

## THE EMOTIONAL IMPACT OF EXCLUSION FOR UNDERGRADUATES IN EXACT SCIENCES AT UNICAMP

Natália Mazzilli Dias<sup>1</sup>; Sérgio Leite<sup>1</sup>

### ABSTRACT

This research aimed to identify and analyze the main situations that determine the exclusion process experienced by students who were excluded from Exact Sciences courses at the University, as well as to investigate the affective/subjective impacts resulting from this exclusion on the students' life stories. A questionnaire was sent to students who dropped out of Exact Sciences courses at Unicamp between 2015 and 2020, from which 66 responses were obtained and 5 participants were selected from the Chemistry, Physics, Mathematics, Statistics and Course 51 courses, with whom Recurrent Interviews were conducted. Based on the analysis of the Thematic Nuclei, the discussion of this work covered three axes: institutional policies and students' academic performance; inadequate teaching methods and teacher training for Higher Education; mental health and the exclusion process. The data discussion made it possible to list some possible institutional policies that aim to remedy the problem of exclusion in Higher Education.

**Keywords:** higher education; exclusion; affectivity; evasion; academic performance

### Impactos afectivos de la exclusión en estudiantes de graduación en Ciencias Exactas de la UNICAMP

#### RESUMEN

En esa investigación se tuvo como objetivo identificar y analizar las principales situaciones determinantes del proceso de exclusión vivenciado por alumnos que se excluyeron de cursos de Ciencias Exactas de la Universidad, así como investigar los impactos afectivos/subjetivos decurrentes de esa exclusión, en la historia de vida de esos estudiantes. Se envió un cuestionario a los alumnos evadidos de los cursos de Ciencias Exactas de la Unicamp, entre 2015 y 2020, a partir del cual obtuvieron 66 respuestas y se seleccionaron 5 participantes de los cursos de Química, Física, Matemática, Estadística y Curso 51, con los cuales se realizaron Entrevistas Recurrentes. A partir del análisis de los Núcleos Temáticos, la discusión del presente estudio atravesó tres ejes: las políticas institucionales y el rendimiento académico de los estudiantes; la didáctica inadecuada y la formación docente para la Enseñanza Universitaria; la salud mental y el proceso de exclusión. La discusión de los datos permitió enumerar algunas posibles políticas institucionales que visen remediar a problemática de la exclusión en la Enseñanza Universitaria.

**Palabras clave:** enseñanza universitaria; exclusión; afectividad; evasión; rendimiento académico

### Impactos afetivos da exclusão em estudantes de graduação em Ciências Exatas da UNICAMP

#### RESUMO

Esta pesquisa objetivou identificar e analisar as principais situações determinantes do processo de exclusão vivenciado por alunos que foram excluídos de cursos de Ciências Exatas da Universidade, bem como investigar os impactos afetivos/subjetivos decorrentes dessa exclusão na história de vida desses estudantes. Foi enviado um questionário aos alunos evadidos dos cursos de Ciências Exatas da Unicamp, entre 2015 e 2020, a partir do qual foram obtidas 66 respostas e selecionados 5 participantes dos cursos de Química, Física, Matemática, Estatística e Curso 51, com os quais se realizaram Entrevistas Recorrentes. A partir da análise dos Núcleos Temáticos, a discussão do presente trabalho perpassou três eixos: as políticas institucionais e o rendimento acadêmico dos estudantes; a didática inadequada e a formação docente para o Ensino Superior; a saúde mental e o processo de exclusão. A discussão dos dados possibilitou elencar algumas possíveis políticas institucionais que visem remediar a problemática da exclusão no Ensino Superior.

**Palavras-chave:** ensino superior; exclusão; afetividade; evasão; rendimento acadêmico

<sup>1</sup> Universidade Estadual de Campinas, Campinas, SP, Brazil; [namadias@hotmail.com](mailto:namadias@hotmail.com), [sasleite@uol.com.br](mailto:sasleite@uol.com.br)

## INTRODUCTION

The affection theme has been gaining relevance in the scenario of educational scientific research as the dualistic conception of human beings has been overcome by the monistic comprehensions of individuals (Leite, 2018). According to the description by Spinoza (2015), because mind and body are inextricable, affection is the perception of the situations the body goes through. Such situations can increase, diminish, or keep the potential of each individual. Based on this comprehension, Vygotsky (2001) developed some reflections on affection, highlighting the fact that individuals are agents of social transformation due to their possibilities of affecting, being affected, creating, and imagining. He also defended the indissociable connection between thinking, acting, and feeling, according to the synthesis by Sawaia (2018).

