of distractions were present, whether you studied alone, whether you set goals and planned ahead, whether you challenged yourself with homework or quizzes, and where the studying took place.

Ask students to write in the journal at the end of any of their school days. Monitoring their daily work habits is an effective strategy for increasing self-awareness and self-efficacy. Give praise to students who write a lot and have detailed accounts of their learning experiences and encourage those who do not write as much to set more challenging goals during study time. The journals will be collected at the end of the program.

Take out Lesson 1 worksheet, check off "Introduce journal"

Lesson 2 – Creating a Study Space

Materials: Lesson 1 and 2 worksheet

Skills to Build: Understanding the components of an effective study space

Vocabulary: Study space (a place to study)

Kinesthetic learning (what type of learning suits you best)

LESSON PLAN

Today we start by talking about working in a space that is optimal for learning.

Part 1: What makes a classroom an effective place in which students learn?

- Ask students what things in the classroom help them learn (e.g., word wall, books, computer, blackboard, clock, light/windows)
- Ask students what things in/on their desk help them learn (e.g., materials, books)

Part 2: What makes a good study space?

- Ask students where they do their schoolwork (e.g., in class, at home →desk in room, kitchen table ask specific questions about the room makeup of the room, who else is in the room when they do work, is music/television on, etc.)
- Ask students to give examples (e.g., quiet space, well-lit, materials, no background noise to distract you like a TV)

Activity: Using worksheet 2, ask students to create their own personal study space

Have the students draw the study space in their home, and add appropriate words (e.g., quiet, no music, well-lit)

It is important to note that effective study spaces are locations that we are used to. For example, if you always study in your room, then keep studying in your room. If you decide to study in a library or a coffee cup, the newness of the environment will distract you because they are filled with stimuli that you are not used (e.g., people talking, room noises, lighting, paintings, etc.)

Once they have completed their worksheet, have some students share their ideas about the ideal homework study space.

Part 3: Sometimes we need to know what type of learner we are. Some people need to read a page twice before they understand what they read, others need to do study alone in their rooms. Finding the type of learner you are will help you create the ideal study space and will help you come up with the right strategies to facilitate the learning process. Knowing what type of learner you are and applying those strategies that suit you best in the right environment is what we call kinesthetic learning.

Ask each student: "What type of learner are you? What is the BEST way that you learn?"

Maybe provide your type of learning as well. Discussing the topic and learning from your students is one step closer to discovering how each of them can improve their learning environment.

Take Lesson 1 Worksheet out and check off "create study space."

Lesson 3 – Creating a Schedule

Materials: Lesson 1 and 3 Worksheet

Skills to Build: Understanding the benefits of using a schedule to complete your schoolwork

Increase self-monitoring

Vocabulary: Schedule (a series of things that need to be done or events that will occur in a particular time or period)

Self-monitoring (evaluating your habits in order to make sure you do not deviate away from those healthy learning habits)

LESSON PLAN

Remind students that they have already begun to take responsibility for their schoolwork and learning by making sure that they have an appropriate place to do their work. This will help them keep their word and do their work more efficiently. The next goal is to create and follow a schedule.

Part 1: Review the idea of a schedule – ask the students to define what it means. Then have the students provide examples of their schedule or routine before coming to school, during the school day, in class and after class. (e.g., wake up, make a lunch for the kids, bring kids to school, go to school, eat lunch, study between class, etc.).

Part 2: Ask students if they have a certain time of the day they do schoolwork – during class, after school, after activities, after dinner, before bed, etc.

What are the benefits of having a schedule on paper? Ask students for their ideas and then provide any additional reasons they missed (easily accessible, visual representation helps remember, etc.)

Activity: Creating a schedule that includes schoolwork. Give each student a calendar that breaks down the time from Monday through Friday. Have each student write what they do in each section (e.g., soccer practice, take kids to school, surf the internet, watch television, prepare

dinner, shower, get ready for bed, study, etc.). When finished, have some students present their schedules to their class. Highlight that the student should hang their schedule in their study space, so that they can see when they are scheduled to do their work.

At the end of the activity, take out checklist and put a check beside "create and follow personal schedule."

