Cultivating Self-Efficacy Linked to Academic Success to Enhance Student Mental Health

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Self-efficacy (SE), stress and academic success are closely linked. Drawing on the results of doctoral research, this article highlights the most effective pedagogical practices to support the strengthening of SE associated with student success and proposes avenues of professional development for teachers and educational teams wishing to integrate such approaches.

Psychological distress on the rise

The idea for this research emerged several years ago, long before the COVID-19 pandemic, when I noticed increasing signs of distress among my students. Some would show up at school but not attend classes. I'd run into them in the corridors before or after my classes; they seemed to be avoiding me. Others would procrastinate on handing in their assignments, while saying they were extremely upset by the situation. Finally, some students admitted to experiencing symptoms they attributed to stress, such as stomach aches or vomiting before leaving for school, crying spells before an exam, or feeling as if they were inevitably heading for failure in a course even though their previous performances pointed more toward probable success. Do these examples sound familiar?

In Quebec, the survey conducted by Gosselin and Ducharme, published in 2017, opened a window on the extent of psychological distress among CEGEP students, revealing that among the 12,208 respondents, 35.1% said they experienced anxiety often or all the time, while 17.4% said they felt a high or very high level of distress. Multiple factors contributed to this situation. Among these, school pressure was cited by 33.3% of respondents as the main source of distress and anxiety. I wondered whether the teaching staff, even though they were attentive and wanted students to succeed, were not unwittingly contributing to this perceived academic pressure.

Student mental health is said to have declined with the arrival of the pandemic. In Quebec, 64% of students surveyed in 2021 as part of the "Derrière ton écran" ["Behind Your Screen," Ed.] survey said their mental health had deteriorated during the crisis (Fédération étudiante collégiale du Québec, 2021), a situation corroborated by other research teams (e.g. Bergeron *et al.*, 2022). In the wake of the pandemic, the Conseil supérieur de l'éducation expressed concern about the deteriorating mental health and dropout rates of post-secondary students (CSE, 2021). These clear signals call for in-depth reflection on the actions that teachers can take to promote better mental health among students.

What role for teachers?

Although specialized services are available in CEGEPs, students are reportedly reluctant to use them (Paré & Marcotte, 2014) for a variety of reasons—among them, the fears they have of seeking mental health help due to the prejudices present in post-secondary institutions (Gerwing *et al.*, 2015). In Quebec, teachers are encouraged to play a preventive role for the student community. To this end, the Plan d'action sur la santé mentale étudiante en enseignement supérieur 2021-2026 [Action Plan for Student Mental Health in Higher Education 2021-2026, Ed.] published by the Ministère de l'Enseignement supérieur (2021) contains two measures of interest:

2.3 Support the adoption of institutional and pedagogical practices conducive to diversity, inclusion and good student mental health;

3.3 Promote early identification of students requiring assistance and support services.

Achieving these goals could be facilitated by the new Observatory on Student Mental Health in Higher Education, created in 2023, whose aims include developing knowledge about promising practices, supporting research in the Quebec context, and actively engaging students in a "change of institutional culture." As the educational landscape develops services and resources to improve students' mental health, it becomes equally essential to strengthen students' beliefs in their own ability to succeed in the classroom.

SE, stress and anxiety: understanding the dynamics

SE corresponds to a person's beliefs about their ability to take action to obtain a desired result in a given context (Bandura, 2003). The links between SE, stress and anxiety are well known to researchers in this field (Bandura, 2003; Lazarus & Folkman, 1984). The work of Lazarus and Folkman (1984) highlights the interactions between the *resources* of a person, which include SE, and the *demands* of the environment, sources of stress present in life situations. Indeed, a person has personal resources (e.g., well-developed SE and social skills), family resources (e.g., a democratic educational style and secure attachment) and environmental resources (e.g., peer support and adapted CEGEP services) (Dumont, 2005; Dumont & Bluteau, 2014). Since life situations are complex and changeable, the individual mentally evaluates and re-evaluates them to determine whether they have the necessary resources to meet the demands of these situations. Depending on these repeated evaluations, any stress experienced will vary in duration and intensity. When resources are available to meet the demands of the environment, balance is maintained, and stress fulfills its adaptive function (Lupien, 2010). Otherwise, if stress is too intense or ineffectively managed, psychological distress may ensue (Lazarus & Folkman, 1984). When a person has developed strong SE, they believe that they can take action to achieve the desired result and perceive that they have greater control over the situation (Bandura, 2003). This sense of control over one's success is associated with lower stress and anxiety. Conversely, lower efficacy beliefs mean less perceived control, which is associated with more stress and anxiety in different life situations.