Human development is a result of the interaction among four plans: phylogenesis, the history of a species; ontogenesis, the biological history of individuals; sociogenesis, cultural history; and micro-genesis the experiences that produce meaning (Vygotsky, 2013). All constructions realized by humans have a meaning, which is shared among people, although meaning is a subjective construction (Vygotsky, 2001). Subjective meaning constitutes a network of significations that are constructed by individuals throughout their lives, in constant transformation, which configures subjectivity (Rey, 2007).

On the other hand, Wallon believes that human development is a result of the dialectic relation between the social and the biological, according to the description by Werebe & Nadel-Brulfert (1986). Based on social life, there is a differentiation of the self by means of conflicts, ruptures, and oppositions. In this process, the four functional fields are: affection, cognition, movement, and the fourth field, made up of the relation among the other fields, a person. Based on the theoretical constructions by Spinoza, Vygotsky, and Wallon, researchers started developing studies in the Grupo do Afeto<sup>1</sup>, or Affection Group regarding affection in the 1990s.

These studies focused on the negative impact produced especially by the pedagogical mediation. It is understood that the affection experiences during the pedagogical mediation process determine the meanings constructed by the students regarding the object of knowledge, while getting them closer to or further apart from the respective objectives (Leite, 2012). Thus, it became possible to identify the way these experiences affect subjectivities, and to analyze the life histories and the social-historical contexts they belong to (Rey, 2007). The works developed by the Affection Group led to the construction of conceptual categories including the

five pedagogical decisions that produced an emotional impact on the teaching-learning process.

They are: a) the choice of objectives and teaching contents, b) deciding where to start teaching, c) the organization and sequence of teaching contents, d) the choice of teaching procedures, e) the choice of assessment procedures. These five items are internally known in the Grupo do Afeto as the “five basic decisions” in the planning of teaching and, obviously, do not exhaust the teacher’s pedagogical work (Leite, 2018, pp. 41-42).

The present work is based on these theoretical presuppositions in order to gather more evidence regarding the affection impact produced on the students’ subjectivities by pedagogical mediation. In this research, the focus was on the clarification of these impacts in the context of exclusion in higher education.

The expansion of higher education took place in the late 20<sup>th</sup> century, in different countries (Fior, 2021), due to the emergence of the knowledge paradigm. The employment rates and the probability to be employed full time are better for people who went to college (Organização para a Cooperação e Desenvolvimento Econômico [OCDE], or Organization for Cooperation and Economic Development, 2013). After 2012, with the enactment of Law no. 12.711, Affirmation Action (Brasil, 2012), the expansion of higher education in Brazil happened not only concerning numbers, but most importantly regarding the diversity of people who started to have access to higher education. Despite affirmative action in higher education, the lack of permanence policies leads to an increase in evasion. Evasion refers to disconnection from a course, canceling a registration or dropping out of a course by a student (Fior, 2021). Evasion problems affect not only students, who interrupt their formation process and suffer the emotional impact of such process, but also institutions, when there is an impact on academic and financial administration, and quality indicators.

The contradiction between the expansion in the acceptance of new students in higher education and the absence of permanence policies for “new contingents” entering university, leads to the choice of the word “exclusion” as a synonym for “evasion”, in the present work. It is important to understand that the decision to disconnect from a course is a decision process that is complex and gradual (Fior, 2021). The Flow of Higher Education presented an Annual Dropout Rate (TADA) of 9.1% among students who entered university in 2015 and of 10.6% among the newcomers of 2016, which demonstrates an increase in evasion rates in Brazilian higher education (Inep, 2020a, 2020b).

At Unicamp, data from the 2020 yearbook (State University of Campinas [UNICAMP], 2020b) demonstrated greater recurrence of exclusion in graduation courses

<sup>1</sup>The Grupo do Afeto, Affection Group, coordinated by Professor Sérgio Leite, is part of the ALLE/AULA group in the Education department at Unicamp.

in Exact Sciences. While the evasion average at the university is 8.01% for newcomers and 7.13% for enrolled students, the rates in area of exact sciences are: 10.11% and 13.83%, respectively, at the “Gleb Wataghin” Physics Institute (IFGW); 17.37% and 12.70% at the Mathematics, Statistics, and Scientific Computer Science Institute (IMECC); 6.62% and 9.15% at the Chemistry Institute (IQ); 8.87% and 11.45% in the intersectional courses between the IFGW and IMECC institutes. According to Tinto (quoted by Fior, 2021), evasion happens when students do not fit into higher education at a social and academic level.

Although exclusion is determined by multiple factors, some factors in common were identified in the histories of four students (Broncher, 2014): the lack of support felt by students when they enter graduation; course curricula; the physical structure of the institutions that, according to them, did not benefit the teaching-learning process; the inadequate pedagogical practices that are adapted by the graduation teachers; the difference in the rhythm of studies and of classes in higher education in comparison to what they were used to in high school; the behaviors they adopted in the first semester of graduation.