Lesson 4 – Using Your Agenda

Materials: Lesson 1 worksheet, personal/school agenda

Skills to Build: Understanding how to use the agenda to effectively plan for doing schoolwork

Vocabulary: Agenda (a special planner to help us organize our assignments and keep track of upcoming due dates and tests)

Self-monitoring (evaluating your own behaviors more effectively)

LESSON PLAN

Remind students that they have already completed two activities that will help them stay on track with doing schoolwork (study space and schedule). Today, you will be talking about the importance of using the agenda.

Part 1: Why do we have an agenda? What is helpful about the agenda?

Ask students to give their opinions on the benefits of using an agenda (e.g., keep track of due dates, assignments, tests, etc.). Reiterate the idea of responsibility and that by using the agenda, students become more aware of their responsibilities for the evening.

Activity: How can we better use the agenda?

Have a discussion as to how students use their agenda (e.g., writing dates down). Then provide strategies about how to keep track of what they have completed (e.g., crossing off item, using checkboxes, etc.).

In pairs, students will use their agenda (or if they do not have a school agenda, use the journal) to write down their tasks for the day and create a checkbox beside it. Review these three steps: writing down tasks, completing the tasks, and checkmark. This is done to get students into the habit of looking in their agendas and *checking* everything they have to do for the week.

Take out checklist from Lesson 1 and put a checkmark beside "use agenda to keep track of schoolwork."

The following lesson, praise those students who used their agenda correctly and encourage those who did not to try again that night.

Lesson 5 – Planning Ahead for School Assignments/Tests

Materials: Lesson 1 and 5 worksheet, personal/school agenda

Skills to Build: Understanding how to plan ahead for upcoming tests/assignments

Vocabulary: Plan (a method to do something or get something done; developed in advance)

LESSON PLAN

Teacher should continue to reinforce/encourage the students' attempts to use their agenda to graph their work.

So far, we have learned many ways to get ready to do our schoolwork. We have made ourselves good work spaces, made time to complete our work using a schedule, and started using our agendas to write our tasks and graph our efforts when we finish. Today, I would like to talk about using our agenda to plan for upcoming tests and assignments.

Part 1: Discussion on WHY we plan for things (e.g., birthday party)

We plan for things so that we have enough time to get ready for them. If we told people that we were having a birthday party tomorrow, we may not be able to prepare for them or finish the things that we need to do for it (e.g., buy presents, plates, cake, candles, clean the house, etc.)

Part 2: In the same way, we have to plan ahead for assignments and tests. If you don't, what may happen? Ask for students opinions (poor grades, teachers/students are disappointed).

Activity: Teacher and class work together to plan a study schedule. Refer to *Case 1 and 2* below and Lesson 5 Worksheet. Assume that today is Monday morning for the activities.

Case 1: Katie has a math lab due Wednesday and a French test on Friday. Her teacher also wants her to read 10 pages for her book report due Thursday. Let's plan her schedule for the week.

INDEPENDENT LEARNING INTERVENTION

- 1) Write due dates in agenda for the week.
- 2) Prioritize write down what needs to be done in order for this week.
- 3) Break down assignments into smaller parts e.g., read a few pages a day, study a number of French words a day, study specific chapters for math a day, have days for review of all materials, etc.
- 4) Fill out schoolwork in agenda and check off the schoolwork once completed.

Case 2: Have students work in pairs for a few minutes to create a study schedule for *Case 2* in Lesson 5 Worksheet. Once finished, have groups present ideas to class on how they balanced school tasks and personal life. Is this something they would consider doing in a busy week?

Take out checklist, and check the box "use agenda to plan ahead"

Lesson 6 – Strategies While Completing Schoolwork

Materials: Lesson 1 and 6 worksheet; agenda

Skills to Build: Using strategies that are helpful while completing schoolwork

Vocabulary: Strategies (use of a plan in order to obtain a specific goal)

LESSON PLAN

Briefly review the previous four items on the checklist and congratulate students for implementing and using these ideas when completing schoolwork (work space, homework schedule, using agenda, and planning ahead). Now, sometimes students have difficulty staying motivated to do their work. They often would rather daydream or watch TV, anything else except concentrating on schoolwork. So today we are going to talk about some strategies to use WHILE you are doing schoolwork.