SE: how to encourage its development?

The development of a person's SE is supported in a context where they perceive information from these four sources:

- *Mastery experiences* are success stories;
- *Vicarious experiences* are opportunities to see role models perform tasks;
- *Social persuasion* refers to verbal and non-verbal encouragement;
- *Psychophysiological cues* refer to sensations and emotions.

In a learning situation, SE related to academic success (academic SE) refers to students' beliefs about their ability to succeed in their studies. Students with strong efficacy beliefs believe they are capable of completing the tasks required in their courses, acquiring new knowledge and using strategies that develop their competencies, thereby increasing their motivation to succeed in their courses and, more broadly, in the educational project they have undertaken. Moreover, in the school context, strong SE is linked to better academic results (Richardson *et al.*, 2012). Thus, SE is a malleable personal resource, and teachers' demands are among the sources of stress in the classroom. These demands are embodied in modifiable teaching practices likely to influence academic SE and the stress experienced. This is exactly the dimension I wanted to explore in my research.

Methodological precisions

The quantitative and exploratory doctoral research carried out had a dual objective:

- From the students' point of view, drawing a portrait of teaching practices likely to influence academic SE according to socio-demographic characteristics of age, gender, program of study and advancement in studies (results available in Pelletier *et al.*, 2022).

- Better understanding the effect of academic SE on the relationship between teaching practices as perceived by students and their stress levels (results available in Pelletier, 2022).

This article focuses solely on teaching practices that have been shown to influence academic SE.

Data collection was carried out from February 1st to March 14, 2020, just before Quebec educational institutions closed due to COVID-19 and involved 355 respondents enrolled in pre-university and technical programs at 7 CEGEPs (2 private, 3 public located in remote areas, 1 English and 1 urban). Descriptive and correlational statistical analyses were performed.

The main limitations of this research include the self-selection of the sample and its modest size having influenced the choices for data processing, the online survey method involving biases related to the quality of responses, as well as the quantitative approach restricting a more nuanced understanding of students' educational experience.

In addition to sociodemographic characteristics, the survey contained two existing scales selected for their relevance to the research objectives, their limited number of items, and their use in a Quebec, French-speaking, post-secondary context: 1) a subscale measuring SE to learn and succeed in school from the *Motivated Strategies for Learning Questionnaire* (MSLQ by Pintrich *et al.*, 1991), and 2) a stress scale, the Mesure du stress psychologique (MSP-9 by Lemyre & Tessier, 1988).

As there was no existing questionnaire of teaching practices corresponding to the research objectives, a new survey was developed (details available in Pelletier, 2022) following a rigorous process comprising seven steps: 1) clearly determining the elements to be measured, 2) generating a pool of potential statements, 3) determining the measurement scale, 4) calling on experts to evaluate the clarity of the statements, 5) proceeding with a pretest, 6) proceeding with the main study, and 7) verifying the factor structure of the questionnaire (Dussault, Valois & Frenette, 2007; DeVellis, 2017).

Academic SE: which practices to choose?

Teaching practices, identified on the basis of self-efficacy theory and a literature review targeting both academic success and mental health, were grouped into 10 dimensions relating to teaching, evaluation and classroom climate, each of which was linked to at

least one source informing SE. **Table 1** briefly presents the 10 dimensions of teaching practices likely to influence academic SE.