The exclusion process that is experienced by students in higher education has an impact on their subjectivities, especially regarding mental health. Literature demonstrates that, among university students in general, the vulnerability to the development of mental disorders – such as anxiety, depression, and stress – is already greater than average: the prevalence of depression cases is of 30.6% among university students and of 50.47% regarding cases of anxiety (Ariño & Bardagi, 2016). These data demonstrate that disconnecting from or dropping out of a course is one of the possible consequences regarding the challenges experienced by students in higher education, in addition to possible damage to mental health. The present study aims at identifying and analyzing the most common situations that determine the exclusion process, experienced by students who were disconnected from the exact sciences courses at the university, in addition to investigating the subjective/affectation impacts caused by this exclusion in the life history of these students.

## METHOD

One of the challenges of education consists of capturing the significations and meanings attributed to their experiences, by the research participants themselves (Ludke & André, 2013). To that end, the following procedures were used in the construction of data: recurrent questionnaires and interviews (Leite & Colombo, 2006). The choice of participants was of students who disconnected themselves from the Exact Sciences courses between the years of 2015 and 2020.

An invitation letter was sent to 608 students who had dropped out of college. The letter presented the objectives of the research and provided the link to a form that had been made with the *Google Forms* tool. The form required basic information on the students and offered options referring to the causes of evasion, in addition to a space for participants to freely write answers. The questionnaire obtained 66 answers. Regarding the answers it is possible to emphasize: the greater recurrence of exclusion during the second and third semesters of the course; the focus on students who were enrolled for classes during the day and the evening; the greater incidence among courses such as 51<sup>2</sup>, Physics, Mathematics, Chemistry, and Statistics in descending order. The causes of evasion that were most often selected by participants were emotional difficulties, repeated failing, and inadequate teaching techniques.

The reading of the data produced by means of the questionnaire led to a new contour for the choice of participants. The selected participants were: Isaac<sup>3</sup>, Physics student. Mirella, Chemistry student; Felipe, Statistics student; Jasmin, Course 51 student; and Pietro, Mathematics student.

Each interview was previously scheduled by e-mail and realized via *Google Meet* by the researcher<sup>4</sup>. In the first interview, the researcher asked participants the guiding question: “In your opinion, what were the determining factors that led to your evasion from the graduation course, what impacts did this experience bring to your life history?”. At the end of the first interview, the researcher transcribed the full content of the recording, selected the most relevant themes in this first interview, and organized a table with the theme nuclei and the speeches in each nucleus. This table was sent to participants so that they could read it before the next interview, when there was a debate on the produced table. After the end of this interview, the process was conducted until the researcher and the participant were in agreement regarding the completeness of the table of theme nuclei. Once this process with the participant was finished, the researcher invited another participant from the next course. This process was repeated with each one of the interviewed participants until there was a table of theme nuclei on each one of the five participants.

<sup>2</sup> In course 51, Science degree, there is a common ground in exact sciences and, in the second half of graduation, students choose to take courses in Physical Engineering, Physics, Medical Physics, Biomedical Physics, Math or Applied and Computational Math.

<sup>3</sup> The names of all participants in the research report are fictitious.

<sup>4</sup> The research Project was approved by the Research Ethics Committee (CEP) at Unicamp and all the participants signed the Free and Informed Consent Term (TCLE).

## ANALYSIS OF DATA AND RESULTS

The process of data analysis started during their acquisition. The procedure of data analysis, with the construction of Theme Nuclei (Leite & Colombo, 2006), consists of organizing the product of the interviews into one matrix, identifying the most important themes that came up during the speeches of the participants and, recurrently, by means of the interviews, updating each one of these Theme Nuclei, including new speeches by participants regarding each theme.

Once the construction of data was finished, researchers had a table referring to each participant, containing the Theme Nuclei and the speeches of the participants referring to them. Based on this condition, researchers aimed at integrating the Theme Nuclei of the participants in a collective way, cross-referencing data in order to verify which nuclei were repeated and how often, in addition to the ones that were differentiated, according to what was observed in Table 1.

## DISCUSSION

Based on the constructed data analysis, the discussion aims at approaching three aspects that are most relevant to the research: institutional policies and academic performance of the students; inadequate teaching technique and teacher formation for higher education; mental health and the exclusion process. It is interesting to emphasize that is a phenomenon that is multi-determined by social, economic, racial, cultural, and political factors.

Unanimous among all participants was the unsatisfactory academic performance issue. In addition to relating to Theme Nuclei such as lack of time, adaptation difficulties, lack of emotional connections,

emotional difficulties, inadequate teaching technique and lack of interest in the course, the academic performance issue is intrinsically related to current institutional policies at the university. Affirmative action in higher education, motivated especially by the racial movement, increased the diversity of contingents that enter this level of education (Heringer, 2018). The participants in the present research illustrate the successful policy of social and racial quotas. Out of the five interviewees, three had attended public schools in their basic education, and three were black.