Part 1: It's often hard to stay focused on schoolwork when you think it is boring or if it is too difficult. Below are a set of strategies that students can use:

- 1) Check that you have all the materials you need (e.g., book, pencils, calculator, clean work space).
- 2) Prioritizing school materials (which subject is easier for you do it first). *Ask students for examples*.
- 3) Time have clock facing towards/away from you. Set time increments (e.g., 20 minutes) for you to do work. Then, take a 5 minute break (e.g., get a drink, do some jumping jacks, go to the washroom). Resume the task until the next break or when you are finished. Statistically, for every 60 minutes of work you do, you need about 15-20 minutes to relax the brain. If you do this, try to not to go over the break time allotted.
- 4) Drink lots of water. Water helps you function properly and being hydrated will help reduce tiredness. Remember, coffee is a diuretic. Meaning, it dehydrates you! It may give you an initial boost to work, but the crash phase will make you really tired afterwards.
- 5) Put your cell phone on silent, and do not have any internet browsers open. This will allow you to focus better on the task at hand.
- 6) Goal set a goal or fun activity for you to do after your work is completed (e.g., play with your kids, draw, cook). *Ask students to give examples*.

- 7) Make it fun use manipulatives (e.g., candy, marbles, play chips) to make tasks more enjoyable. Have students generate some examples (e.g., drawing out a scenario from the book you are reading, role-playing of the characters you are studying, quizzing yourself)
- 8) Get motivated! Using self-talk or encouraging words has shown to improve motivation during school and home-related work (e.g., "good job!"; "only a few more to go!")
- 9) Record yourself (selfies, movies) monitoring yourself during study time can make you aware of some of the work habits you would like to change.

Activity: Refer students to the Worksheet 6 activity to be completed on their own in class.

Case 1: Lisa is a student attending Adult Education. She enjoys school and particularly enjoys reading and writing, however, she struggles with chemistry. On Wednesday, Lisa's instructor gave the class the following assignments: 5-page reflection paper on ethics, finish chemistry report, and read 27 pages of the physics textbook.

Using what you have learned so far, what are some strategies that Lisa can use during study time? What are some strategies that she can do with subjects that she struggles with? Discuss with students the myriad of strategies than can be implemented for Lisa.

Part 2:

Have students review some of the work that is due in their agenda. Encourage them to prioritize what they will do first by writing a '1' next to the most important task to do first, and then a '2' for the next most important task, in descending order.

Then, have students continue Lesson 6 Worksheet with strategies they commonly use while doing schoolwork. Discuss some of the strategies they would like to try (e.g., taking breaks, setting goals, self-talk strategies).

Upon completion of the activity, check off "use study strategies for completing schoolwork"

Lesson 7 – Attention to Detail and Concentration

Materials: Lesson 1 and 7 worksheets

Skills to Build: Work on strategies that encourage attention to detail and concentration

Vocabulary: Attention to detail (paying attention to small things or items that are easy to miss)

Concentration (to focus or direct toward one point)

LESSON PLAN

Teacher should praise students for their continued efforts in schoolwork completion, use of agenda, and planning.

Last time, we learned about some strategies that we could use while doing schoolwork. Can anyone name a few? Has anyone used any this week?

Today we are going to continue to talk about strategies and particularly ones that help you pay attention.

Part 1: Attention.

When I say attention, what does that mean to you? Have students give opinions. Attention is when we are able to focus or concentrate on something and not become distracted. When you watch a movie, you have to pay attention, or you may miss an important part of the story. When you are crossing the street, you have to pay attention to traffic or you could get hurt. Attention also involves a selective process. Meaning, we select things we want to pay attention to. Other things we don't pay attention to, are sometimes missed.

Note-taking: Attention is important when you are taking notes in class (have students follow the Lesson 7 guidelines on note-taking). By taking careful notes, we can review a lot of the material we go over in class. By reviewing and taking careful notes, we grasp a lot more information than we would normally while only listening. If you do not have enough time to write down all the notes, write down only the significant portions that you hear, only the most relevant notes so that you can go back to those notes and know exactly what the subject is about.

Part 2: Attention to detail.

Sometimes our homework has so many parts, it is easy to miss or skip a few of them. For example, when we are doing math, sometimes if you are not paying attention, it can be easy to mistake a + sign for a – sign. When we are reading, we can sometimes read "on" instead of "in". This can totally change the answer or meaning of what we are doing. (e.g., 40% + 20% vs 40% - 20%; the student studied in the building *vs* the student studied on the building).

Why do we pay attention to detail? Get class opinions. By paying attention to detail, we make less careless errors and therefore do not lose marks on our assignments and tests. We make sure our work is complete. Let's create a checklist on the board of what we need to pay attention to when completing our work (e.g., answered all questions, name and date on sheet, read instructions slowly and carefully, printing neat and legible, etc.).

