EMOTIONAL LEARNER: INVESTIGATING THE NEED FOR AN EMOTIONALLY SUPPORTIVE LEARNING ENVIRONMENT

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Abstract

This paper investigates the relationship between emotional experience and the academic performance of university students. Based on a survey, and the existing body of research, we argue that there is a growing concern about the social and emotional well-being of students and that the academic planning is too focused on cognitive aspects of learning. This leaves students without proper emotional support and requires better training of faculty on topics such as emotional intelligence and more effective academic plans that integrate emotional aspects into academic activities. We illustrate these through specific concerns and suggestions.

Keywords: student, emotion, learning, survey.

1 INTRODUCTION

American Psychiatric Association defines mental health as a mental state where the person can effectively function in daily activities [1]. Mental health problems and disorders, on the other hand, are situations that cause “significant changes in thinking, emotion and/or behaviour, and distress and/or problems functioning in social, work or family activities.” These problems can be the result of too much stress (demand for mental resources) or other factors such as life events or substance abuse.

Mental health problems among higher education students in Canada has drawn significant attention in the last few years with increasing demand for various support services and actions [2][3]. In a 2016 survey, more than 80% of Canadian university and college students considered themselves overall in good, very good, or excellent health [4]. However, 44% of the 43,780 students surveyed felt so depressed over the previous year that it was difficult to function, up from 38% in 2013, while 65% experienced overwhelming anxiety, up from 57% in 2013. This seems to be a trend similar to the United States where in a 2017 survey by the American College Health Association (ACHA) of 63,000 students in 92 schools, 40% of the US college students reported that they had felt so depressed in the prior year that it was difficult for them to function, and 61% said they had “felt overwhelming anxiety” in the same period. The follow-up 2018 study from the ACHA yielded similar results, with over 62% claiming overwhelming anxiety in the past 12 months, and almost 70% of females affected [5].

The education literature emphasizes the role of emotions in learning. From Bloom's Taxonomy [7][8] to modern Game-Based Learning (GBL) [29][30], the common theme is that learning is not a purely cognitive task and emotional factors have to be considered to provide an engaging and effective learning experience. Despite the existing body of knowledge, the practices of curriculum design and the related educational activities in higher education are generally geared toward accessibility of educational content and various support for cognitive tasks. While frameworks such as Social and Emotional Learning (SEL) [27] are receiving deserved attention at K-12 levels, there are fewer efforts in applying these ideas to higher education [12]. In particular, while the integration of academic and social/emotional support has been suggested for a long time [22], in practice the emotional support is commonly considered separate from academic affairs and provided by counselling services, while the faculty are considered responsible for the cognitive aspect of education [11][17]. Not integrating proper emotional (and in general well-being) support in academic activities and classrooms results in lower academic performance and increased mental health problems in students which cannot be solved by an increase in counselling services. It requires institutional plans and faculty commitment and knowledge.

This paper addresses the topics of university students' negative emotional experiences and the relationship between these experiences and academic performance. To understand the role of emotions in the learning process, and investigate the difficulties students are facing and possible remedial actions that can lead to a comprehensive well-being framework, we conducted a survey of current university students with seven quantitative and one open-ended qualitative questions related to negative emotions
they have experienced since the start of the academic year and how these have affected their education. These were accompanied by three demographic questions about their gender, level of study, and area of study. The survey was conducted during the second (winter) term in online and interview formats. This resulted in 116 online responses and five in-person interviews.

Despite the extensive support services for students and an active healthy workplace program at the surveyed university, the results showed that more than half of the respondents have experienced stress-related negative emotional experiences and that more than half reported getting discouraged, losing confidence, and having physical and mental health results. The qualitative responses highlighted issues such as the stressful nature of education, communication problems, traumatic encounters, burn-out effect, loneliness, and the lack of emotional training in faculty. The results confirmed the need for integration of academic and well-being plans in universities.

After a review of the related literature and discussing our survey findings, we present a learner-centred approach that involves motivation and exploration for students, support and guidance for instructors, and a relationship of trust and understanding between them. To establish such a relationship, we propose and discuss a series of practical recommendations. We conclude by discussing the role of institutional support and the need for a comprehensive well-being framework at universities and colleges.