Table 1

Grouped teaching practices likely to influence academic SE
(Pelletier, 2022, p. 125)

	Dimensions	Descriptions
1	Collaborative learning and peer modelling	Student-centered practices that promote mastery experiences through active learning by encouraging, for example, the exchange of ideas, mutual support, reflective exercises and problem-solving.
2	Feedback	Descriptive feedback provided during the course to inform students of their progress and guide them to the next learning module. This dimension is linked to social persuasion.
3	Clarity of tasks and organization	The practice of specifying the tasks to be performed and establishing the guidelines and general organization of a course. These practices aim to make the environment and requirements predictable.
4	Learning challenges and task selection	Practices related to the presentation of tasks that are authentic, stimulating, and useful outside the school environment or relevant to further study. These practices encourage mastery experiences.
5	Choice	The practice of offering students choices, for example, different ways of completing assignments or choices of evaluation activities. The teacher can also ask students for their opinion and then adjust the course according to the preferences expressed.
6	Modelling by teachers or other role models	Demonstrations by relevant, credible models who verbalize and highlight the potential difficulties associated with the task being performed. This dimension supports vicarious experiences.
7	Messages of fear	Messages uttered by the teacher, especially before exams, that emphasize the level of difficulty of a course and the negative consequences associated with failure. Contrary to the other dimensions described in this table, these practices are not recommended and risk lowering academic SE.
8	Messages of efficacy	Communicating high expectations to students, reiterating the strategies and resources available to support their success. This dimension is closely linked to social persuasion.
9	Positive relation-ships	Practices that help build trust and a positive classroom climate. The teacher takes an interest in students as individuals and facilitates pleasant exchanges between them to promote their well-being in the classroom.
10	Error management	Practices that encourage students to take risks. The teacher sees mistakes as part of the learning process and invites learners to ask questions and learn from their mistakes.

The results: four dimensions of classroom practices to learn about and deploy

Four of the 10 dimensions described in the table have significant links with academic SE, i.e., the respondents who perceived these teaching practices more strongly had stronger academic SE. We will focus on these dimensions in particular: learning challenges and task choice, modeling by teachers or other role models, efficacy messages, and positive relationships.[1]

Learning challenges and task selection

This dimension emphasizes the importance of offering authentic, useful tasks to learners, since these pave the way for mastery experiences, which primarily inform SE.

This dimension is concretely embodied in the following practices:

- Proposing learning challenges that students are capable of meeting, i.e. challenges that take into account their prior learning and direct them to the next module. For example, as an introduction to a new course module, ask students what they already know about what they need to learn, and what they think they'll learn. Then, share this information in small groups and as a class, and compare their preconceptions with your teaching plan. At the end of the module, look back on what they've learned to see how far they've come;

- Suggesting activities or assignments that take into account the interests of the students in the class. To do this, it's important to be up to date on the topics that concern them, asking questions and listening to what they have to say, in order to link what you're teaching to their interests;

- Presenting concrete ideas or activities that are useful on the job market or for the rest of the program of study;

- Offering stimulating learning activities that require active participation from students. An example of an authentic learning challenge is presented in the article by Beaulieu (2021), who adapted a program integrative assessment in Engineering Physics Technology to the pandemic reality;

- Explaining how the courses in the program relate to one another;

- Considering the fact that students may not understand the concepts and master the competencies at the beginning of the session, even if they have been taught previously. Take the time to question them on what they have learned, understood and retained;

- Establishing links between theory and practice.

Modelling by the teacher or other role models

This dimension is closely related to vicarious experiences—one of the four sources informing SE—and underlines the importance of observing demonstrations by relevant, credible models who verbalize strategies and demonstrate the potential difficulties associated with the targeted competencies. It's essential that students identify with the model presented: a model that's too different or too perfect risks being perceived as an unattainable ideal, while one that's too imperfect could indicate to learners that they've already mastered the targeted competency, thus failing to motivate them to improve. In this sense, it is possible to present counterexamples, while ensuring their relevance and credibility.

On the other hand, teachers who model certain competencies in front of the class might feel vulnerable to students (Lamarre & Cavanagh, 2012). For example, during a creative writing demonstration, a teacher might encounter a writer's block that is difficult to resolve on the spot. Consequently, the implementation of modelling by the teacher requires

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[1] Regarding the *positive relationships* dimension, a negative relationship was obtained, which could be due to a suppression effect (effect arising from two highly correlated variables). The interpretation is in line with available theoretical and empirical data. Further information is provided in Pelletier (2022).

reflection on their own relationship to error and their stress reaction in a situation where their ego could be threatened.