Part 3: Concentration

Have students review strategies on concentration below.

- 1. Use verbal cues that re-direct your attention to the homework and encourage yourself to stay true to the task at hand.
- 2. Minimize electronics and distracting stimuli (ideal environment is essential)
- 3. Having a timer/alarm to remind you to pay attention
- 4. Review your answers on a test or on an assignment in backwards order (end → beginning), you tend to catch silly mistakes faster.
- 5. Systematic relaxation (see below)

Activity: Systematic Relaxation.

Sometimes in order to concentrate, we need to listen to how our bodies are feeling. If we ate too much, or if we did not get enough sleep the night before, or if you are feeling anxious because of an upcoming test or personal problems, these may all be factors that will affect us during schoolwork time. So, the point of this activity is to show you all how we can relax before sitting down and doing some concrete work. Please read following to students:

What I would like you all to do, is to sit quietly, close your eyes, listen to the beat of your heart while breathing in from your nose and out from your mouth, relaxing all your face muscles, neck, chest, and back. When I say go, you can start and then I will tell you when to stop. Ready, go (allow 1 minute to pass).

This is one method of relaxing our bodies before doing homework. Another relaxation technique we can try is I want everyone to clench both their fists really tight and flex your

muscles for 30 seconds. Ready, go (allow 30 seconds to pass). And now slowly open your fists. This is another relaxation technique that will help reduce anxiety by increasing blood flow in your body and give you the energy you need to start work. You may refer to the Lesson 7 worksheet for other relaxation activities you can do to decrease tension and anxiety before schoolwork.

On checklist, check off "Complete attention to details and concentration strategies".

Lesson 8 – When to Ask For Help

Materials: Lesson 1 and 8 worksheet

Skills to Build: Initiative to work independently

Staying motivated to do as much work as you can do by yourself

Vocabulary: Independent (doing something on your own or by yourself)

Initiative (starting something on your own terms or schedule)

LESSON PLAN

Teacher should praise students for their continued efforts in schoolwork completion, use of agenda, and planning and encourage note-taking.

In the last few weeks, we have learned how to schedule time for schoolwork, use our agendas, plan ahead, and use strategies while doing schoolwork. Today we are going to talk about when and how to ask our teachers or family members for help when we get stuck.

Part 1: Initiative/Independence overview

What does initiative/ independent mean? Ask class for examples of doing things independently or showing initiative. Being independent means that you are able to do things by yourself without asking for help. This is especially important when you are going to start your homework. You show initiative when your parents don't have to remind you to begin your homework, you just know that you have to start doing it on your own. You look at your schedule, you get your workspace in order, you prioritize your homework, and you try as best as you can to do it by yourself. We have talked about all of these skills, right? But sometimes, we get stuck on a problem. We can't figure out the instructions of the homework or don't understand what to do. So let's talk about some strategies that we can use before we ask for help which will improve our independent learning:

- 1) Force yourself to do as much of the work as you can before you ask anyone for help.
- 2) Take the initiative to look online for some methods that are related to the schoolwork without copying or plagiarising any work (by seeking methods and answers yourself, you teach yourself the subject).

- 3) If you still do not understand some of the problems, try to guess some answers (this will force yourself to learn and remember things you may have forgotten).
- 4) Ask yourself, on a scale of 0 to 100 (10 = not sure, 40 = somewhat sure, 70 = pretty sure, 100 = very sure) "How sure are you that you will be able to solve these math problems?"
- 5) Call a friend or ask siblings for an explanation or to help you.
- 6) Ask another family member to check over the work you have completed.

Part 2: Asking a teacher for help

Our goal is to encourage students to come to a teacher for help with solving a problem. However, they need to be able to explain what they DO understand and they need to explain how they tried to solve the problem first. Teacher may clarify, give hints/cues, or find other words they might use to help solve the problem.

Activity: *Probe students with questions*. Let's look at the case with Bryan who had trouble completing his humanities schoolwork in Worksheet 8. What do you think are some of the steps he could have taken before asking his parents for the answers? (Revise his work, guess some of the answers, look for answers or methods online, call up a friend for an explanation) When do you think Bryan should have asked for help? (when he was really stuck and had no other options left). Have students begin with outlined steps and begin examples on the worksheet. Discuss answers together.