Although there are assistance policies, permanence policies are not clear in the Unicamp legislation. Permanence policies are understood as strategies that will guarantee that all students will have conditions to fully engage in their learning at higher education institutions (Heringer, 2018). In addition to being insufficient, assistance policies still regard the students' academic performance as a pre-requisite, which creates a paradox in which the student presents a good academic performance in order to obtain economic support that emancipates from the necessity to work and generates more time to study. It is also important to emphasize that the figures relating to scholarships granted by the university are not the same for everyone, and when combined they might cost a whole minimum weight. However, some students decide to get jobs rather than request a scholarship so they can get other benefits.

Shortcomings in basic education are another issue that directly relates to unsatisfactory academic performance. It was reposted by four of the five participants. It is important to emphasize that the participants who reported this difficulty attended public high schools. This delay in learning points at a distance

Table 1 - Theme nuclei and their recurrences.

Participants	Isaac	Mirella	Felipe	Isamin	Pietro
Theme Nuclei	Physics	Chemistry	Statistics	Course 51	Mathematics
Unsatisfactory academic performance	X	X	X	X	X
Late entrance	X		X	X	X
Shortcomings of basic education	X	X		X	X
Inadequate teaching technique	X	X		X	X
Emotional difficulties	X	X	X	X	
Before Unicamp			X	X	X
After Unicamp			X	X	X
Lack of time	X	X			X
Lack of interest in the course		X	X		
Lack of emotional connection	X		X		
Pressure to finish courses		X			
Social inclusion difficulties	X				
Adaptation difficulties	X				

Source: produced by the author.

between education in the public network of basic education and public institutions of higher education, which is due to the expansion and to the quality of public education in Brazil (Fior & Martins, 2021).

In my attempts to fulfill the empty spaces in my high school education, sometimes I heard teachers say derisively thing like: “how come you did not study that in high school? You should know that.” Or, “I wonder how you passed the college entrance examinations”, and I was like “why, I don’t know” [laughs]. How come I am here and not know it? (Isaac, Physics, interview 1).

Although the issue of quality basic education is more complex than the extension of the present study allows us to develop, it is important to understand possible strategies to handle these problems. Studies (Bertolin, Amaral, & Almeida, 2019) that aimed at investigating the possibilities of compensation obtained good results by graduation courses, for the lack of cultural capital and background in the students who entered higher education. Regarding some disciplines, such as Calculus I, there are strategies such as extension disciplines to respond to the demands of Basic Mathematics at the university, but there are no strategies for simple access for newcomers who are not integrated to the institution yet.

Another important factor related to unsatisfactory academic performance and to blank spaces in basic education is the Theme Nucleus named “late entrance”. It is the entrance of students in subsequent levels as a measure by the university to fill remaining vacancies. According to Isaac and lasmin, they had not had access to contents of basic education that were revisited in the beginning of some disciplines. Although these convocations are necessary to fill up all vacancies in the courses, the fact that they happen after the beginning of classes implies that students who enter later start the course with significant loss of content. The absence of an institution that provides a solution to this issue has produced an impact in the lives of four of the five participants.

It is also relevant to discuss the policy in the university that determines that students who fail in all disciplines in the first semester have their registrations cancelled. In the common nucleus for Course 51, there is a discipline named “Seminars on the Professions”, in which the examination criterion is mere attendance. According to lasmin, this is an important strategy to guarantee that students do not get excluded in the first semester even though they fail all other disciplines. In addition, Participant Pietro reported that, when he failed all disciplines in the first semester and had his registration cancelled, he appealed to the graduation department and was given a chance to enroll again, which is something that happened frequently according to other students in the course. So we ask ourselves why

keep an institutional policy that leaves loopholes?

The results of this exclusion were conducive to three of the five participants to choose to transfer to a private institution of higher education, which demonstrates the seriousness of the problem of exclusion at public universities, which should be accessible to anyone. Beyond institutional policies, academic performance is still related to problems such as inadequate teaching techniques or the students’ emotional difficulties, which we will discuss soon.

Inadequate teaching techniques were a determining factor for exclusion that was reported by four participants. In order to analyze the practices that were described by the students, it is interesting to relate them to the decisions described by Leite (2012). The first decision is the structuring of a course and the choice of teaching objectives so that students can understand the proposed objectives and the finality of learning such contents. The speech by lasmin, however, demonstrates that it was not possible to understand the objective and the load of contents to be learned in the disciplines of Course 51.