This dimension includes the following five practices:

- Providing in-class opportunities to practise the skills, strategies and competencies taught, for example by pairing students, asking them to take turns demonstrating a skill while verbalizing the process followed and, while they are performing it, answering questions from their peers, such as "How did you do that?" "What did you think?" and "Why didn't you do that?";

- Providing ample opportunity to review material before moving on to summative evaluations. In groups, students can take advantage of these opportunities to review the material by asking each other questions about the content, practising the competencies that will be evaluated, or sharing their study strategies with others;

- Providing students with opportunities to observe different people performing the activities to be carried out in the course, for example by doing your own demonstrations in person or using videos, having guests in class or showing videos of other role models;

- Explaining the strategies (tips, approaches, etc.) you use to find solutions to problems related to the course objectives;

- Explaining the difficulties students are likely to encounter in completing the activities and tasks required in the course. For example, you could create a repository of examples of anonymized work previously completed by students in your course, to demonstrate in concrete terms the different degrees of attainment of the success criteria.

Efficacy messages

Efficacy messages can be delivered before, during or after the completion of learning activities or during the exam period, with the aim of motivating students to succeed. The box provides an example of an efficacy message that can be adapted to different evaluation or learning situations (this example was translated and adapted from Von der Embse *et al.*, 2015, cited in Pelletier, 2022).
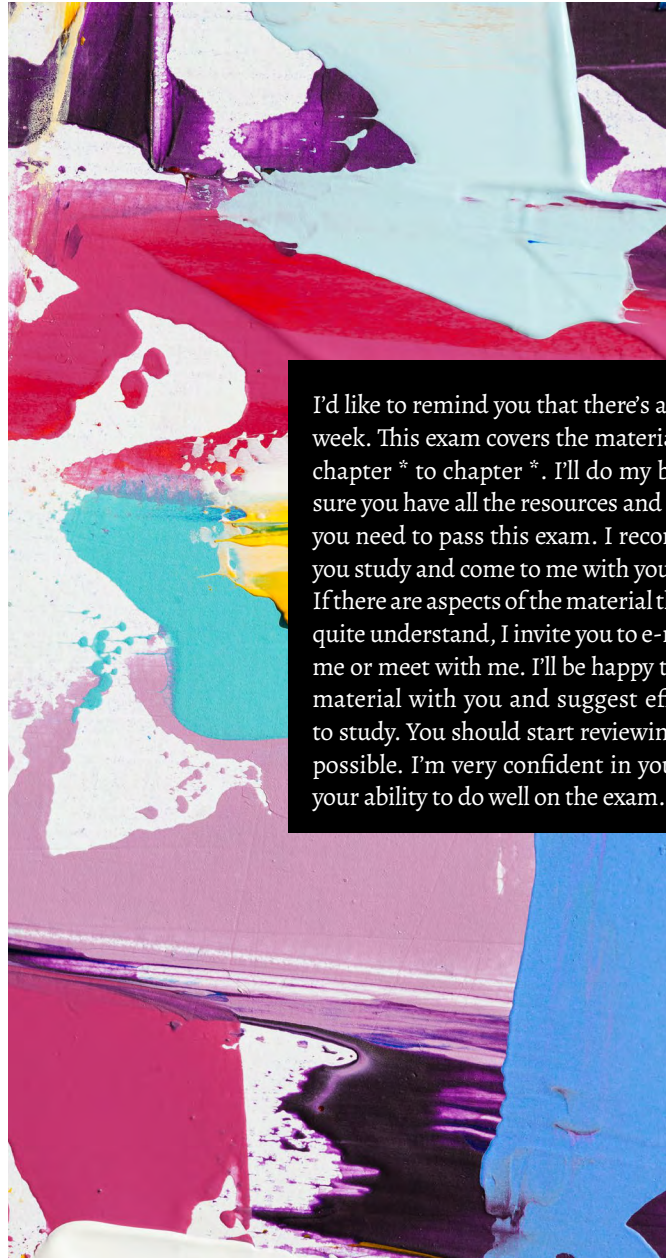
I'd like to remind you that there's an exam next week. This exam covers the material covered in chapter * to chapter *. I'll do my best to make sure you have all the resources and information you need to pass this exam. I recommend that you study and come to me with your questions. If there are aspects of the material that you don't quite understand, I invite you to e-mail them to me or meet with me. I'll be happy to review the material with you and suggest effective ways to study. You should start reviewing as soon as possible. I'm very confident in your skills and your ability to do well on the exam.