2 RELATED WORK

Bloom's taxonomy categorizes the educational objectives (and so strategies) into three groups of cognitive, affective, and psychomotor [7][8]. The taxonomy is essential in understanding and acknowledging the role of emotions in the learning process and the need for integration of emotional and cognitive strategies.

Pekrun and Linnenbrink-Garcia [28] discuss the various aspects of emotions in education and identify the achievement, epistemic, topic, social, and incidental emotions as categories based on object focus. Holistic learning (integration of intellectual, social, and emotional aspects) has been suggested and studied [22]. Faculty are traditionally considered to be dealing with the intellectual (cognitive) aspect while student affair staff and counselling services deal with the other two. The integration has been traditionally considered as linking these two groups so that they can communicate. But these aspects should be integrated in a more fundamental way such as embedding the emotional support in academic planning [11][17][22].

Constructivist learning theories pioneered by Dewey and Piaget, on the other hand, emphasize the role of learner experience [15][26][32]. This supports the integration of emotional and cognitive plans as they together form the student experience. Experiential learning follows the learner-centred approach of constructivists and focuses on “learning by doing,” and is mostly influenced by Kolb’s Learning Cycle [19]. This learning cycle has less attention to issues such as emotion and power structure in experiential learning [35] but includes reflective aspects that still value the student’s internal sense-making process which can be affected by how they feel about the educational task. Vince [34] curated a collection of articles on the subject of emotion and learning, with a focus on business schools and concluded with some open questions:

- How can we help educators and students to better understand the underlying emotional dynamics of learning?
- How can we continue to unsettle the ways in which the roles of teacher and student are enacted in order to mobilize emotions and engage with power relations in the classroom?
- How can we comprehend more about the reasons and advantages of using emotionally loaded data and of generating uncertainties and confusion as a basis for learning?
- How can we better understand educators’ responses to and responsibilities toward emotions in the classroom?

Wolfe [36] stated that emotions and meaning could affect the learning process, through attention and retention. Ingleton [16] proposed shame and pride as powerful emotions in learning because they are part of social bonding, and the basis of self-identity and self-esteem.

Emotional intelligence [10][24] has been studied as our ability to understanding, controlling, and using emotions. Increased emotional intelligence in faculty and staff can make education more engaging and nurturing by increasing students’ self-esteem and providing necessary support [33]. Learning styles are
also considered by many researchers as a way of customizing the learning process to individual needs [18].

Affective parameters have also been considered by researchers when using technology and multimedia systems, for example, motivational constructs like decorative illustrations, positive emotions through visual design, and even confusion to increase curiosity [14][20][25].

Social and Emotional Learning (SEL) is a framework for promoting mental health in youth and children but also extended to higher education. In particular, mindfulness interventions have been shown to be successful [12] [27].

Gamification and Game-based Learning have also been drawing attention as ways of engaging digital natives [6][23][29][30]. Game-based learning and gamification methods are based on the notion of borrowing concepts and techniques from games to make activities more engaging. They are generally at the risk of an oversimplification of what is fun and engaging about games though. Games are not fun and engaging just because of winning and losing, having competition, scores, prizes, etc. (although those can be important too). The more fundamental attractions of games (less considered in gamification approaches) are playfulness and exploration, as more explorative educational approaches such as the Montessori system have shown [21][31].

Overall, while there is a significant body of research supporting the role of emotions in learning, the state of practice in higher education still relies on separation of cognitive and emotional support. While most faculty members try to be supportive of their students, their efforts are not properly structured by the institutions, and the faculty commonly lack training and knowledge of how their academic plans and actions are related and affect students emotionally with academic and professional consequences. The nature of such a relationship between emotional experiences and academic activities is the subject of this paper and the reported survey.

3 STUDENT SURVEY

3.1 Survey Design

While existing research emphasizes the importance of integrating emotional strategies in education and also the data confirms the increasing mental health issues in students, there is not enough evidence that shows how academic interactions can affect emotional state of the students and how those states, in turn, can affect the academic performance. In particular, we wanted to see these within the context of a specific institution, in this case, Carleton University.

To avoid variables beyond our control, and considering our limited resources, we made the following decisions regarding our research approach:

- We would use a short online survey as the main form of collecting information from participants.
- The online survey would have seven quantitative multiple-choice questions and one open-ended qualitative question, to make sure responding to the survey can be short but allows longer descriptive answers.
- The online survey would include a second part with three demographic questions about their gender, level, and area of study.
- We would provide the option of in-person interview for those participants who were interested in having a closer and possibly longer conversation.
- The survey would be open to current students (at all levels and programs) and related only to experiences at the current academic year.