You see, it was an absurd amount of stuff to learn, even experimental physics, which was pretty cool, but there was way too much stuff to go through, it was quite overwhelming. It was just too much for me, it was hard work for me and also a little complicated. So that was it, with the load of content in the course and the exclusion grade being 7, I was like “all right, this is it, I cannot go on”. (lasmin, Course 51, interview 1)

The curricula in the graduation courses are developed by the coordination of each course, even though the best thing to do would be a collective elaboration by the teachers; on the other hand, the way content is approached is determined by the teachers of each discipline. The lack of clarity regarding this pedagogical decision, therefore, becomes an institutional problem.

The second pedagogical decision to be analyzed is the decision on the starting point of the teaching-learning process, which is a result of comprehension, by the teacher, of the level of knowledge that students already have on a certain field. Participants Isaac, lasmin, Mirella and Pietro, however, reported that teachers considered as pre-requisite certain topics that should have been studied in basic education, without realizing a diagnostic assessment to verify this information. In addition, when they noticed that the students did not know these contents, some teachers and monitors blamed the students by telling them that they should already know that or even questioning their approval in the entrance examinations, since they did not know such “trivial” content. This derisive tone regarding shortcomings in the knowledge acquisition of students by educational actors configures a case of symbolic violence. The impact on students includes the development of a certain

self-deprecation and even systematic self-derision (Bourdieu, 2012). Even strategies for revisiting contents proved unsuccessful: according to Mirella, the diagnostic assessment of a certain discipline was graded; according to the reports by Mirella and Pietro, the monitoring classes or “test supervision” sessions were conducted in the morning or in the afternoon, although the courses took place in the evening, and many students were not able to be present.

Another pedagogical decision that emotionally affects the learning-teaching process is the organization and sequence of contents to be learned (Leite, 2012). The absence of organization of a logic sequence of things to learn, which is evident in strategies based on memorizing or exhaustingly take notes on a certain content, is described in the report by Iasmin:

I remember that there was a test in which the teacher said “listen, I am going to ask you to write a declaration”. It was not exactly a declaration but we were supposed to write exactly how this rule worked. I memorized two pages of the course book in order to write an identical copy for the examination [...] in the first semester, the same thing happened in all disciplines because they were all mandatory disciplines in the curriculum. I guess 6 disciplines were like that (Iasmin, Course 51, interview 1).

The fourth pedagogical decision concerns the choice of teaching procedures, which is indispensable in the relation that is established between student and knowledge (Leite, 2012). Participants Mirella, Iasmin and Pietro made criticisms regarding the material selected by the teachers, arguing that those were books that were written for those who already knew the content. In addition, Isaac, Iasmin and Pietro reported difficulties related to the language used by the teachers, the complex vocabulary and the indiscriminate use of the whiteboard. These teaching procedures also produced an impact on the teachers’ posture regarding the students. In these cases, the teachers seemed distant and even rude regarding the difficulties students presented, according to the following reports.

Teachers in exact sciences have no patience to teach students individually. Not at all. [...] in the classroom, they talk a lot, they waste time, and provide explanations the way they find convenient... interrupting them during the class or approaching them after class for question is an offense. If you tell them that you didn’t understand something, they say “that’s your problem! Read the material! Did you study that before?”, and other rude remarks. (Pietro, Mathematics, interview 2).

The fifth decision, finally, concerns the assessment methods adopted by the teachers: the examination must be used to provide guidance and help reorganize the learning-teaching process, in a collaboration between teachers and students, and not to reward or punish students for performance (Leite, 2012). In addition, distinct methods of assessment can be used, as alternatives to traditional examinations, according to Participant Pietro.

Students cannot live by tests alone, tests do not guarantee satisfactory results. Some students get really scared during a test and their minds just go blank. And then, after the test, they are able to remember all answers. During the test, there is tension, pressure, nervousness, amnesia, butterflies in one’s stomach, difficulty to concentrate, interruptions, confusion... it is different, college entrance examinations are over [...] but then all you do is take tests... (Pietro, Mathematics, interview 1).

The interpretation of the pedagogical decisions made by the teachers, from the theoretical perspective of the Grupo do Afeto, leads to the confirmation of the students’ opinion that the teaching techniques are inadequate. The question is: why did these educators make these pedagogical decisions? The studies corroborate the hypotheses proposed by participants Isaac and Pietro along the interviews. First of all, it is all due to shortcomings in the pedagogical formation of these teachers, and they are destined to repeat the same pedagogical practices they were submitted to as students (Cunha, 2018). Part of it is also due to the fact that these individuals went through the mastering and doctoring processes, which, in general, focus on the development of scientific research, rather than on pedagogical practice (Cunha, 2018). Concerning the continuous formation that would fix the shortcoming problem in the teachers’ formation, it is possible to highlight the consolidation of [EA]<sup>2</sup> (Space for Support to Teaching and Learning)<sup>5</sup>, at Unicamp. This space is provided with diverse courses and events that aim at guaranteeing the continuous formation of teachers, fixing the problem of inadequate teaching technique. However, participation in these events is voluntary and, especially in the Exact Sciences courses, unsatisfactory.