This dimension of teaching practices ties in with social persuasion, which informs SE. According to our results, the more strongly students perceive these messages, the stronger their academic SE.

The practices associated with this dimension include:

- Conveying efficacy messages and gestures of encouragement, especially when the activities required are more difficult, for example by using checklists that mark the progression of learning;

- Supporting all students in the class equally well, for example by walking around the class to give descriptive feedback on the work in progress even to students who don't usually seek your attention;

- Encouraging students to persevere in their program of study or on their educational trajectory;

- Demonstrating conviction in your ability to lead students to academic success in the course.

Positive relationships

This dimension deals with the physical and emotional availability of teaching staff for students and contains practices whose crucial role in post-secondary education is highlighted by Ducharme and the Carrefour de la réussite (2012) and Kozanitis (2015), among others. This dimension relates to psychophysiological cues, which inform SE and refer to sensations and emotions felt in a given context. When these are positive, the learning experience is pleasant, which favours the development of SE. Furthermore, in a context where psychological distress is on the rise, positive relationships and a climate of trust between teachers and learners, as well as within the student community, could encourage its members to seek help if they feel the need.

This dimension aims to maintain a pleasant classroom climate and includes the following practices:

- Demonstrating curiosity and passion for your field;

- Smiling and laughing in class;

- Considering the classroom a suitable place to make appropriate jokes[2];

- Ensuring, inasmuch as possible, that the physical environment of the classroom is comfortable (e.g. adequate temperature and lighting and acceptable noise levels);

- Taking an interest in students as individuals and wanting to get to know them;

- Showing compassion when students are stressed;

- Avoiding creating unnecessary stress and frustration for students;

- Being available outside of class times for student conferences;

- Establishing a relationship of trust in the classroom that allows students to express themselves if they are experiencing difficulties.

Avenues for professional development

Teachers wishing to promote both academic success and student mental health are encouraged to take a critical look at their practices, to select them carefully or adjust them if necessary. Several professional development activities can facilitate the adoption and adaptation of the approaches presented in this article to their own

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[2] Editor's note: Readers interested in this subject can read the article "Can We Truly Laugh about Everything? Humour in the classroom: Balancing fun and respect" on p. 50 of this issue of *Pédagogie collégiale*.

context, notably by placing them at the heart of professional learning communities, by asking students how these and other practices can facilitate or hinder their success, and then by questioning the causes and nature of student stress in order to better identify the actions to be taken. Finally, students could be asked to complete the surveys used in this research to assess the changes brought about by the adoption of new practices.

Forthwith, teaching staff are called upon to play a detection and prevention role in supporting students' mental health. This role can be fulfilled by paying attention to manifestations of stress and anxiety in the classroom, finding out about specialized services available at their institution and referring those who could benefit from them, as well as selecting the pedagogical practices best suited to the mental health issues faced by young adults.

More than a concept forming part of motivation theory, SE is also an important and malleable personal resource for coping with the demands of the environment. Certainly, a person who believes they are capable of achieving a goal will be more motivated to try to do so, but also, the more they believe they are capable of taking action to achieve a specific goal, the more they feel they have control over the situation and the less likely they are to experience stress or anxiety to a degree that can lead to psychological distress. In this sense, SE is first and foremost a key to exercising control over life situations, leading one to regain power (Bandura, 2003). ▬

References

Bandura, A. (2003). *Auto-efficacité: le sentiment d'efficacité personnelle*, Paris, De Boeck.

Beaulieu, D. (2021). "Former une relève en intelligence artificielle en contexte de pandémie," *Pédagogie collégiale*, vol. 34, n° 2, p. 13-19.

Bergeron, J. et al. (2022). *Enquête sur la santé psychologique des 12 à 25 ans*, March.