The research was approved by the Research Ethics Board with clearance ID #110138. The questionnaire is included in the Appendix and consists of questions such as how often they experienced negative emotions, the cause of the emotion, and how it affected them.

3.2 Results

The survey was active during the months of February and March 2019. In the first month, 93 participants responded to the online survey and 4 participants were interviewed. In the second month, 25 participants responded to the online survey and no interviews were conducted.

87 of the online participants did not respond to the demographic questions. Of the remaining 31, we had:
• 25 female, 3 male, 2 unidentified, and 1 non-binary participant
• 27 undergraduate, 3 Master’s, and 1 Ph.D. student
• 10 Engineering, 10 Public Affairs, 7 Arts, and 4 Science students

One of the interviewees was female and three others male; two from engineering and two from science; one Master’s and three undergraduate students. None of the interviewees responded positively to the first questions, said they had negative experiences constantly, and then discussed only the descriptive question 8. So, their data is not included in the Table 1.

Table 1 show the answers to main quantitative questions from online survey. All 4 interviewees responded positively to the first questions, said they had negative experiences constantly, and then discussed only the descriptive question 8. So, their data is not included in the Table 1.

Table 1. Answers to Questions 1 to 7 (Online, total 108).

<table>
<thead>
<tr>
<th>Question</th>
<th>Answers</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Since the start of 2018-19 academic year, have you had an academic experience that elicited negative emotions such as anger, fear, disappointment, anxiety, and sadness?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>How often have such experiences happened?</td>
<td>Constantly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rarely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequently</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(multiple times a week to once every few weeks)</td>
</tr>
<tr>
<td>3</td>
<td>What was the main cause of the negative emotion? If you had more than one experience, please consider the most significant one.</td>
<td>Stressful Situation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mistreatment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>4</td>
<td>If your answer to question 3 was Stress, what was the stressor?</td>
<td>Frustration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conflict</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-imposed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(no Stress)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>5</td>
<td>If your answer to question 3 was Mistreatment, what type was it?</td>
<td>Unfair Evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humiliating Situation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aggressive Behaviour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(no Mistreatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>6</td>
<td>Since the start of 2018-19 academic year, have you had a personal experience that elicited negative emotions such as anger,</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>
fear, disappointment, anxiety, and sadness?

<table>
<thead>
<tr>
<th>7</th>
<th>If you have had an academic or personal experience resulting in negative emotions since the start of 2018-19 academic year, what helpful AND/OR harmful effects has it caused on your academic experiences moving forward? Choose as many as needed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encouraged to do better</td>
<td>41 (35.96%)</td>
</tr>
<tr>
<td>Stronger connections</td>
<td>19 (16.67%)</td>
</tr>
<tr>
<td>Explored resources</td>
<td>39 (34.21%)</td>
</tr>
<tr>
<td>Informed about self</td>
<td>43 (37.72%)</td>
</tr>
<tr>
<td>Made better life choices</td>
<td>21 (18.42%)</td>
</tr>
<tr>
<td>No effect</td>
<td>4 (3.51%)</td>
</tr>
<tr>
<td>Discouraged</td>
<td>60 (52.63%)</td>
</tr>
<tr>
<td>Lost concentration</td>
<td>69 (60.53%)</td>
</tr>
<tr>
<td>Lowered confidence</td>
<td>66 (57.89%)</td>
</tr>
<tr>
<td>Lowered academics</td>
<td>37 (32.46%)</td>
</tr>
<tr>
<td>Lowered social abilities</td>
<td>36 (31.58%)</td>
</tr>
<tr>
<td>Lowered health</td>
<td>68 (59.65%)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (4.39%)</td>
</tr>
</tbody>
</table>

Key points mentioned in the qualitative responses (online survey and interviews) were as follows:

- School is stressful (too much work and pressure): Limited time left for anything else (life, work, etc), conflicting deadlines, different systems and expectations, too much weight on tests, and lack of accommodation.
- Communication problems: Lack of attention to concerns and thoughts, lack of long-term and high-level insight about university, program, and career, contradicting or missing information, and fear of asking for help in class or outside from faculty, TA, or peers.
- Wrong place: Not fitting in the university/program, culture shock and unfulfilled expectations, and difficulty of living in university residence
- Traumatized and burnt-out: Questioning not the results but the students’ intellect and ability,
- Lonely experience: Lack of social activity and social support
- Lack of support from family, peers, and faculty: History of mental and emotional issues, work and other outside problems, and first-year experience not preparing students for what is coming up
- On the positive side, negative experiences were considered by some as personal learning experiences that could motivate to do better and resulted in emotional/cultural wisdom
- Poor quality teaching vs Highly professional and safe environment: Both types of responses existed
- There is a need for faculty to be trained on teaching styles, academic support, and emotional support

4 DISCUSSION

4.1 Highlights of Findings

The survey results confirm the existing concerns about the growing mental health issues among university students and add new insight about the relationship between negative emotional experiences and academic actions. Among the key findings and observations, we can mention the type and causes of negative emotions.

More than half of respondents have experienced stress. Negative emotions are normal (to some level) and stress is not necessarily negative. Even Pressure can still be positive. The high level of stress and pressure can result in distress and frustration and that is the alarming observation when there is pressure and the students do what they can but still don’t succeed.

Feeling negative due to “unfair evaluation” at the level we see can be normal and acceptable. Very few other types of mistreatment were reported which was encouraging, although harsh and offensive judgment is still a concern. For example, being aggressive, tough, and unforgiving to “prepare students
for real-world" is not acceptable as it can promote, approve, or accept a bad work environment. We should set good examples for students and encourage them to critically analyze the world and improve it rather than prepare to accept a harsh and unjust world. More than half reported getting discouraged, losing confidence, and having physical and mental health results (although some felt encouraged to do better in many cases) which can be the direct result of those negative treatments.

Based on the comments by majority of participants, and considering current hiring and academic practices, it is not unreasonable to assume that many faculty members do not have the proper skills and knowledge to incorporate suitable emotional strategies in their academic plans and provide appropriate social and emotional support. At the same time, students are not prepared to deal with their social and emotional challenges either which will result in mental health issues.

Majority of respondents who answered the demographic questions were female.

The high level of participation by female students can be interpreted in different ways:

- Female students face more emotional problems, for example, due to still-existing gender biases and discrimination
- Female students recognize the problems more often
- Female students are more willing to talk about the problems

At this point, we are not able to make any conclusion on this matter, and it can potentially be a combination of the above reasons. It is essential though to reach out to male students in a better way as they are likely to experience problems they are not sharing.

4.2 Suggested Practices

Experiential learning as in “learning by doing” is not enough, and we need to also make sense of the experience through reflection [19]. Reflective practices should be a more important part of education as they help with emotional balance and dealing with frustrations, fears, anxieties, and stress in general, in addition to the academic tasks [9][13]. Together with extended mental health and counselling services, these can provide a better coping mechanism for students. However, universities should pay specific attention to preventive measures that start in the classroom to help students with issues that have academic sources.

It is important to note that providing emotional support for students and their learning process does not mean lowering academic standards and pampering students. At the same time, it is also important to notice that the growing mental health concerns should not be a considered a medical issue related to a small people with “health problem.” We are all “emotional” and have emotional concerns which will result in mental illnesses if they are not dealt with properly.

Being a systematic issue, social and emotional learning and the well-being of students (and faculty and staff) is an institutional concern that requires institutional solutions including but not limited to proper training for faculty and staff, rewarding good pedagogical efforts, and providing a well-being framework that encourages good practices. At the same time, there are practices that every faculty can adopt with no or minimum extra resources which can help provide an emotionally supportive environment. Depending on resources available and the special situation of every course, the faculty can decide to use and expand the following practices:

- Acknowledging the fact that we are emotional beings and learning is an emotional process:
  - Students are not machines so faculty should not treat them that way.
- Relating to the students:
  - Faculty can try to observe without judging and reacting, be more positive than negative, explain the reason for decisions, changes, etc, and listen.
- Noticing that they are not there Yet, but are they growing?
  - Giving the ability to grow can include the use of online courses/material and proper support system, covering what is really needed and important, providing opportunities for sense-making and reflection, and when possible, personalizing and giving options.
- Admitting problems, issues, mistakes, and weaknesses:
  - Honesty pays by establishing trust

Together, these practices can provide a learner-centred framework that allows motivation and exploration for students, through support and guidance by instructors and a relationship of trust and understanding between them, as shown in Figure 1.
5 CONCLUSIONS

In this paper, we reported on a survey that investigated the relationship between negative emotional experiences and academic activities of university students. The results confirmed the growing concerns over students' mental health issues and the academic practices that may have affected them. Based on these results, we supported the notion of an integrated well-being framework that brings social and emotional support into the academic activities, and offered some specific suggestions.