The lack of interest for these strategies of continuous formation, by the teachers, is related to the second hypothesis that was presented by the participants, also described in the research by Broncher (2014): to the participants: it seems that university teachers are more interested in scientific research, regarding the teaching practice as a mere side effect of their professional

<sup>5</sup> The space for support to teaching and learning is represented by the abbreviation [EA]<sup>2</sup>.

attributions. This appreciation of the research area rather than of the education area is less exclusive of individuals than of the historical and social comprehension of these working areas. Along their formation and also along the selection process to become professors, research seems more important than teaching (Cunha, 2018). Even the criteria for assessing teachers, according to what was observed in the Final Report of the Unicamp Institutional Assessment 2014 – 2018, are more elaborated when it comes to the scientific production, while the assessment of teaching has a merely descriptive character.

The defense of strategies for continuous formation and assessment of higher education is not something new, but it leads to plenty of social struggle. The ruling ideology at public universities is still rather elitist, that is, it regards school as a space that is not for everyone, and thus the idea of exclusion is understood as a naturalized process. The exercise of awareness, of becoming aware of social structures and forms of oppression that aim at maintaining the ruling ideology, however, it is necessary so that it becomes possible to fight for the transformation of reality as it is (Freire, 2016). Institutional policies that lead to the formation and assessment of teachers might provide a solution to one of the issues that lead to exclusion in higher education, and which produces relevant subjective impact.

In addition to being an evasion factor that was frequently reported by participants in the research questionnaire, the matter of emotional difficulty was present in the Theme Nuclei of four participants. Mirella, lasmin and Felipe reported that they had experienced mental health challenges before their entrance into Unicamp, while Isaac had not had any previous experience of this nature. During the interviews, Mirella and Felipe named the feelings they experienced “burnout”, anxiety, and depression symptoms. Isaac defined them as *burnout*, anxiety, and depression; while lasmin defined them as anxiety and depression. Although they different stories, they are unanimous in their opinion on the unpleasant feelings experienced during the time they were in graduation, in the area of Exact Sciences at Unicamp.

A research work realized with Unicamp students between 2017 and 2018 (Soares, 2021) demonstrated that most of these students were classified as possible cases of Common Mental Disorders (CMD), with greater incidence with women, black students, non-heterosexual and students who had gone through bullying. In consonance with these data, it is possible to observe that, among the participants in the present study, Felipe and Isaac are black and lasmin and Mirella are women. It is relevant to emphasize the association between difficulties to stay in the course and the possibility to develop some disorder (Soares, 2021), which corroborates the comprehension that exclusion from higher education is a promoter of emotional difficulties. The issue of emotional difficulties is related

to unsatisfactory academic performance because of the challenges students went through, they had more difficulty to focus on their studies.

I really could not do anything, I left home because I did not like to study at home, I liked to study in the campus, or in a cafeteria, or library, but that way, I just couldn't. So, I left home and the moment I opened up my laptop or a book, I burst out crying. And I would keep on crying for a long time, sometimes the whole day. That is what happened to me, you see? So I said to myself “this is so wrong, I cannot do anything, I cry all day” and then I reached a point in which I just couldn't take it anymore, I could no longer interact with people (Mirella, Chemistry, interview 1)

On the other hand, unsatisfactory academic performance was also an aggravating factor concerning the difficulties experienced by the students, according to the following report by Isaac.

It felt like drowning, like... emotionally, you see, we are human beings, I felt so frustrated, not only with the university but with myself, you know? I was like “gee, I must be the dumbest person on earth. How come?” (Isaac, Physics, interview 1).

In addition, participants Isaac and Felipe reported a lack of emotional connections because they had difficulty to make friends at the university. To Isaac, there was also the difficulty of social insertion because he felt socially and economically different from his classmates. This illustrates the concept of the inclusion/exclusion dialectics, that is, although they have been included in this context, as if they didn't belong to it a priori, individuals remain excluded (Sawaia, 2001). This dialectic, especially materialized in the cases of students who are women and black, like the participants of the present research, is a promoter of ethical-political suffering, which is caused by social injustice (Sawaia, 2011). When asked whether they sought the Serviço de Assistência Psicológica e Psiquiátrica ao Estudante (SAPPE), or Student Psychological and Psychiatric Assistance Service at the university, Isaac and Felipe reported that they were not aware of that possibility, whereas Mirella and lasmin learned that the wait list was way too long so they just gave up seeking for that support. In addition to making it clear that it is necessary to promote wider advertising and amplification of these services, it is also important to emphasize that we should not only respond to psychological suffering with treatment, but most importantly, we must avoid it.