On contract, check off box "work independently and only ask for help if necessary"

Remind students to bring their journals into class for Final Lesson, check off box "bring journals to Final Lesson"

Demographics Questionnaire



- 1. Name: _____
- 2. School: _____
- 3. Grade: _____
- 4. Gender: _____
- 5. Age: _____
- 6. Date of Birth: _____
- 7. What is your parents' current marital status?

| Married | Common Law | Single | Legally Separated | Divorced | Widowed |
|---------|---------------|--------|----------------------|----------|---------|
| | | | | | |

- 8. Which of the following best describes your living situation
 - a. I live with both parents
 - b. I live with my mother
 - c. I live with my father
 - d. I split time living with my father and my mother
 - e. I live with other relatives (grandparents, aunts, uncles, etc.)
 - f. Other
 - i. Specify the situation_____
- 9. How many people live at home with you?
 - a. Adults _____
 - b. Children _____

10. What is the highest level of education of each of your parents?

| | Mother | Father |
|--|--------|--------|
| Some High School | | |
| Some righ School | | |
| Completed High School | | |
| Some college, CEGEP, or technical school | | |
| Some University | | |
| Bachelor's Degree | | |
| Master's Degree | | |
| Degree in Medicine (M.D.), Dentistry (D.D.S., D.M.D), Veterinary | | |
| Medicine (D.V.M.), Optometry (O.D.) or Law (LL.B) | | |
| Earned Doctorate (e.g. Ph.D., D.Sc., Ed. D.) | | |
| Other (Specify) | | |
| I don't know | | |

11. What is your parents' current employment status?

| | Mother | Father | |
|------------|--------|--------|--|
| | | | |
| Full time | 0 | 0 | |
| Part time | 0 | 0 | |
| Unemployed | 0 | 0 | |
| Retired | 0 | 0 | |
| Student | 0 | 0 | |

| Homemaker | 0 | 0 |
|-------------------------|---|---|
| Company paid sick leave | 0 | 0 |
| Government disability | 0 | 0 |
| Other | 0 | 0 |
| I don't know | 0 | 0 |

- 12. How do you consider your financial situation at home compared to other students at your school?
 - a. I think I have more than other people at my school
 - b. I think I have the same as other people at my school
 - c. I think I have less than other people at my school
- 13. What is your primary language?
 - a. English_____
 - b. French_____
 - c. Other_____

What language do you primarily speak at home?

What other languages do you speak?

14. Were you born in Canada?

a. Yes

b. No

- i. Specify Country: _____
- ii. At what age did you come to Canada?

15. Were your parents born in Canada?

| | Mother | Father |
|------------------------|--------|--------|
| | | |
| Yes | | |
| | | |
| No | | |
| | | |
| If no, specify country | | |
| | | |

16. How would you best describe your ethnic or cultural heritage?

| Check | |
|-------|---|
| | White/Caucasian |
| | Chinese |
| | South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan) |
| | Black (e.g., African, Haitian, Jamaican Somali) |
| | Native/aboriginal People (North American Indian, Métis or Inuit/Eskimo) |
| | Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan) |
| | Filipino |
| | South East Asian (e.g., Cambodian, Indonesian, Laotian, Vietnamese) |
| | Latin-American |
| | Japanese |
| | Korean |

| Other (please |
|---------------|
| specify) |
| |

17. Do you currently have a part-time job outside of school?

- a. Yes
 - i. Specify_____
- b. No

18. What was your approximate grade in the last school year?

- a. Letter grade? _____
- b. Out of 100? _____
- c. I don't know

Meta- Academic Questionnaire

| All information supplied will be kept strictly confidential | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| # | | | | | | | | | |
| NAME: | | | | | | | | | |
| Teacher: | | | | | | | | | |

Please read the instructions first. **There are no right or wrong answer**. Answer honestly and to the best of your knowledge!

The following statements are designed to give us an idea about how you feel and view yourself. This is not a test, so you will have different answers compared to those around you. Furthermore, there are no right or wrong answers to these questions, so consider each of them and answer them honestly. We will keep your answers private, no one except you and the researchers will be able to see them.