Our research was limited to one university, one academic year, and only a few short questions. A more comprehensive and long-term study can provide more insight into the studied relationship and offer better suggestions on how to improve it.

Educational approaches, especially these days, focus heavily on learning outcomes, but they may ignore the learning process. Process is as important or even more important than outcome. As Kolb states "Learning is best conceived as a process, not in terms of outcomes" [19]. The learning process is heavily emotional, its assessments should include process and its emotional aspects. The improvements in assessment methods is another area of future research in this regard.

Some other open research questions are:

- What are emotional states of faculty and how they affect the learning process?
- How do we prepare students emotionally for learning? Reflection, meditation, and games, could be options to investigate.
- How exploration-based methods such as Montessori system [21][30] can be used in higher education?

ACKNOWLEDGEMENTS

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REFERENCES

[1] https://www.psychiatry.org/patients-families/what-is-mental-illness


APPENDIX: QUESTIONNAIRE

Note: For the purpose of this survey, an academic experience is defined as any activity undertaken to directly satisfy a requirement of the university program you are enrolled in. Examples include but are not limited to attending lectures and labs, presentations, coursework, and related communications. A personal experience is one that is undertaken for a personal reason. Both types of experience may involve people from university or outside, and may happen on campus or outside.

1. Since the start of 2018-19 academic year, have you had an academic experience that elicited negative emotions such as anger, fear, disappointment, anxiety, and sadness?
   - Yes
   - No
     - If No, you may skip to the Question 6.

2. How often such experiences have happened?
   - Rarely
   - Frequently
     - How frequently?
   - Constantly

3. What was the main cause of the negative emotion? If you had more than one experience, please consider the most significant one.
   - Stressful situation
   - Mistreatment by others
   - Failure in achieving academic goals
   - Other. Explain:

4. If your answer to question 3 was Stress, what was stressor?
   - Frustration
   - Conflict
   - Pressure
   - Change
   - Self-imposed
   - Other. Explain:

5. If your answer to question 3 was Mistreatment, what type was it?
   - Unfair evaluation of work
   - Not receiving credit for work
   - Harassment (verbal or physical)
   - Humiliating situation (public or private)
   - Aggressive behaviour
   - Other. Explain:
6. Since the start of 2018-19 academic year, have you had a **personal experience** that elicited negative emotions such as anger, fear, disappointment, anxiety, and sadness?
   - [ ] Yes
   - [ ] No

7. If you have had an **academic or personal experience** resulting in negative emotions since the start of 2018-19 academic year, how do you think it has informed or affected you in your following academic experiences? Choose as many as needed.
   - [ ] Encouraged you to do better
   - [ ] Resulted in stronger connections to friends
   - [ ] Made you explore resources on or off campus
   - [ ] Informed you about yourself and others
   - [ ] Caused better life choices
   - [ ] Discouraged you to work/study
   - [ ] Made you lose concentration
   - [ ] Lowered your confidence
   - [ ] Lowered your academic abilities
   - [ ] Lowered your social abilities affecting academic performance
   - [ ] Lowered your physical/mental health affecting academic performance
   - [ ] Other. Explain:

8. If you have any comments about this emotional experience, or if you want to mention more than one experience, please add here.

Please let us know a little about you. You may skip to the end of this page if you prefer to not share any information about yourself.

- **Which gender do you identify with?**
  - [ ] Female
  - [ ] Male
  - [ ] Prefer not to say
  - [ ] Other

- **Which level is your program of study?**
  - [ ] Undergraduate
  - [ ] Master’s
  - [ ] PhD

- **Which faculty is your program of study?**
  - [ ] Engineering and Design
  - [ ] Science
  - [ ] Arts and Social Sciences
  - [ ] Public Affairs
  - [ ] Sprott School of Business