Conseil supérieur de l'éducation (2021). *Revenir à la normale ? Surmonter les vulnérabilités du système éducatif face à la pandémie de COVID-19*, Report on the state and needs of education 2020-2021, Le Conseil.

DeVellis, R. F. (2017). *Scale development: theory and applications* (4th ed.), SAGE.

Ducharme, R. and Carrefour de la réussite (2012). *La voie de la réussite, la voix des étudiants: rapport d'enquête sur les facteurs de réussite réalisée auprès des étudiants du collégial qui ont réussi tous leurs cours de première session à l'automne 2010*. Carrefour de la réussite au collégial and Fédération des cégeps.

Dumont, M. (2005). "Influence du stress sur l'adaptation psychosociale et scolaire des adolescents," in L. DeBlois, D. Lamothe and M.-H. Gagné (eds.), *La réussite scolaire : comprendre et mieux intervenir*, Québec, Les Presses de l'Université Laval, p. 173-184.

Dumont, M. and J. Bluteau (2014). "Stress management, " in L. Massé, N. Desbiens and C. Lanaris (dir.), *Les troubles du comportement à l'école : prévention, évaluation et intervention* (2nd ed.), Gaëtan Morin Éditeur, p. 264-280.

Dussault, M., P. Valois and E. Frenette (2007). "Validation de l'échelle de leadership transformatif du directeur d'école," *Psychologie du travail et des organisations*, vol. 13, n° 2, p. 37-52.

Fédération étudiante collégiale du Québec (2021). Rapport de l'enquête nationale *Derrière ton écran*.

Gerwing, T. G. *et al.* (2015). "Perceptions and incidence of test anxiety," *The Canadian Journal for the Scholarship of Teaching and Learning*, vol. 6, n° 3, p. 1-14.

Gosselin, M.-A. and R. Ducharme (2017). "Détresse et anxiété chez les étudiants du collégial et recours aux services d'aide socioaffectifs," *Service social*, vol. 63, n° 1, p. 92-104.

Kozanitis, A. (2015). "La relation pédagogique au collégial : une alliée vitale pour la création d'un climat de classe propice à la motivation et à l'apprentissage," *Pédagogie collégiale*, vol. 28, n° 4, p. 4-9.

Lamarre, N. and M. Cavanagh (2012). "Représentations, chez les enseignants, de la pratique du modelage dans le contexte d'une rédaction," *Revue des sciences de l'éducation*, vol. 38, n° 1, p. 135-160.

Lazarus, R. S. and S. Folkman (1984). *Stress, appraisal, and coping*, Springer Pub. Co.

Lemyre, L. and R. Tessier (1988). "Mesure de Stress Psychologique (MSP): se sentir stressé-e," *Revue canadienne des sciences du comportement*, vol. 20, n° 3, p. 302-321.

Lupien, S. J. (2010). *Par amour du stress*, Montréal, Éditions au Carré.

Ministère de l'Enseignement supérieur (2021). *Plan d'action sur la santé mentale étudiante en enseignement supérieur 2021-2026*. Gouvernement du Québec.

Paré, M.-L. and D. Marcotte (2014). "La consultation de services psychologiques chez les jeunes adultes: enjeux et pistes de solution," *Psychologie Québec*, vol. 31, n° 4, p. 29-31.

Pelletier, C. (2022). *Sentiment d'efficacité personnelle à réussir ses études : l'influence des pratiques enseignantes au collégial*, doctoral dissertation, Université Laval.

Pelletier, C., N. Gaudreau and E. Frenette (2022). "Portrait des pratiques enseignantes qui soutiennent le sentiment d'efficacité personnelle à réussir ses études au collégial selon les perceptions étudiantes," *Revue des sciences de l'éducation*, vol. 48, n° 2.

Pintrich, P. et al. (1991). *A manual for the use of the motivated strategies for learning questionnaire (MSLQ)*. National Center for Research to Improve Postsecondary Teaching and Learning.

Richardson, M., C. Abraham and R. Bond (2012). "Psychological correlates of university students' academic performance: a systematic review and meta-analysis," *Psychological Bulletin*, vol. 138, n° 2, p. 353-387.

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