Among the four participants who reported emotional difficulties, all reported the experience of relief from the symptoms after disconnecting from the university. The present investigation, therefore, demonstrated the multidimensional character of exclusion in higher education, mediated by social, economic, and racial factors. In this sense, research works on affection have the responsibility to demystify suffering that is

experienced individually, recognizing in it the collective character of institutions (Sawaia, 2001). It is possible to verify, thus, the need for institutional policies that aim at mitigating, and then eradicate the problem of exclusion of students in graduation courses in Exact Sciences. Here is a summary of some proposals:

a) on policies for students who are entering higher education: strategies for promoting equality in knowledge acquisition among students who enter higher education, by means of additional disciplines or more time dedicated to reviewing content from previous semesters; reassessment of the policy of enrollment cancellation for students who fail all disciplines in the first year of graduation; students who are approved after regular entrance process cease to miss the initial lessons, and start their classes in the following semester, classes in the first weeks are recorded or a specific program for updating students who enter after the beginning of the semester is created;

b) concerning student permanence: collective strategy by teachers for rethinking the method of assessing disciplines; institutional policy that leads to the possibility of complementary activities, such as test supervision and monitoring, only in the period in which students are enrolled; amplification of the advertisement and practice of the SAPPE in the treatment and prevention of mental health difficulties among students; in addition to the permanence policies the university already provides.

c) regarding teacher formation: inclusion of criteria for the selection of teachers who assess the candidates' formation and pedagogical experience; review of the policies of assessment in order to include pedagogical formation as a criterion to be assessed in the teacher's performance; include the activities of the [EA]<sup>2</sup> as part of the mandatory formation trajectory for the practice of teachers after the process of selection for entering the university.

These possible institutional policies are ways to promote the democratization of public higher education in Brazil. The present research is an exercise of awareness and struggle for actions that promote equality of opportunities for diverse contingents, fighting against the status quo and meritocracy (Freire, 2016). We conclude the present study by emphasizing the need for new educational research works on institutional policies that might contribute to an improvement in the scenario for higher education, in addition to the theories that contribute to the advancement of public, free, democratic, and quality Brazilian Education.

## REFERENCES

- Ariño, D. O., & Bardagi, M. P. (2016). Saúde mental de estudantes universitários e os fatores acadêmicos e de carreira associados. In A. B. Soares, L. Mourão, & M. C. Monteiro (Eds.), *O estudante universitário brasileiro: saúde mental, escolha profissional, adaptação à universidade e desenvolvimento de carreira* (pp. 34-51). Appris Editora.
- Bertolin, J. Amaral, & A. Almeida, L. (2019). Os cursos de graduação podem compensar a falta de capital cultural e background dos estudantes? *Educação E Pesquisa*, 45, e185453. <https://doi.org/10.1590/S1678-4634201945185453>
- Bourdieu, P. (2012). *A Dominação Masculina* (Translation by Maria Helena Kühner, 12. ed.). Bertrand Brasil.
- Brasil. (2012). Lei nº 12.711, de 29 de agosto de 2012. *Dispõe sobre o ingresso nas universidades federais e nas instituições federais de ensino técnico de nível médio e dá outras providências*. Brasília, DF. [https://www.planalto.gov.br/ccivil\\_03/\\_ato2011-2014/2012/lei/112711.htm](https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/112711.htm)
- Broncher, H. (2014). *História de desligamentos do ensino superior por baixo coeficiente de progressão* [Trabalho de conclusão de curso, Faculdade de Educação/Unicamp, Campinas-SP].
- Cunha, M. I. (2018). Docência na Educação Superior: a professoralidade em construção. *Educação*, 41(1), 6-11. <https://doi.org/10.15448/1981-2582.2018.1.29725>
- Espinosa, B. (2015). (2015). *Ética*. Edusp.
- Fior, C. A. (2021). Evasão no Ensino superior e papel preditivo do envolvimento acadêmico. *Amazonica – Revista de Psicopedagogia, Psicologia Escolar e Educação*, 13(1), 9-32. <https://periodicos.ufam.edu.br/index.php/amazonica/article/view/8308>
- Fior, C. A., & Martins, M. J. (2021). Experiências de escolarização de jovens de camadas populares que ingressam no ensino superior. *Cadernos do Aplicação*, 34(2). <https://doi.org/10.22456/2595-4377.111286>
- Freire, P. (2016). *Conscientização*. Cortez.
- Heringer, R. (2018). Democratização da educação superior no Brasil: das metas de inclusão ao sucesso acadêmico. *Revista Brasileira de Orientação Profissional*, 19(1), 7-17. <https://doi.org/10.26707/1984-7270/2019v19n1p7>
- Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2020a). *Indicadores de Fluxo da Educação Superior 2015 a 2020*. [Online]. Brasília: Inep. <https://www.gov.br/inep/pt-br/aceso-a-informacao/dados-abertos/indicadores-educacionais/indicadores-de-fluxo-da-educacao-superior>.
- Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2020b). *Indicadores de Fluxo da Educação Superior 2016 a 2020*. [Online]. Brasília: Inep. <https://www.gov.br/inep/pt-br/aceso-a-informacao/dados-abertos/indicadores-educacionais/indicadores-de-fluxo-da-educacao-superior>.
- Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2022). *Censo da Educação Superior 2021: notas estatísticas*. Brasília, DF: Inep. [https://download.inep.gov.br/publicacoes/institucionais/estatisticas\\_e\\_indicadores/notas\\_estatisticas\\_censo\\_da\\_educacao\\_superior\\_2021.pdf](https://download.inep.gov.br/publicacoes/institucionais/estatisticas_e_indicadores/notas_estatisticas_censo_da_educacao_superior_2021.pdf).
- Leite, S. A. da S. (2012). Afetividade nas práticas pedagógicas. *Temas em Psicologia*, 20(2), 355 – 368. <https://www.redalyc.org/articulo.oa?id=513751440006>
- Leite, S. A. da S. (2018). Capítulo 1: Bases teóricas do grupo do afeto. In S. A. d S. Leite, *Afetividade: as marcas do professor inesquecível* (pp. 27-49). Mercado de Letras.