On the following pages will be 36 statements. Please answer them using the following scale:

| 1 | 2 | 3 | 4 | 5 |
|----------|----------|-----------------|-------|----------------|
| | | | | |
| Strongly | Disagree | Sometimes | Agree | Strongly Agree |
| Disagree | | disagree/ | | |
| | | sometimes agree | | |
| | | | | |

If you do not understand a statement or require help in any way, raise your hand and we will help you. If a statement does not apply to you at the moment, try to think back to a time when it did and answer it to the best of your ability. Please do not leave any answers blank. Thank you!

| Statement | False |
|-----------|-------|
| | True |
| | |

INDEPENDENT LEARNING INTERVENTION

| 1. My level of intelligence will never change | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 2. No matter how much effort and studying I do, I will not do well on the tests of some subjects | 1 | 2 | 3 | 4 | 5 |
| 3. When I want to achieve something at school, I try my hardest even if I experience a setback | 1 | 2 | 3 | 4 | 5 |
| 4. I am willing to put effort into my school work to become good at it | 1 | 2 | 3 | 4 | 5 |
| 5. When I know a test is coming, I make sure I am prepared for it | 1 | 2 | 3 | 4 | 5 |
| 6. If I work very hard, I can change my levels of intelligence | 1 | 2 | 3 | 4 | 5 |
| 7. I have noticed my level of intelligence change as I learn | 1 | 2 | 3 | 4 | 5 |
| 8. Even when I do school work, I don't do well in school | 1 | 2 | 3 | 4 | 5 |
| 9. When I don't do well in school, I accept the results and do nothing about it | 1 | 2 | 3 | 4 | 5 |
| 10. When I have my mind set on a goal, I stay on track even when unexpected things happen | 1 | 2 | 3 | 4 | 5 |
| 11. I learn thing quickly in all school subjects | 1 | 2 | 3 | 4 | 5 |
| 12. I have the potential to get good marks at school | 1 | 2 | 3 | 4 | 5 |
| 13. I am proud of my school work | 1 | 2 | 3 | 4 | 5 |
| 14. When I am experiencing a setback when trying to achieve something at school, it is hard for me to stay on track | 1 | 2 | 3 | 4 | 5 |
| 15. Even if I work very hard to improve my intelligence, it will most likely remain the same | 1 | 2 | 3 | 4 | 5 |
| 16. If I want to do well at a subject in school, I need to put effort into it | 1 | 2 | 3 | 4 | 5 |
| 17. When I work hard at school, I do better at it | 1 | 2 | 3 | 4 | 5 |
| 18. I do not get good marks at school | 1 | 2 | 3 | 4 | 5 |
| 19. If my mind is set on a goal, when unexpected things happen I will forget about it and won't achieve it. | 1 | 2 | 3 | 4 | 5 |

| 20. In order to develop any skills, not just at school, I need to put effort and time into it | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 21. When I don't do well in school, I want to understand why | 1 | 2 | 3 | 4 | 5 |
| 22. No matter how hard I work at some subjects in school, I will not improve in them | 1 | 2 | 3 | 4 | 5 |
| 23. It is easy for me to stay on task with my school work | 1 | 2 | 3 | 4 | 5 |
| 24. I find the material and work at school difficult | 1 | 2 | 3 | 4 | 5 |
| 25. I find the material and work at school easy | 1 | 2 | 3 | 4 | 5 |
| 26. I am good at certain subjects at school and not others because I was born this way and cannot change the things I am not good at | 1 | 2 | 3 | 4 | 5 |
| 27. When I do work in school, I do well | 1 | 2 | 3 | 4 | 5 |
| 28. I can greatly change my levels of intelligence | 1 | 2 | 3 | 4 | 5 |
| 29. I get good marks at school | 1 | 2 | 3 | 4 | 5 |
| 30. I am easily distracted from my school work | 1 | 2 | 3 | 4 | 5 |
| 31. When I get a bad school grade, it is because I am not good at that subject | 1 | 2 | 3 | 4 | 5 |
| 32. I don't feel like putting effort into my school work | 1 | 2 | 3 | 4 | 5 |
| 33. Compared to others in my class, I think I am strong in school | 1 | 2 | 3 | 4 | 5 |
| 34. If I want to do well on tests, I must put in the effort and study for them | 1 | 2 | 3 | 4 | 5 |
| 35. Even when I work hard I don't feel I am getting better at my school work | 1 | 2 | 3 | 4 | 5 |
| 36. When I get a bad grade, I work harder and stay on track | 1 | 2 | 3 | 4 | 5 |