- Leite, S. A. da S., & Colombo, F. A. (2006). A voz do sujeito como fonte primária na pesquisa qualitativa: a autoscopia e as entrevistas recorrentes. In S. G. Pimenta, E. Ghedin, & M. A. S. Franco (Eds.), *Pesquisa em Educação - alternativas investigativas com objetos complexos*. Edições Loyola.
- Ludke, M., & André, M. E. D. A. (2013). *Pesquisa em Educação: abordagens qualitativas*. (2ª ed.). E.P.U.
- Organization for Economic Co-operation and Development [OCDE]. (2013), *Education at a Glance - OECD Indicators*. [http://www.oecd.org/edu/eag2013%20\(eng\)--FINAL%2020%20June%202013.pdf](http://www.oecd.org/edu/eag2013%20(eng)--FINAL%2020%20June%202013.pdf).
- Rey, F. G. (2007). As categorias de sentido, sentido pessoal e sentido subjetivo: sua evolução e diferenciação na teoria histórico-cultural. *Psicologia da Educação, 24*, 155-179.
- Sawaia, B. B. (2001). *O sofrimento ético-político como categoria de análise da dialética exclusão/inclusão*. In B. B. Sawaia (Ed.), *As artimanhas da exclusão: Análise psicossocial e ética da desigualdade social* (pp. 97-117). Editora Vozes.
- Sawaia, B. B. (2018). Prólogo. Afeto e Comum: categorias centrais em diferentes contextos. In B. B. Sawaia, R. Albuquerque, & F. R. Busarello (Eds.), *Afeto & Comum: reflexões sobre a práxis psicossocial* (pp. 29-36). Alexa Cultural.
- Soares, M. M. (2021). Transtornos mentais comuns entre universitários e sua associação com fatores demográficos, socioeconômicos e vivências acadêmicas [Tese de Doutorado, Instituto de Filosofia e Ciências Humanas, Universidade Estadual de Campinas, Campinas]. <https://hdl.handle.net/20.500.12733/700>.
- Universidade Estadual de Campinas [UNICAMP]. (2020a). *Relatório final de avaliação institucional UNICAMP 2014-2018* [recurso eletrônico] / Coordenadoria Geral da Universidade. Campinas, SP: BCCL/UNICAMP.
- Universidade Estadual de Campinas [UNICAMP]. (2020b). *Anuário Estatístico 2020: base 2019*. Assessoria de Economia e Planejamento. Campinas.
- Vygotski, L. S. (2001). *A construção do pensamento e da linguagem*. Martins Fontes.
- Vygotski, L. S. (2013). *Obras escogidas: Historia del desarrollo de las funciones psíquicas superiores*. Tomo III. Machado Libros S. A.
- Werebe, M. J. G., & Nadel-Brulfert, J. (1986). *Henri Wallon*. Editora Ática.

Submitted on: April 24, 2023

Approved on: July 17, 2024

#### Section Editor

Maria Júlia Lemes.

#### Data availability

Research data are available upon request.

This paper was translated from Portuguese by Régis Lima.